



2021 BUDGET

Prepared by Accounting Department

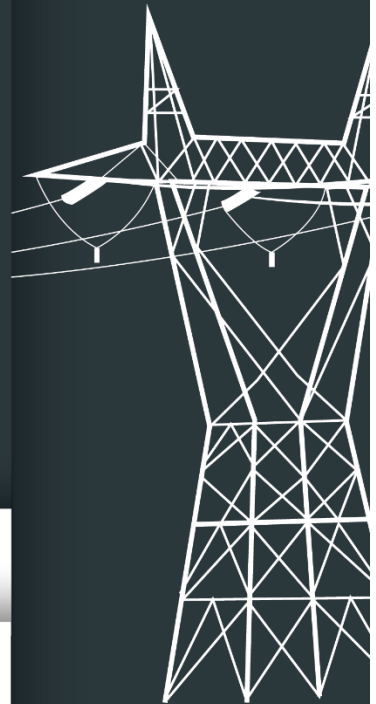


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I. SPP AND MEMBER VALUE

SPP is devoted to the prudent and conservative use of member entrusted resources, effective and efficient controls and business practices, and a culture that promotes doing the right thing for the right reason in the right way.

The electric utility industry is evolving rapidly. SPP's stakeholders face significant and daily risks to both electric reliability and financial security. Changes in customer behavior, the emergence of technologies that are disrupting traditional utility models, constantly shifting state and federal policies, and threats to the security of physical and cyber assets are just a few of the obstacles electricity providers face every day.

SPP works diligently to understand these challenges and their impacts on our stakeholders, and we stand ready to help. SPP's stakeholder-driven, regionally holistic approach to planning, problem-solving and decision-making protects the interests of its members and their customers.

SPP works with its diverse stakeholders to produce mutually beneficial and cost effective solutions that provide its customers—and their customers—peace of mind.

SPP acts as reliability coordinator (RC) for a territory that includes all or part of 17 states reaching from the Canadian border to the Texas panhandle and serves customers in both the Eastern and Western Interconnections. SPP manages a diverse roster of members and geographically expansive footprint, both of which pose unique operational, regulatory, environmental and political challenges that help shape and hone the transmission system, processes and tools.

SPP's Integrated Marketplace has produced the lowest wholesale electricity costs in the nation and has saved SPP's market participants and their ratepayers cumulatively more than \$3.5 billion. The Integrated Marketplace has enabled access to environmentally friendly renewable generation to a previously unimaginable degree, while enhancing reliability in the region.

Since 2004, SPP has directed nearly \$10.4 billion in transmission construction and upgrades. These projects are modernizing the grid, enabling access to renewables and other generation that has enhanced reliability and lowered wholesale electricity costs. More than \$8.4 billion of transmission projects have been completed from 2005-2019 and another \$2 billion are scheduled to be put into service by 2026.

In addition to the core products described above, SPP provides a suite of professional services that benefit stakeholders through economies of scale and cost savings. SPP's stakeholders

receive industry-best training, project management, strategic planning, counsel and representation in regulatory and government affairs and more. SPP does these things at a fraction of the cost of outside agencies, and because stakeholder needs are addressed at a regional level, solutions are more cost-efficient than those achievable by members' in-house resources.

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

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

II. BUDGET SUMMARY

BACKGROUND

The SPP 2021 Operating Plan was used as a guide for development of the budget, with the strategic plan serving as the foundation for the Operating Plan.

SPP's officers met in June 2020 to discuss corporate and departmental objectives that were incorporated into the creation of the 2021 Operating Plan and 2021-2023 budget. Similar to the 2020 budget process, SPP utilized an incremental-based budget approach at the department level for operating expenses.

Operating expenses represent the largest component of SPP's NRR and consist of budgeted costs for ongoing operation. Once the operating budgets were created, management reviewed justifications for significant changes from the current 2020 forecast. The Resource Utilization section of this document discusses material changes in detail.

Capital projects are investments in long-term assets required by SPP to meet its strategic goals and operational requirements. These capital expenditures represent costs incurred to enhance or expand current systems and services and/or to maintain existing capabilities. SPP budgets for ongoing foundation expenditures and specific planned capital projects. The foundation budget captures hardware and software to support SPP's business applications. This includes upgrades and replacements of SPP's aged hardware infrastructure and expenditures for new enterprise technologies driven by security requirements, application and architectural enhancements and legacy growth.

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

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

Major assumptions used to create the 2021 budget include, but are not limited to, the following.

Compensation expense is the largest component of the operating budget. SPP began increasing staffing levels during 2019 to accommodate both western expansion and engineering efforts to better manage generation interconnection (GI) studies. In light of the recent growth, SPP made a decision to defer any incremental headcount until 2022 budget and later. SPP directors review open positions throughout the year and are expected to identify efficiencies in existing staff in order to manage incremental headcount needs via attrition.

The SPP Human Resources Committee meets annually to determine funding required to maintain company compensation levels at the 50th percentile of a predetermined peer group. This budget assumes merit and promotion funding of 2.5 percent and 0.75 percent, respectively.

2020 true-up of Schedule 1A: Net favorable variances to budget in revenues and operating expenses result in a projected over-recovery of SPP's costs in 2020. The estimated over-recovery of \$16.6 million is included in the 2021 budget as a reduction to the 2021 NRR.

Increases in the 2021 budget are offset by the expected 2020 over-recovery resulting in a 2021 budget NRR that is \$0.3 million more than the 2020 forecast NRR. Restrictions in activities as a

result of the COVID-19 pandemic caused expenses in the 2020 forecast to be considerably lower than expected.

OPERATING PLAN

SPP's 2021 Operating Plan considers the changing business environment along with the many opportunities and challenges affecting SPP such as cybersecurity risks, a changing generation mix, electrification impacts, regulatory changes and SPP's expansion into the west.

The SPP board of directors approved the finance committee's recommendation to adopt the 2021 Operating Plan as the foundation for the 2021 operating and capital budgets at the July 2020 board meeting. The 2021 Operating Plan is the culmination of months of work by SPP staff to document the operating environment and activities SPP anticipates for 2021. The plan identifies several corporate objectives in 2021 along with departmental objectives and specific project efforts.

Significant among the corporate objectives is a renewed focus on enhancing the connection between SPP and its membership. Changes at the most senior levels of SPP during 2020 require attention to the relationships that bind SPP and its members. SPP must ensure it performs as, and is viewed as, a solution to the regional issues impacting all members. Other corporate objectives include reducing the generation interconnection studies backlog, implementing improvements to transmission study processes and providing services to utilities in the western interconnection.



The 2021 NRR of \$155.3 million includes an anticipated prior-year over recovery of \$16.6 million from 2020.

The 2021 Operating Plan documents various projects addressing both operational needs and efficiency efforts. No new projects have been added to the work pipeline from the 2020 Operating Plan. Capital expenditures are discussed in detail in section V.

The Operating Plan document in its entirety is included following the supplementary schedules in section IX.

NET REVENUE REQUIREMENT (NRR)

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

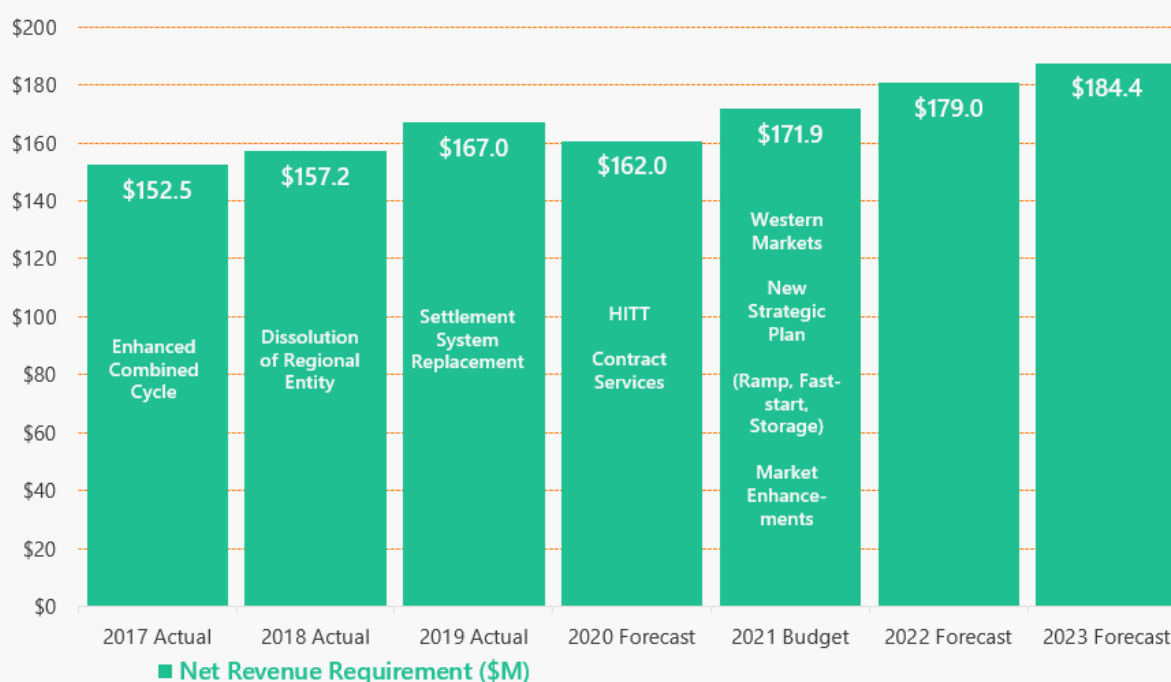
Miscellaneous revenues provide a reduction in the NRR calculation and include reimbursements for engineering studies and other revenue sources such as joint operating agreements, miscellaneous rebates, reserve sharing and circuit reimbursements.

Revenues, in excess of associated expenses, generated from specific services provided by SPP under standalone contractual agreements also provide a reduction in the NRR calculation.

A projected over-recovery for 2020 provides a \$16.6 million reduction to the 2021 NRR, which is excluded from the table below.

NET REVENUE REQUIREMENT AND SPP INITIATIVES

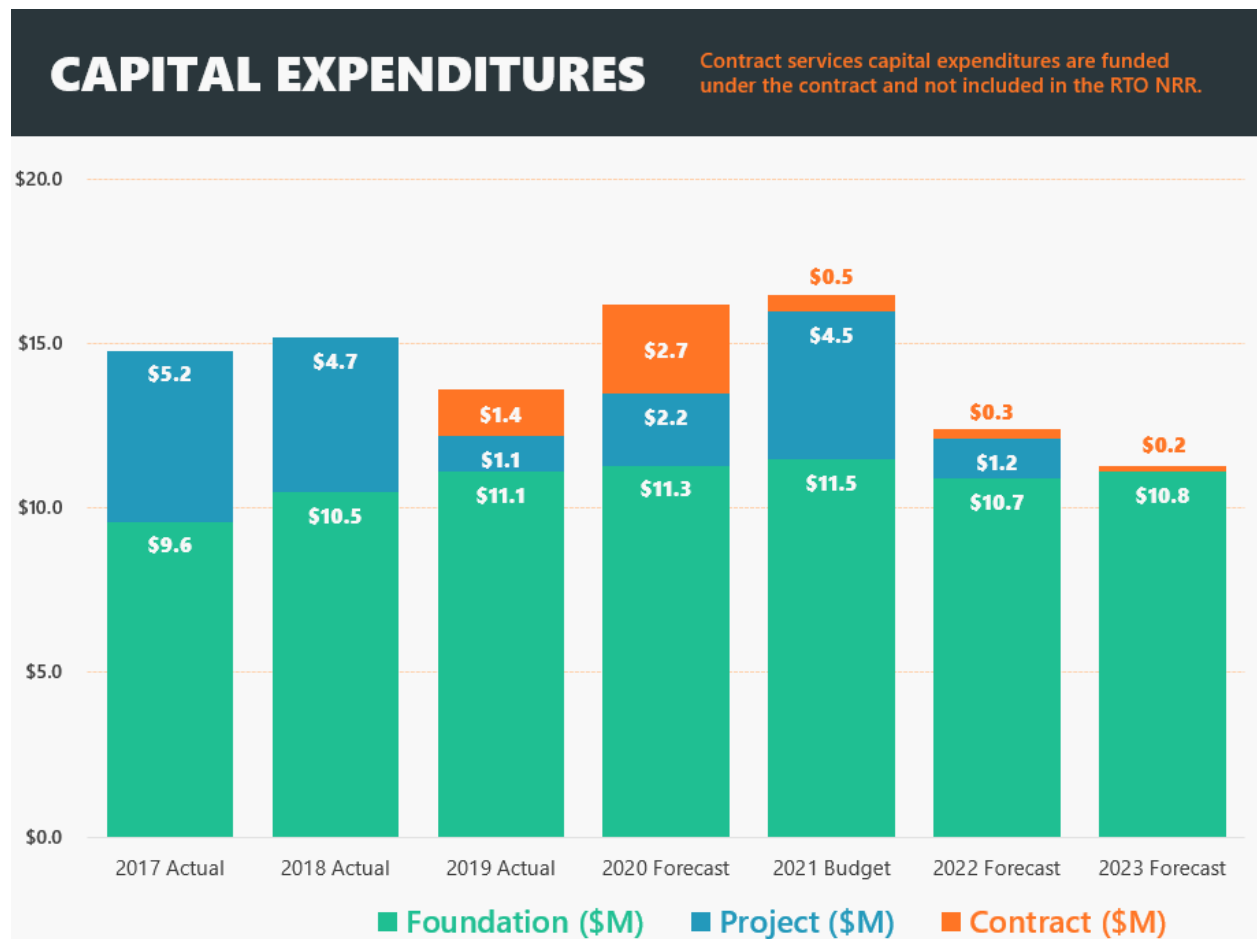
Chart reflects the actual NRR for 2017-2019 and the budgeted/forecasted NRR for 2020-2023. The 2020 and 2021 NRR excludes prior-year true-up amounts.



CAPITAL EXPENDITURES

The 2021 budget identifies capital expenditures totaling \$38.6 million for 2021-2023, plus \$1.0 million for contract services. These monies represent investments in various initiatives, each of which is driven by either stakeholder requests, compliance-related concerns or capital spending intended to maintain and improve SPP’s capabilities and services.

Projects are consistently evaluated throughout the year under oversight of SPP’s internal Project Review and Prioritization Committee (PRPC). Reprioritization due to new developments and/or resource constraints throughout the rest of 2020 and into 2021 could potentially impact the project portfolio. Capital expenditures planned for 2021 could be impacted by: 1) addition of projects not currently reflected in the budget, 2) deferrals of projects into future years, 3) elimination of projects due to time constraints and/or completion of the project without incurring capital costs, or 4) costs carried forward into 2021 for projects not completed as planned during 2020.

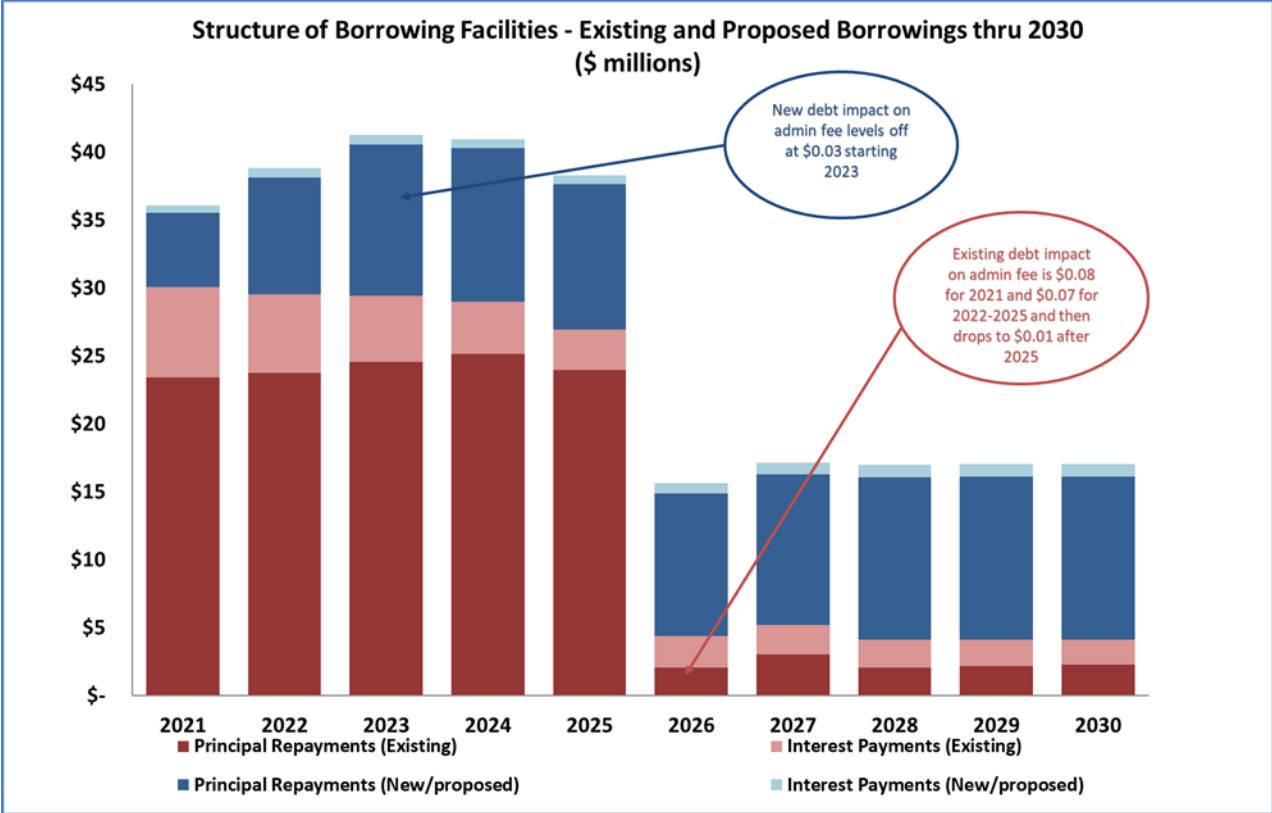


The capital projects section VI. describes noteworthy projects in detail, and a complete list of initiatives and associated capital budgets appear in the supplementary schedules section X.

DEBT SERVICE

Debt service is the second largest component of the NRR following operating expenses.

The balance of SPP's outstanding long-term borrowings will equal \$190.2 million at the beginning of 2021. Debt repayments will total \$32.3 million during 2021, \$28.9 million recovered within SPP's NRR, the remainder covered under contracts. In 2019, SPP began utilizing the \$80 million revolving line of credit that was obtained in 2018 to fund capital expenditures. Draws from the line of credit are converted into four-year term notes after year end, and the first such conversion took place in 2020 in the amount of \$11 million for 2019 draws for capital expenditures. SPP's annual debt repayments will continually increase over the next three years due to the addition of the new annual term note issuances. Annual debt obligations for these term notes is projected to level off beginning in 2023, becoming approximately equal to SPP's annual capital expenditures on a rolling average basis. Except for Chenal campus mortgage, by 2026 SPP will have paid off all borrowings that were obtained to fund capital expenditures for projects prior to 2019, including the Integrated Marketplace and Project Pinnacle. As a result, based on current projections the annual debt obligations are projected to decrease significantly to approximately \$16.3 million beginning in 2026.



More details are included in the debt section IX.

III. VALUE DRIVERS

SPP collaborates with members, market participants, regulators and ratepayers through an inclusive and transparent stakeholder process. It takes time to achieve consensus, adhere to impeccable standards and strive to continuously learn, grow and become more efficient and effective. Because of this approach, SPP provides significant value and earns top-tier stakeholder satisfaction scores year after year.

MEMBER-DRIVEN CULTURE

SPP is value-oriented and works to ensure that its people and processes align with its members’ goals.

SPP’s transparent and collaborative stakeholder process governs all that it does. The independent board of directors oversees dozens of committees, working groups and task forces. In these groups’ meetings - nearly all of which are open to the public - member representatives and SPP staff work toward consensus on the organization’s strategic direction,

financial decisions, processes and procedures and more. Everyone is welcome to participate in the process.

SPP manages change by building consensus. A stakeholder prioritization process gives members whose support and input SPP depends on the chance to provide direct input into prioritization of project work and changes to market protocols, governing documents and more.

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



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

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

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

MAJOR SERVICES

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

SPP's primary service is reliability coordination: helping our members keep the lights on. The North American Electric Reliability Corporation certified SPP as a reliability coordinator to guarantee reliable delivery of electricity to consumers by maintaining a wide-area view of the grid's current state and future conditions.

SPP's wholesale electricity markets determine the resources needed to economically ensure reliability and then dispatch the most cost-effective generation to meet demand and mitigate congestion in real-time. Working in tandem with SPP's other services, SPP's Integrated

Marketplace has produced the lowest wholesale electricity costs in the nation. Since it launched in 2014, the Integrated Marketplace has yielded an average of \$776 million in annual savings derived from lower wholesale electricity costs, reductions to excess capacity requirements and other efficiencies



SPP's average wholesale electricity prices remain the lowest of any organized market in the U.S.

facilitated by SPP's robust market processes. SPP's markets have produced more than \$3.5 billion in cumulative benefits to the region since their launch in 2014. They also complement RC services by enabling operations staff to spend more time addressing circumstances that require manual intervention and critical thinking. This type of partnership is at the heart of SPP's belief that reliability and economics are inseparable.

Since 2004, SPP has directed nearly \$10.4 billion in transmission construction and upgrades. These projects are modernizing the grid, enabling access to renewables and other generation that has enhanced reliability and lowered wholesale electricity costs. From 2005-2019, more than \$8.4 billion of transmission projects have been completed, and another \$2 billion are scheduled to be put in service by 2026. A recent study based on real-world data showed that every dollar SPP directs toward transmission expansion will return \$3.50 in expected benefits. SPP's Value of Transmission report and supplementary materials regarding the study are available at www.spp.org/value-of-transmission.

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

CONTINUOUS IMPROVEMENT

SPP embraces a strategy of continuous improvement and strives to always innovate, question the status quo and take every chance to cut costs, improve outcomes and work more efficiently. It's a practice that yields big returns for our stakeholders.

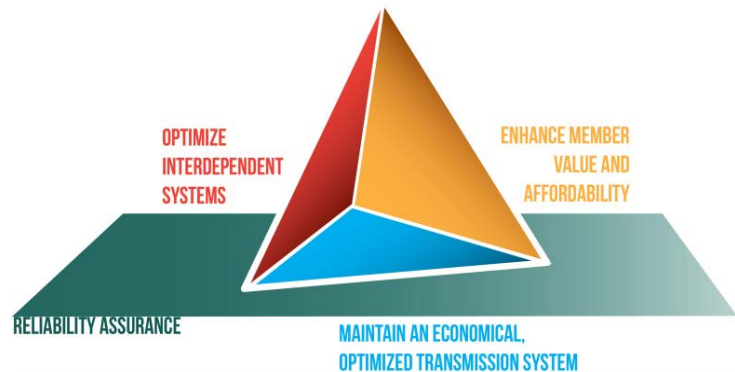
Through process improvements, efficiencies and the constant maturation of its business practices, SPP has expanded territory and service offerings, adapted to changing requirements and circumstances and saved members billions of dollars, and we've done it all while helping them achieve their own goals of providing affordable and reliable electricity to their customers.

IV. ALIGNMENT WITH THE STRATEGIC PLAN

SPP'S STRATEGIC PLAN

The Finance Committee (FC) and the Strategic Planning Committee (SPC) endorsed the 2021 Operating Plan as being aligned with SPP's strategic plan.

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



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

The 2021 Operating Plan outlines goals to complete the remaining initiatives from the Holistic Integrated Tariff Team recommendations adopted by the SPP Board of Directors in July 2019. The 2021 Operating Plan discusses the creation and adoption of a new, improved strategic plan for SPP scheduled for review by the SPP Board of Directors in April 2021.

V. 2021 NET REVENUE REQUIREMENT

NET REVENUE REQUIREMENT

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

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

Income Statement

<u>\$ millions</u>	<u>2020 Budget</u>	<u>2020 Forecast</u>	<u>2021 Budget</u>	<u>2021 Prior</u>
Income				
Tariff Administration Service	\$172.3	\$171.6	\$155.3	\$179.6
Fees & Assessments	23.7	25.6	23.1	24.4
Contract Services Revenue	5.6	6.2	10.2	10.8
Miscellaneous Income	9.3	9.3	11.5	9.5
Total Income	\$210.9	\$212.7	\$200.2	\$224.2
Expense				
Salary & Benefits	\$104.6	\$107.6	\$107.8	\$108.7
Communications & Maintenance	24.2	22.4	22.8	24.7
Assessments & Fees	22.4	22.3	22.5	23.5
Outside Services	19.7	16.8	19.0	16.3
Depreciation	19.5	18.8	18.1	19.8
Administrative / Other	15.7	8.4	13.3	14.6
Travel & Meetings	2.9	0.6	1.4	3.0
Total Expense	\$209.1	\$197.0	\$204.9	\$210.5
Net Income (Loss)	\$1.9	\$15.7	(\$4.7)	\$13.7
Debt Repayment	\$25.6	\$25.4	\$32.3	\$33.9
Net Revenue Requirement	\$172.3	\$155.0	\$155.3	\$179.6

Total expenses (excluding depreciation and FERC assessments) are expected to be \$164.3 million in 2021, an increase of \$8.4 million compared to the 2020 forecast. Items included in the administrative/other budget are primarily interest expense and various other administrative items such as insurance expense, property taxes, dues, utilities, etc. These items reflect a marginal increase of \$0.3 million over the 2020 forecast. The primary driver of the increase in administrative/other is associated with \$4.9 million in income from the partial liquidation of the retiree healthcare plan in 2020 that serves as an offset to the total NRR, plus various non-cash valuation items in 2020 that do not impact the NRR.

The increases in 2021 for outside services is primarily related to engineering studies and the industry expert panel (IEP) costs associated with Order 1000 (which are offset by pass-thru revenues) and for legal services related to FERC litigation associated with the zonal placement process. The increase in the 2021 budget over the 2020 forecast is also attributed to lower expenses in 2020 associated with the COVID-19 pandemic (travel, meetings, administrative expenses).

The salary and benefits budget assumes a merit increase of 2.5 percent, a promotion increase of 0.75 percent and a vacancy factor of 2.5 percent (which is comparable to 2020 forecasted vacancy). This overall increase in the 2021 budget is reduced by the taxes associated with the partial liquidation of the retiree healthcare plan that occurred in June 2020.

The following tables illustrate the calculation of the NRR. The 2021 calculation includes funding of the 2021 capital reserve (20% of RTO capital expenditures) and an adjustment to NRR to account for expected over-recovery in 2020. Based on the NRR and the expected transmission usage, the 2021 calculated rate remains under the 43.0¢ cap as approved by FERC.

Net Revenue Requirement (NRR)			
(\$ millions)	2020 Forecast ⁽²⁾	2021 Budget	2021 Prior Estimate ⁽³⁾
Total expense (excluding deprec., FERC and interest exp.) ⁽¹⁾	\$146.8	\$150.8	\$152.4
Debt service - principal payments	24.6	28.9	30.4
Debt service - interest expense	8.2	7.5	7.8
Capital expenditure reserve	3.1	3.2	2.9
Western contract services shared overhead	(4.7)	(2.2)	(0.3)
Gross revenue requirement	\$177.9	\$188.1	\$193.3
Less:			
NRR adjustments ⁽⁴⁾	(12.5)	(20.2)	(3.3)
Other revenues	(10.4)	(12.6)	(10.4)
Net revenue requirement	\$155.0	\$155.3	\$179.6
<i>(1) Total expense excludes RC West and WEIS expenses.</i>			
<i>(2) Expenses for 2020 also exclude non-cash items such as swap valuation adjustments and realized/unrealized gains on investments.</i>			
<i>(3) 2021 Prior Year Estimate refers to the 2021 estimate made during the 2020 budget presentation.</i>			
<i>(4) Explanation provided in the section below.</i>			

Debt service comprises the second largest component of NRR. The increase in debt service over the 2020 forecast is solely due to higher scheduled principal repayments under SPP's credit and note purchase agreements.

NRR Adjustments (\$ millions)			
NRR Adjustments (\$ millions)	2020 Forecast	2021 Budget	2021 Prior Estimate
Pension & retiree healthcare (non-cash)	(\$5.6)	(\$3.7)	(\$3.3)
2019 Over-recovery	(2.1)		
2020 partial liquidation of retiree healthcare plans	(4.9)		
2020 Projected over-recovery		(16.6)	
Total NRR adjustments	(\$12.5)	(\$20.2)	(\$3.3)

The 2020 projected over-recovery is associated with various offsetting revenue and expense variances throughout 2020.

2020 Projected over-recovery	
Retiree healthcare partial liquidation	\$4.9
2020 western contract services shared overhead	4.7
Cost savings associated with pandemic *	2.7
Other operating expense savings	3.1
Decrease in debt service associated with delays	1.3
Lower cash pension contributions	0.5
New contract services revenues	(0.3)
Miscellaneous other	(0.4)
Total 2020 projected over-recovery	\$16.6

** Travel, meetings & administrative expenses*

Although the 2021 budget NRR exceeds the 2020 forecast NRR by only \$0.3 million, several areas are notably higher than the 2020 forecast. The increases are partially attributed to restrictions in activities as a result of the pandemic that caused expenses in the 2020 forecast to be considerably lower than expected. These overall increases in the 2021 budget are largely offset by the expected 2020 over-recovery.

The table below outlines changes in the NRR from the 2020 forecast to the 2021 budget.

**Change in NRR
2020 Forecast vs. 2021 Budget**

2020 NRR Forecast (excluding PY true-up & RHC liquidation cash)	\$162.0
Western contract services shared overhead	2.5
Increase in debt service (principal & interest)	3.8
Increase in compensation (excluding non-cash adjustments)	1.5
Increases in travel, meetings & administrative	1.1
Net increases in maintenance, communications & outside services	0.8
Elimination of IM virtual transaction fees in 2021	0.7
Net miscellaneous other increases/decreases	0.7
Increase in engineering studies staff time revenues	(1.3)
2021 NRR Budget (excluding PY true-up)	<u>\$171.9</u>
Prior-year over-recovery	<u>(16.6)</u>
2021 NRR Budget (including PY true-up)	\$155.3

The western services contracts are administered to provide recovery of all direct costs incurred by SPP under the contracts, as well as an allocation of shared overhead which reduces SPP's NRR. The 2021 budget includes \$9.9 million in revenues for western services contracts and \$2.2 million for shared overhead recovery that translates 1 for 1 in reducing SPP's NRR in 2021. The reduction in the 2021 NRR related to western contract services shared overhead is comprised of \$0.4 million of overhead incurred during WEIS implementation and \$1.8 million of overhead related to operational activities for both RC West and WEIS.

TARIFF RATE CAP

The SPP tariff currently limits the annual budgeted NRR to a ratio not exceeding 0.43:1 of estimated annual transmission usage (expressed in MWh). This limitation is a legacy limit based on SPP's single bundled rate recovery structure where costs were recovered from all transmission customers. This requires the budgeted NRR, when divided by estimated transmission billing determinants for the budget year, to be at or below a specific rate stipulated in the tariff. The specific rate cap in effect for the 2021 budget year is 43¢ per MWh.

Actual billing determinants from August 2019 thru July 2020 are used for estimating transmission billing determinants per SPP's documented process as outlined in the Schedule 1A Task Force Whitepaper dated April 2019. SPP recorded 371,084,817 MWhs of network transmission billing units and 21,134,484 MWhs of point-to-point transmission billing units for August 2019 thru July 2020 which totaled transmission usage of 392,219,301 MWh.

SPP’s budgeted NRR for the 2021 fiscal year is \$155.3 million, as described throughout the budget document. Comparing the NRR to the estimated transmission usage yields a ratio of 0.396:1, which falls within the limitations in the tariff.

FUTURE FORECASTING

SPP constructs a three-year budget plan each year in accordance with the tariff. The basis for the five-year forecast is the 2021–2023 budget with only inflation adjustments applied to the operating expenses for 2024-2025. The transmission usage for 2024 and 2025 remain equal to the 2021 budget of 392.2 TWh.

The prior year adjustment applied in 2021 results in a lower NRR than the subsequent years. The calculated rate for 2021 falls within the FERC rate cap of \$0.43; however, the calculated rate for future years exceeds the cap beginning in 2022.

	<u>2021 Budget</u>	<u>2022 Forecast</u>	<u>2023 Forecast</u>	<u>2024 Forecast</u>	<u>2025 Forecast</u>
Net Revenue Requirement	\$155.3	\$179.0	\$184.4	\$186.8	\$186.2
MWh Forecast (in millions)	392.2	392.2	392.2	392.2	392.2
Calculated rate for FERC cap	\$0.396	\$0.456	\$0.470	\$0.476	\$0.475

Capital expenditures for 2024 and 2025 are assumed to be consistent with the 2023 forecast with only inflation adjustments applied. Consistent with the budget for 2021-2023, SPP has included collection of 20 percent of the forecasted capital expenditures for each year in 2024 and 2025. This collection will serve to reduce future financing costs.

SPP Five Year Forecast					
	2021 Budget	2022 Forecast	2023 Forecast	2024 Forecast	2025 Forecast
Income					
Tariff Administration Service	\$155.3	\$178.7	\$184.3	\$186.8	\$186.2
Fees & Assessments	23.1	23.6	24.1	24.6	25.1
Contract Services Revenue	10.2	10.4	10.5	10.7	10.9
Miscellaneous Income	11.5	11.2	11.1	11.4	11.6
Total Income	\$200.2	\$224.0	\$230.1	\$233.5	\$233.8
Expense					
Salary & Benefits	\$107.8	\$111.0	\$114.3	\$116.6	\$118.9
Depreciation	18.1	18.5	17.4	17.8	18.1
Communications & Maintenance	22.8	23.4	24.0	24.5	25.0
Outside Services	19.0	18.4	17.9	18.2	18.6
Administrative / Other	13.3	12.6	11.6	10.3	9.5
Assessments & Fees	22.5	22.9	23.4	23.8	24.3
Travel & Meetings	1.4	2.4	2.5	2.6	2.6
Total Expense	\$204.9	\$209.2	\$211.1	\$213.9	\$217.1
Net Income (Loss)	(\$4.7)	\$14.7	\$18.9	\$19.6	\$16.7
Debt Repayment	\$32.3	\$35.9	\$39.3	\$39.3	\$33.9
Net Revenue Requirement	\$155.3	\$179.0	\$184.4	\$186.8	\$186.2
Capital Expenditures	\$16.0	\$11.8	\$10.8	\$11.0	\$11.3

VI. CAPITAL PROJECTS

SPP expects 2021-2023 capital expenditures to be approximately \$38.5 million.

Beginning in early 2020, a comprehensive list of projects was compiled in consideration for the 2021-2023 budget under the direction of SPP’s PRPC and in collaboration with staff from the project management office (PMO), accounting and IT departments. These projects are in addition to the foundation capital expenditures for IT, operations, engineering, settlements and facilities for routine refresh and upkeep.

The PRPC is comprised of all SPP departmental directors and is responsible for ensuring the effective and efficient use of SPP resources, including staff and capital funds. The PRPC reviews all SPP enterprise project requests and only approves projects aligned with SPP’s foundational strategies and justified by a project business case. For the 2021-2023 budget planning cycle, the PRPC recommended a portfolio of 14 projects to the SPP officer team. There were no incremental headcount requests for any of the projects submitted.

The 2020 recommendation was notable for at least two reasons: 1) it is the first time the PRPC recommended projects as a portfolio of projects, in various stages of implementation,

consistent with the project pipeline and portfolio management principles adopted by the PRPC, and 2) there were no new projects being presented as part of this recommendation. Each project represented in the recommendation had previously been reviewed and approved by the PRPC and officers, although some had been on hold or postponed for various reasons. The officers ultimately approved the 14 project portfolio as recommended by the PRPC to be included in the 2021-2023 capital budget.

The following table summarizes the capital impact of projects for the 2021-2023 budget cycle, including projects approved in previous years not completed in 2020.

2021 - 2023 Capital Expenditures (\$ millions)						
	Prior Year(s)	2021 Budget	2022 Forecast	2023 Forecast	Total Capital	
Capital Projects						
EMS, CMT & Markets Upgrade	\$ 0.2	\$ 1.8	\$ 1.2	\$ -	\$ 3.2	
Markets & Reliability Training Simulator (formerly DTS)	1.3	0.9	-	-	2.2	
Ramp Product	0.3	0.5	-	-	0.8	
Identity Access Management Deployment (IAM)	0.2	0.3	-	-	0.5	
FERC Order 841: Electric Storage	0.2	0.2	-	-	0.4	
Tagit/Scert Rewrite	0.1	0.2	-	-	0.3	
Freeze Date Replacement	-	0.2	-	-	0.2	
Fast-Start Resource Compliance	-	0.2	-	-	0.2	
Interface Pricing & Pseudo Tie Modeling	-	0.2	-	-	0.2	
Total Capital Projects	\$ 2.3	\$ 4.5	\$ 1.2	\$ -	\$ 7.9	
Foundation						
Information Technology		\$ 7.6	\$ 7.9	\$ 8.1	\$ 23.6	
Operations		2.9	2.3	2.3	7.4	
Engineering		1.0	0.4	0.4	1.8	
Facilities		0.1	0.1	0.1	0.2	
Total Foundation *	\$ -	\$ 11.5	\$ 10.7	\$ 10.8	\$ 33.0	
Total Capital Budget	\$ 2.3	\$ 16.0	\$ 11.8	\$ 10.8	\$ 40.9	
2021-2023 SPP Capital Budget					\$ 38.6	
Contract Services						
RC West - EMS Upgrade	\$ 0.0	\$ 0.2	\$ 0.1	\$ -	\$ 0.4	
RC West - PMU		0.1	-	-	0.1	
WEIS Ongoing WEIS Market Enhancements		0.2	0.2	0.2	0.6	
Total Contract Services (funded thru contract revenues)	\$ 0.0	\$ 0.5	\$ 0.3	\$ 0.2	\$ 1.0	

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

CARRYOVER PROJECTS

Certain projects were approved to start in previous years and have capital spend associated with the completion of those projects in the 2021-2023 budget cycle. A narrative is provided below to serve as a brief overview of each project and a current update on its status.

Markets & Reliability Training Simulator (formerly DTS Upgrade)

This multiyear project serves to upgrade the dispatcher training simulator in order to increase availability to real-time operations staff, configure simulation displays to match those used on the operations floor and incorporate market functionality to provide a more realistic simulation experience. This final phase of the multi-year Dispatcher Training Simulator (DTS) project includes the build and integration of simulation software for market functionality to create a Markets and Reliability Training Simulator (MRTS). It consists of the following three phases of work:

- Phase 2B-1: Requirements, system design and implementation of some of the core infrastructure. Expected completion to occur in Q3'20.
- Phase 2B-2: Design, installation, testing and implementation of a basic MRTS. Expected completion to occur in Q1'21.
- Phase 2B-3: Design and implementation of functionality to provide SPP instructors with the ability to simulate additional subsystems such as automation features that make the creation of scenarios easier. This phase will commence with the completion of Phase 2B-2 and the project is expected to wrap up in early Q3'21.

	Prior	2021	2022	2023	
Markets & Reliability Training Simulator (formerly DTS)	Year(s)	Budget	Forecast	Forecast	Total
Project Capital	\$ 1.3	\$ 0.9	\$ -	\$ -	\$ 2.2
IT Capital	-	-	-	-	-
Department Operating	-	-	-	-	-
IT Operating	-	-	-	-	-
Total Cost	\$ 1.3	\$ 0.9	\$ -	\$ -	\$ 2.2

Ramp Product

Due to increasing renewable penetration and interchange flexibility, net load variations and uncertainties impose challenges to maintain real-time power balance. These challenges are a threat both to the security of the grid and the health of SPP's Integrated Marketplace. The ramping product will provide a market-based approach for ramp management that leverages existing operational experiences to systematically pre-position resources with ramp capability

to manage net load variations and uncertainties and to provide transparent price signals to incent resource flexibility and economic investment.

This project addresses the impact that resource ramp shortages in the market cause with respect to short-term spikes in market prices by designing methods to better anticipate the need for responsive resources in the market.

The project was approved in 2019 with a capital budget of \$0.2M based on an internal estimate. During 2Q'20 the vendor returned a statement of work (SOW) in the amount of \$0.7M. In addition to the SOW, the project will require staff augmentation of \$0.1M. The project requirements are expected to be finalized during 3Q'20, with an expected implementation date in 4Q'21.

Ramp Product	Prior Year(s)	2021 Budget	2022 Forecast	2023 Forecast	Total
Project Capital	\$ 0.3	\$ 0.5	\$ -	\$ -	\$ 0.8
IT Capital	-	-	-	-	-
Department Operating	-	-	-	-	-
IT Operating	-	-	-	-	-
Total Cost	\$ 0.3	\$ 0.5	\$ -	\$ -	\$ 0.8

Identity and Access Management (IAM) Deployment

IAM addresses the need to ensure appropriate access to resources across diverse technology environments and to meet increasingly rigorous compliance requirements. SPP is exposed to significant cybersecurity and compliance risk along with reduced operating efficiency due to continued use of manual processes.

This project involves installing the IAM solution in production to run user-access certification campaigns and support provisioning and de-provisioning of access for a defined set of targets in a phased approach. The solution will also establish a support model to accommodate ongoing development needs across all environments, including on-boarding of access to additional applications and systems.

In 2020, a vendor was engaged to assist with the deployment of the software solution that was previously acquired. This effort includes defining SPP's business procedures related to an overall IAM strategy by conducting assessments. This review and evaluation phase is expected to conclude during 3Q'20 and reconfiguration of the solution is expected to commence in 4Q'20. Implementation is targeted to take place in 1Q'22.

	Prior Year(s)	2021 Budget	2022 Forecast	2023 Forecast	Total
Identity Access Management Deployment (IAM)					
Project Capital	\$ 0.2	\$ 0.3	\$ -	\$ -	\$ 0.5
IT Capital	-	-	-	-	-
Department Operating	-	-	-	-	-
IT Operating	-	-	-	-	-
Total Cost	\$ 0.2	\$ 0.3	\$ -	\$ -	\$ 0.5

FERC Order 841: Electric Storage

This project consists of SPP software system changes and process changes to comply with FERC Order 841. The order's requirements remove barriers to participation of electric storage resources in ISO/RTO capacity, energy and ancillary markets.

The vendor originally began work on requirements and design activities for market system enhancements in late 4Q'18 with an expected delivery date of March 2019. However, updates to the settlements system were also required as part of the project, and given the delay in the completion of the settlements project, a decision was made to place this project on hold until after the new settlements system went live in early 2020. As a result of FERC mandating an implementation date of August 3, 2021 in response to SPP's 4Q'19 filing, the project has recently resumed in order to meet that date. The target implementation date is now July 1, 2021.

	Prior Year(s)	2021 Budget	2022 Forecast	2023 Forecast	Total
FERC Order 841: Electric Storage					
Project Capital	\$ 0.2	\$ 0.2	\$ -	\$ -	\$ 0.4
IT Capital	-	-	-	-	-
Department Operating	-	-	-	-	-
IT Operating	-	-	-	-	-
Total Cost	\$ 0.2	\$ 0.2	\$ -	\$ -	\$ 0.4

Transmission & Generation Implementation Tracking (TAGIT)/ Standardized Cost Estimation Reporting Template (SCERT) Rewrite

The existing TAGIT and SCERT tools are used by SPP planning engineering staff and SPP transmission owners with oversight provided by the Project Cost Working Group (PCWG). These tools help facilitate tracking of projects and the SPP Transmission Expansion Plan (STEP), and issuance of notification to construct (NTC) as described in SPP Business Practice 7060, Business

Practice 7160, Attachment O of the SPP Open Access Transmission Tariff (OATT) and Attachment Y of the SPP OATT.

The goal of this project is to enhance the platform to allow operators to focus on data analysis, remove potential barriers for additional operators to cross-train and improve data integrity. These changes will help streamline the utilization of the tools and provide more consistent and higher quality NTC letters and project tracking reports.

The design phase was completed and development commenced in 2Q'20. Utilizing more internal resources than originally contemplated is expected to bring the project significantly under budget. The new tool, which is planned for implementation in 1Q'21, will be renamed Transmission Reporting and Communication (TRAC).

Tagit/Scert Rewrite	Prior Year(s)	2021 Budget	2022 Forecast	2023 Forecast	Total
Project Capital	\$ 0.1	\$ 0.2	\$ -	\$ -	\$ 0.3
IT Capital	0.0	-	-	-	0.0
Department Operating	-	-	-	-	-
IT Operating	0.0	0.0	0.0	0.0	0.0
Total Cost	\$ 0.1	\$ 0.2	\$ 0.0	\$ 0.0	\$ 0.3

2020-2022 CAPITAL PROJECTS

A discussion for all projects commencing in 2021-2023 is presented below. Costs presented for each project include all capital and operating costs expected during 2021-2023 associated with the implementation and ongoing maintenance of these projects. The IT Capital portion of these projects is included in the IT Foundation budget as discussed in a later section while the operating expenses associated with these projects are included in the operating expense budgets for the respective departments.

EMS CMT Markets Software Upgrade

This project addresses the hardware refresh and software upgrade required to continue operations of the EMS, CMT and Markets applications. Both the system software and the hardware used for the systems are due for refresh by December 2022. In addition, a time frequency device must be replaced in conjunction with this project no later than September 2022, which is the timeline for this project. The EMS and Markets systems are critical CIP applications that require continual patch source and vendor support to operate reliability and market functions.

This project has appeared in the forecast for the last two budget cycles with an estimated budget of \$5.7 million and a 2021 projected start date. Over the past few months, the SPP technical team has worked closely with the vendor to define specific requirements and timelines which resulted in a revised, lower estimate of \$3.5 million. Preliminary work is expected to commence in late 2020 in order to minimize risk and ensure adequate vendor resource availability.

	Prior	2021	2022	2023	
EMS, CMT & Markets Upgrade	Year(s)	Budget	Forecast	Forecast	Total
Project Capital	\$ 0.2	\$ 1.8	\$ 1.2	\$ -	\$ 3.2
IT Capital	-	-	-	-	-
Department Operating	-	-	-	-	-
IT Operating	-	-	-	-	-
Total Cost	\$ 0.2	\$ 1.8	\$ 1.2	\$ -	\$ 3.2

Freeze Date Replacement

SPP’s congestion management process details the method used to allocate rights for transmission service on flowgates having shared impacts between one or more parties (“CMP members” – Midcontinent Independent System Operator (MISO), SPP, PJM Interconnection, LG&E and KU Energy, the Tennessee Valley Authority (TVA) and Manitoba Hydro (MHEB)) based on a methodology that employs a baseline of transmission reservations set in 2004, known as the Freeze Date.

The overarching objective of the project will be to update the process that calculates firm flow entitlements (FFE) on reciprocal constraints used in the real-time congestion processes in accordance with new rules and requirements agreed upon by CMP members.

The project was broken into two phases. Phase I of the project allows new designated network resources (DNRs) to participate in the allocation process, and was implemented in June of 2018 with no vendor software changes required.

SPP is currently working with other CMP members to develop and implement Phase II. The Phase II design is intended to better align the allocation process with the CMP members’ respective planning processes. Phase II will require vendor system changes and is expected to be implemented in June 2022.

	Prior Year(s)	2021 Budget	2022 Forecast	2023 Forecast	Total
Freeze Date Replacement					
Project Capital	\$ -	\$ 0.2	\$ -	\$ -	\$ 0.2
IT Capital	-	0.1	-	-	0.1
Department Operating	-	-	-	-	-
IT Operating	-	0.0	0.0	0.0	0.0
Total Cost	\$ -	\$ 0.4	\$ 0.0	\$ 0.0	\$ 0.4

Fast-Start Resource Compliance

FERC opened a proceeding to examine price formation in organized markets in 2014. The proceeding aimed to ensure that pricing rules established in RTO/ISO markets would satisfy four objectives: 1) maximize market surplus for consumers and suppliers, 2) provide correct incentives for market participants to follow commitment and dispatch instructions, make efficient investments in facilities and equipment, and maintain reliability, 3) provide transparency so that market participants understand how prices reflect the actual marginal cost of serving load and the operational constraints of reliably operating the system and 4) ensure that all suppliers have an opportunity to recover their costs.

In December 2017, FERC opened a 206 proceeding to investigate SPP's practices regarding the pricing of fast start resources and in July 2019, issued an order finding that SPP's fast start resource pricing practices were unjust and unreasonable. SPP filed its response to the issues raised in the Section 206 proceeding in December 2019. FERC issued its order in July 2020, accepting SPP's compliance filing subject to further compliance as described in the order. The FERC order requests SPP to specifically address certain issues around the requirement to allow commitment costs of fast-start resources to be reflected in day-ahead and real-time prices. FERC also requested that SPP propose an effective date for the proposed tariff revisions and an estimate of when the development, testing and implementation of the software system changes will be complete. SPP staff is currently assessing the overall project requirements and the timeline for implementation.

	Prior Year(s)	2021 Budget	2022 Forecast	2023 Forecast	Total
Fast-Start Resource Compliance					
Project Capital	\$ -	\$ 0.2	\$ -	\$ -	\$ 0.2
IT Capital	-	-	-	-	-
Department Operating	-	-	-	-	-
IT Operating	-	-	-	-	-
Total Cost	\$ -	\$ 0.2	\$ -	\$ -	\$ 0.2

Interface Pricing & Pseudo Tie Modeling

SPP will collaborate with MISO to design a common methodology for modeling pricing interfaces and treating pseudo-tie-congesting charges. Once SPP and MISO agree on a methodology, they will begin designing, testing and implementing the changes. Multiple vendor changes may be required to properly model the new interfaces. Settlement changes will be required to remove pseudo-tie overlapping congestion charges.

Interface Pricing & Pseudo Tie Modeling	Prior	2021	2022	2023	Total
	Year(s)	Budget	Forecast	Forecast	
Project Capital	\$ -	\$ 0.2	\$ -	\$ -	\$ 0.2
IT Capital	-	-	-	-	-
Department Operating	-	-	-	-	-
IT Operating	-	0.0	0.0	0.0	0.0
Total Cost	\$ -	\$ 0.2	\$ 0.0	\$ 0.0	\$ 0.2

FOUNDATION CAPITAL EXPENDITURES

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

IT Foundation

The IT Foundation budget captures corporate-wide hardware and software requirements to support SPP's business applications and systems. This budget is used for ongoing upgrades and replacements of SPP's aged hardware infrastructure, as well as incremental hardware, software, and application requirements driven by new corporate initiatives. The 2021 budget and 2022-2023 forecast by category for IT Foundation is illustrated below.

IT Foundation	2021	2022	2023	Total
	Budget	Forecast	Forecast	Capital
IT Infrastructure Refresh	\$ 7.1	\$ 7.6	\$ 7.7	\$ 22.3
New Initiatives	0.5	0.4	0.5	1.3
Total IT Foundation	\$ 7.6	\$ 7.9	\$ 8.1	\$ 23.6

IT Foundation – IT Infrastructure Refresh

This category includes upgrades and replacements of aged technology and software to support existing systems and services (markets, reliability, settlements, corporate functions, etc.).

	2021 Budget	2022 Forecast	2023 Forecast	Total Capital
IT Foundation				
IT Infrastructure Refresh				
Servers	\$ 2.9	\$ 3.1	\$ 3.1	\$ 9.1
Storage	1.7	1.8	1.8	5.3
Network	1.8	1.9	1.9	5.6
Software licenses and upgrades	0.7	0.8	0.8	2.2
Total IT Infrastructure Refresh	\$ 7.1	\$ 7.6	\$ 7.7	\$ 22.3

The major initiatives in the 2021 budget include the following:

- **Servers** It is the policy of IT to consider physical server replacements after a 5-6 year useful life based on many factors such as withdrawn support from the vendor, high failure rates, increased performance requirements, incompatibility with other technology and performance/economic considerations.

SPP has approximately 130 servers targeted for replacement during 2021. The cost per server ranges from \$10,000 to \$45,000 (capital expense portion), contributing to a total budget of \$2.8 million and roughly 40% of the IT Foundation budget. The server replacements include larger host machines that support SPP’s virtualized environment, along with dedicated servers to support a particular application.

- **Storage:** In late 2014, SPP invested in a \$6.5 million storage solution that included over 20 components of hardware and software, including production storage capacity (at Chenal and Maumelle), SAN switch technology, and backup hardware/software located at the Chenal, Maumelle and off-site data centers. As opposed to replacing all of this equipment at once, the team established a 2-3 year phased approach to better align with operational and budget impacts.

Some of this content was replaced in 2020, and IT plans to continue the initiative in 2021 to include:

- Electronic Security Perimeter (ESP) storage replacement
- Elastic Cloud Storage (ECS) growth for long-term storage retention
 - ECS is SPP’s on- premise cloud solution for storage that provides a significantly lower-cost platform than previous archival solutions
- Network attached storage (NAS) replacement and growth
- Data domain (long term storage retention) storage migration/replacement

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

The following key areas are planned to be addressed in 2021:

- Switch Upgrades/Replacements: The current switch technology running at Chenal and Maumelle is limited on the number of 40G interfaces and even more limited on the number of 100G interfaces. SPP is deploying additional 40G interfaces for new servers (utilized for server virtualization), and there is only one remaining slot for 10G/40G line cards. The upgraded switch technology will provide for much greater 40G capacity and accommodate 100G, which is expected to be introduced to SPP's network by 2022.
- Corporate Domain Group Access / Security Enhancements: In order to enhance security between the corporate user network and corporate server zones, SPP has been working with a consultant on a solution for group access at the corporate firewall, as well as a form of network access control that allows only SPP authorized machines to access the SPP corporate network based on criteria such as certificates.
- Multi-Factor Authentication (MFA): The existing phone factor solution does not scale well when deploying for internal and external applications and will be cost prohibitive if deployed for external applications that might have thousands of accounts that require MFA. There is an initiative to find a corporate wide MFA solution that will accommodate all of the applications that require multi-factor authentication.
- Office Building Switch Technology Refresh: The existing switching infrastructure for the Chenal office building (COB) was purchased in 2012 prior to occupying the COB. These switches will be at the end of the support agreement on 12/31/2021. Since next business day hardware support is no longer offered as of 5/1/2020, the hardware must be returned to the manufacturer's factory and wait for approximately ten days for diagnostic activities. SPP has targeted nine units for replacement in 2021.

- Software Licenses and Upgrades: SPP performs routine software upgrades and installations each year to maintain product currency, as well as to accommodate growth of user and/or server requirements. IT plans to perform upgrades to several applications in 2021 and acquire incremental licenses for a number of existing products. A summary of major activities by area is included below:
 - Service Management Team: The software utilized by the IT service management team to provide change management and software installation management will be evaluated and potentially replaced during 2021 due to product support issues and significant increases in vendor support costs. The software utilized to provide baseline inventories of CIP assets will be upgraded in 2021 to ensure SPP is running on a current supported version. SPP will utilize the software vendor to perform the upgrade.
 - Cyber Security and Quality Control: Additional licenses for the software utilized for vulnerability assessments and security risk management will likely be needed to keep up with the growing number of CIP qualifying assets. SPP acquired a software product in 2020 to comply with CIP13 supply chain requirements, specifically to assist with vendor risk assessments. A minimal set of licenses was initially purchased, but expectations are that additional licenses will be needed in 2021 as the vendor portfolio increases.
 - IT Applications, Database Administration, Architecture, and Data Services:
 - Database Licenses: Additional licenses for the database platform utilized for the settlements system will be needed in 2021 due to significantly greater consumption of storage and computing infrastructure over what was originally anticipated.
 - Security Access: SPP utilizes tools to secure and protect all privileged account passwords and secure shell (SSH) keys in a highly secure central repository to prevent the loss, theft or unauthorized sharing of credentials. The tool continues to be rolled out to new users and servers, requiring additional licenses.
 - Data Visualization: SPP utilizes software to collect, integrate, analyze and provide data visualizations to support better SPP business decision making. The current data visualization tool continues to be adopted by more business users/teams within SPP, driving the need for additional server and viewer licenses.

- Applications: SPP must make routine, ongoing changes to many business applications to allow for compatibility/coexistence with newer versions of the operating system, middleware, and databases. These application updates frequently require services and/or software fees from the vendor.

IT Foundation - New Initiatives

The new initiatives category consists of both software purchases related to new technology /functionality as well as incremental hardware and software associated with capital projects. While IT has a number of automation and product evaluation activities slated for 2021, there is a relatively limited number of new initiatives that will drive incremental capital spend. A summary of projects that is expected to drive additional spend is provided below.

	2021 Budget	2022 Forecast	2023 Forecast	Total Capital
IT Foundation				
New Initiatives				
Enterprise projects and other departmental initiatives	\$ 0.3	\$ 0.2	\$ 0.2	\$ 0.7
IT Software and architectural tools/enhancements	0.2	0.2	0.3	0.6
Total New Initiatives	\$ 0.5	\$ 0.4	\$ 0.5	\$ 1.3

Enterprise PRPC Projects

The PRPC and officer team approved a relatively small number of new projects to begin in 2021. While each project carries a dedicated capital budget, a nominal amount of incremental hardware and software impacts the IT Foundations budgets. IT anticipates capital expenditures only for the Freeze Date Replacement project for 2021, requiring roughly 15TB's of incremental storage capacity.

Tool and architectural enhancements

SPP is evaluating options to automate software deployment and implement containerization which allows software applications to be more efficiently partitioned/utilized on physical servers, potentially eliminating virtual machines and the associated costs of software licensing and patching.

Storage for SPP Settlements system

SPP implemented a new Settlements system during 2020, which requires significantly more storage capacity than the previous system. The team anticipates additional storage will need to be acquired in both 2020 and 2021 to accommodate these application requirements.

Operations Marketplace and Other System Enhancements

The operations foundation budget primarily consists of planned enhancements to the market operations system (MOS). This includes modifications to the market operator interface (MOI), market user interface (MUI) and market clearing engine (MCE) applications as well as the market database (MDB). MOS enhancements drive over 80 percent of the operations foundation budget. The remainder includes enhancements for numerous other systems and tools as summarized in the table below.

	2021	2022	2023	Total
	Budget	Forecast	Forecast	Capital
Operations Marketplace and Other System Enhancements				
Market Operation System (MOS)	\$ 2.0	\$ 2.0	\$ 2.0	\$ 6.0
Energy Management System (EMS)	0.1	0.1	0.1	0.3
Market Benefit Studies	0.2	-	-	0.2
DSA Tools (PSAT, VSAT, TSAT)	0.1	0.1	0.1	0.2
Open Access Same-Time Information System (OASIS)	0.1	0.0	0.0	0.1
Phaser Measurement Unit (PMU)	0.1	0.0	0.0	0.1
Miscellaneous Other *	0.3	0.1	0.1	0.5
Total Operations Marketplace and Other System Enhancement	\$ 2.9	\$ 2.3	\$ 2.3	\$ 7.4

* Includes Control Room Operations Window (CROW), Topology Control Tool (Router, POM-OPM), Open Access Technology Int'l/Native Network Limit (OATI/NNL), Centralized Modeling Tool (CMT), Dispatch Training Simulator (DTS), Vision and PI.

Engineering System Enhancements

The most significant component of this budget is routine enhancements to the congestion hedging system. The remainder of the budget is primarily for incremental licenses to existing applications as well as potential miscellaneous hardware and software purchases.

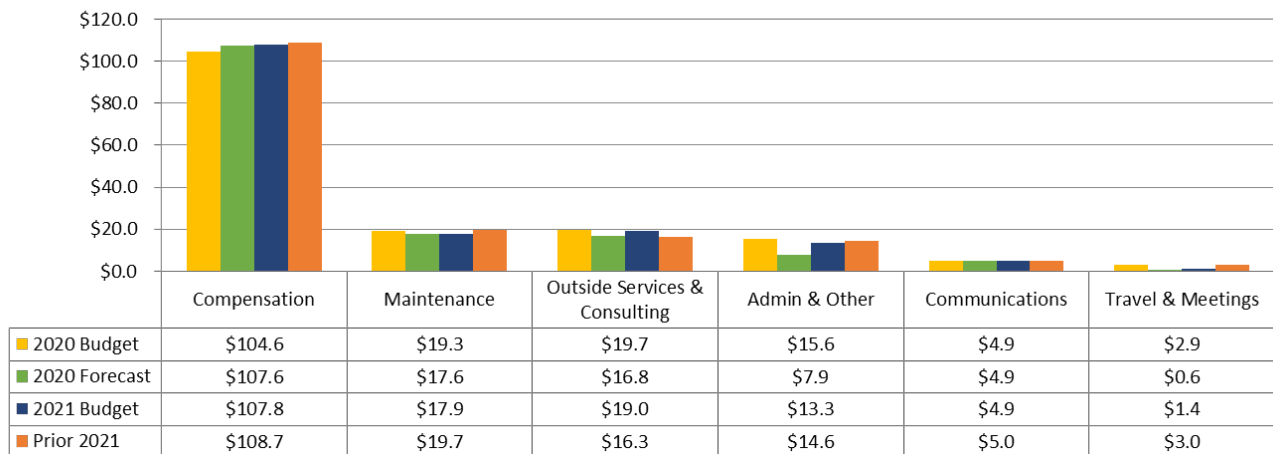
	2021 Budget	2022 Forecast	2023 Forecast	Total Capital
Engineering				
TCR market system enhancements	\$ 0.5	\$ 0.3	\$ 0.3	\$ 1.0
Other enhancements, license and hardware	0.1	0.1	0.1	\$ 0.3
ESRI Enterprise license agreement	0.1	0.1	0.1	\$ 0.2
Various HW/SW services *	0.3	-	-	\$ 0.3
Total Engineering	\$ 1.0	\$ 0.4	\$ 0.4	\$ 1.8

**Includes ServeM/Gridview/POM machines and MKTCIMNET and PSCAD software*

VII. RESOURCE UTILIZATION

SPP’s 2021 budget incorporates the funds necessary for SPP to provide day-to-day operations while pursuing strategic goals and organizational objectives. The chart below shows the various resource components and the corresponding 2021 budget amounts in comparison to 2020 budget and forecast, and a comparison to amounts forecasted for 2021 during the 2020 budget cycle. The following section discusses each component in detail.

Operating Expenses by Resource (\$ millions)



Operating Expenses by Resource (\$ millions)

	2020 Budget	2020 Forecast	2021 Budget	Prior 2021
Compensation	\$104.6	\$107.6	\$107.8	\$108.7
Maintenance	19.3	17.6	17.9	19.7
Outside Services & Consulting	19.7	16.8	19.0	16.3
Admin & Other	15.6	7.9	13.3	14.6
Communications	4.9	4.9	4.9	5.0
Travel & Meetings	2.9	0.6	1.4	3.0
Total Operating Expense *	\$167.0	\$155.3	\$164.3	\$167.2

* Excludes depreciation & FERC fees. Other expense in 2020 Forecast also excludes non-cash items.

STAFFING

Leveraging Diversity

SPP’s most valuable asset is its employees. A diverse, well-trained employee base is essential for delivering SPP’s wide range of services. SPP’s employment practices are based on hiring and retaining the right employee and the right number of employees while ensuring diversity, equity and inclusion in every employee experience.

SPP began the development of a formal Diversity, Equity and Inclusion program in 2020 with the goal of ensuring that employees feel valued and included, regardless of race, gender, nationality, sexual orientation, age, religion or protected class. While fair employment practices have always been embedded in the SPP business model, the executive leadership recognized the importance of clarifying this key component of SPP’s employment strategy as part of the core ideology of doing the right thing, for the right reason and in the right way.


Benefit plans, organizational structure and compensation programs are crucial to attracting and retaining career employees, each of which are reviewed and approved by the SPP human resources committee on an annual basis. Offering a competitive total compensation package fosters employee engagement and contributes to lower turnover. SPP management reviews staffing levels as vacancies occur and seeks opportunities to create efficiencies and manage headcount.

SPP deploys various initiatives to foster retention and build bench strength, which ultimately enhances the ability to provide the highest level of service and value for members and customers. Employees are encouraged to seek opportunities matching their career goals and to expand their knowledge base through career development initiatives such as rotation programs, job shadowing and career planning tools. Employees are also encouraged to engage in learning opportunities such as professional development, compliance training, teaming initiatives and giving back to their community.


From recruiting practices to an employee's first day at SPP and throughout the new-hire orientation program, employees learn about SPP's culture and essential information about the industry. Part of what makes SPP an attractive employer is the company culture and the dedication to the corporate mission. Valuing the power of diversity makes SPP even more attractive to current and potential employees.

Staffing Levels

Establishing and maintaining the right number of employees to efficiently provide SPP's services can be challenging. SPP management staff considers staffing needs each year as part of the annual budget process. Business needs for incremental headcount are submitted for approval by managers and vetted by directors and officers. While 12 positions were submitted for consideration in the 2021 budget, SPP chose to defer any incremental headcount until the 2022 budget in light of the current economic environment. HR facilitates a bi-monthly meeting with the officer team



SPP's employment practices are based on hiring and retaining the right employee and the right number of employees while ensuring diversity, equity and inclusion.



SPP made the decision to defer any incremental headcount until the 2022 budget.

to discuss corporate staffing metrics, requests for additional staffing, reorganizations and attrition to ensure staffing decisions are not made from organizational silos.

There were a total of 6 unidentified reductions for attrition as scheduled in the 2019 budget cycle (1 carried over from 2019, 3 carried over from 2020, and 2 originally scheduled for 2021). Three of these positions were identified for elimination by the end of 2020. SPP directors review open positions throughout the year and are expected to identify efficiencies in existing staff in order to manage incremental headcount requests as well as identify staffing the remaining staff reductions via attrition.

The table below illustrates changes in the approved staffing levels for 2020-2023.

Approved Staffing Levels				
	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
2020 Budget	659			
Budgeted attrition	<u>(3)</u>			
2020 Year-end forecast	656			
2021 Incremental positions		0		
Budgeted attrition (unidentified)		<u>(3)</u>		
2021 Budget		653		
IT Programmer/Analysts			4	
Customer Relations Representative			1	
Finance, Accountant			<u>1</u>	
2022 Forecast			659	
IT Programmer/Analysts				<u>2</u>
2023 Forecast				661
Prior Budget / Forecast		656	656	n/a

The following table shows the staff numbers by executive division:

2020 - 2023 APPROVED POSITIONS BY DIVISION

Headcount	2020 Budget	2020 Forecast	2021 Budget	2022 Forecast	2023 Forecast
Information Technology	169	168	168	172	174
Engineering	157	154	154	154	154
Operations	113	117	117	117	117
Finance & Corporate Services	69	69	69	70	70
Process Integrity ⁽¹⁾	57	56	56	57	57
Contract Services	33	33	33	33	33
Regulatory & Legal	27	27	27	27	27
Market Monitoring (MMU)	16	16	16	16	16
Officer	11	11	11	11	11
Corporate Communications & Gov't Affairs	8	8	8	8	8
Other ⁽²⁾	(4)	(3)	(6)	(6)	(6)
SPP Total	656	656	653	659	661

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

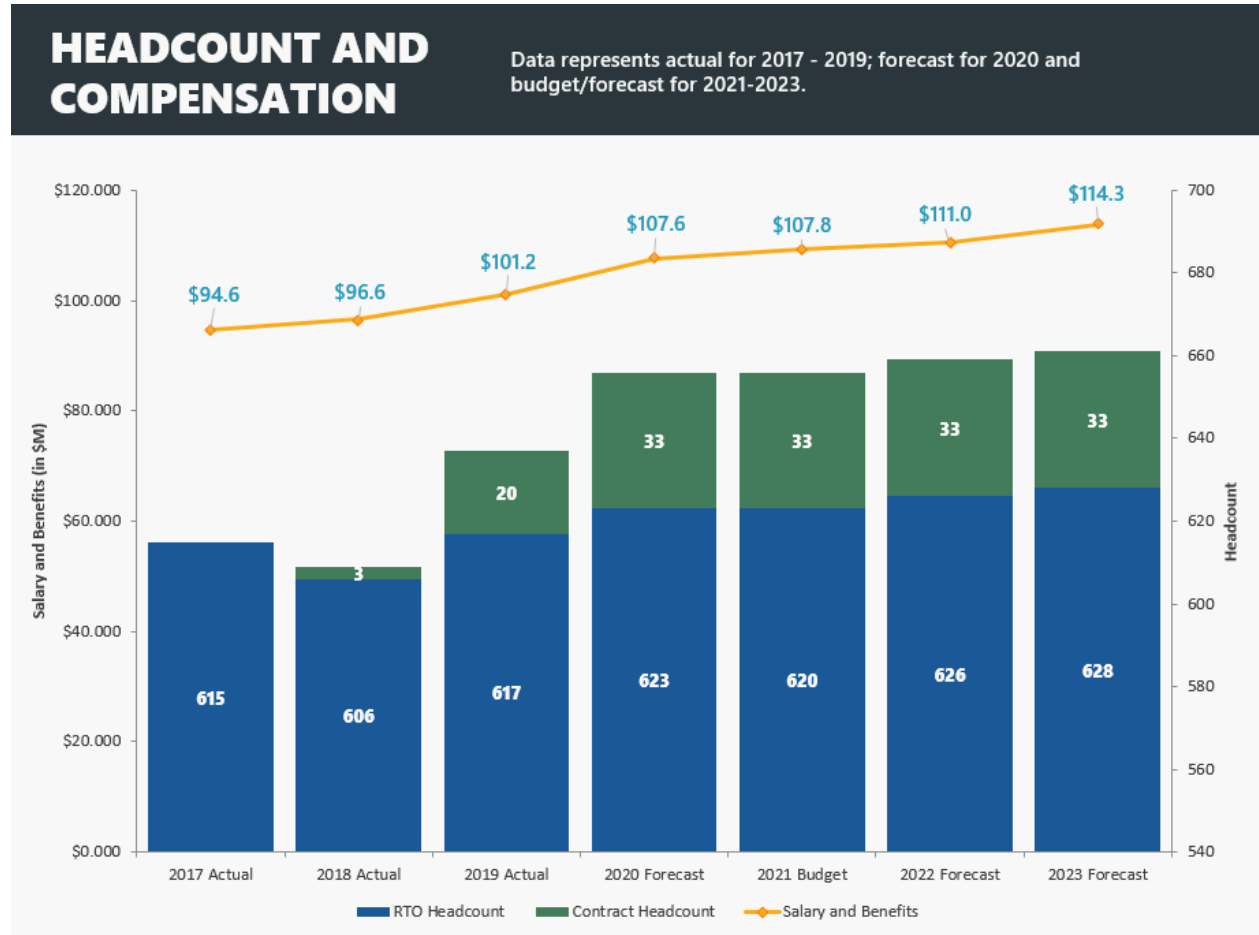
2) "Other" represents total of 6 remaining unidentified reductions for attrition (1 in 2019, 3 in 2020 and 2 in 2021).

Note: In some instances, the net increases/decreases by division discussed in the previous section are partially offset by additional interdepartmental transfers.

Staffing Components

Staffing levels have recently risen in association with the additional contract services agreements as well as efforts to curtail the backlog of engineering

studies by eventually lowering dependency on contractors. Beginning in 2021 staffing is expected to become more leveled.



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

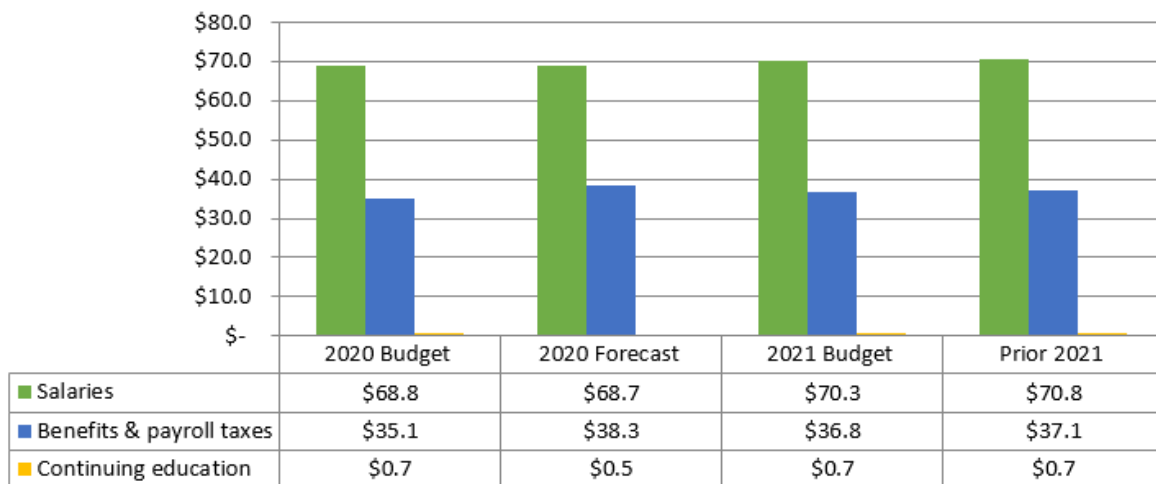
The staffing budget for 2021 includes funding for salaries (including base salary and overtime pay), benefits and payroll taxes and continuing education.

Salary Expenses (\$ millions)	2020 Budget ⁽¹⁾	2020 Forecast	2021 Budget ⁽²⁾	2021 Prior ⁽²⁾
Base salaries at beginning of year	\$65.6	\$65.6	\$68.6	\$69.3
Merit increase	2.0	2.0	1.7	2.1
Premium pay	1.2	1.2	1.2	1.2
Incremental staff	1.9	1.9	0.0	0.2
Promotions	0.5	0.5	0.5	0.5
Vacancy	(2.4)	(2.5)	(1.8)	(2.6)
Total Salary Expenses	\$68.8	\$68.7	\$70.3	\$70.8

(1) 2020 budget vacancy 3.5% & merit 3.0%

(2) 2021 budget vacancy 2.5% & merit 2.5%; 2021 prior vacancy 3.5% & merit 3.0%

Compensation (\$millions)



Vacancy and Merit Assumptions

The average vacancy rate is expected to be approximately 2.4% for 2020. A vacancy rate of 2.5% was applied to the 2021 budget as SPP anticipates staff turnover in 2021 to be relatively consistent with its experience in 2020. This equates to headcount vacancy averaging 16 positions during the calendar year.

	2020 Budget	2020 Forecast	2021 Budget	2021 Prior
Vacancy rate	3.5%	2.4%	2.5%	3.5%

Merit and Promotion Budget					
	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>
Merit Increase	\$1.7	\$1.8	\$1.8	\$2.0	\$1.7
Promotion Pool	\$0.5	\$0.5	\$0.5	\$0.5	\$0.5
Merit %	3.0%	3.0%	3.0%	3.0%	2.5%
Promotion %	0.75%	0.75%	0.75%	0.75%	0.75%

Benefits and Taxes

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

Benefits & Taxes (\$ millions)	2020 Budget	2020 Forecast	2021 Budget	2021 Prior
Retirement Plans (401K, pension, deferred comp)	\$10.7	\$11.9	\$12.1	\$11.6
Performance Compensation	12.0	11.8	12.0	12.3
Payroll Taxes	5.8	6.0	5.8	6.6
Medical Benefits	5.2	5.5	5.6	5.3
Other Employee Benefits	0.5	2.2	0.5	0.5
Dental Benefits	0.4	0.4	0.4	0.4
Life Insurance Benefits	0.5	0.5	0.5	0.5
Total Benefits & Taxes	\$35.1	\$38.3	\$36.8	\$37.1
Continuing Education	0.7	0.5	0.7	0.7
Total Benefits, Taxes & Con't Education	\$35.8	\$38.8	\$37.5	\$37.9

The SPP human resources committee (HRC) voted in April 2020 to terminate the post-retirement healthcare plan for eligible but non-vested participants. This partial liquidation of the plan was approved by the SPP board of directors. In lieu of the terminated benefit, eligible participants were provided a lump-sum payout at the present value of the projected benefit that was calculated by the actuary. The HRC considered several factors in the recommendation, including the relatively small size of the eligible group of employees (< 100), the length of time until most eligible employees would vest in the plan and the ability to provide certainty of this benefit by paying a lump-sum to participants. After distributing the lump-sum payouts to non-vested staff and retaining funds to provide benefits to current



The SPP HRC and board of directors approved the partial liquidation of the retiree healthcare plan, resulting in \$4.9 million reduction to the 2020 NRR.

participants, the remaining cash of \$4.9 million serves as a reduction to the 2020 NRR as a result of the liquidation.

The 2020 forecast and 2021 budget amounts for pension expense are based on the most recent actuarially calculated pension costs. Pension expense was calculated assuming a long-term asset return of 7 percent (consistent with the assumed rate of return in SPP’s investment policy statement). SPP will make cash contributions of \$5.0 million to the pension plan during 2020, and contributions to the plan are also budgeted at \$5.0 million in 2021. Only the cash contribution portion of pension expense is included in the NRR.

	<u>2020 Budget</u>	<u>2020 Forecast</u>	<u>2021 Budget</u>	<u>2021 Prior</u>
<u>Pension expense</u>				
Cash contributions (included in NRR)	\$5.5	\$5.0	\$5.0	\$5.6
Other costs	2.2	3.2	3.7	2.3
Total expense	\$7.7	\$8.2	\$8.7	\$7.9
<u>Retiree healthcare expense</u>				
Cash contributions (included in NRR)	\$0.0	\$0.0	\$0.0	\$0.0
Other costs	1.1	0.2	0.0	1.5
Total expense	\$1.1	\$0.2	\$0.0	\$1.5

Performance compensation is budgeted at the target level of 17.6% of base salary and is paid in March of the following year. The performance compensation program is a key component to achieving the 50th percentile total compensation benchmark set by the human resources committee. Funding for the 401(k) matching contribution is estimated at 4.7% of the salary expense (including performance compensation) based on recent company trends.

Medical Benefits Costs

The net cost of the self-funded medical plan in the 2021 budget is \$5.6 million, which represents a 1.8% increase over the 2020 forecast and a 7.7% increase from the 2020 budget.

SPP’s medical and pharmacy costs have increased an average of 4% per year since 2016. The market average for cost increases for that time frame was 10% according to information obtained from the insurance provider. Total gross claims for 2021 are estimated to be \$5.9 million, which is a \$0.1 million increase from the 2020 forecast.

Nearly 93% of employees participate in the medical plan, which is comparable with previous years. The estimated number of employee participants in 2021 is 616 (as compared to 603 in

2020), with an estimated number of insured participants of 1,665 (as compared to 1,625 in 2020).

A healthcare savings account (HSA) is an option in the medical plan and serves to reduce SPP’s exposure to claims expense. Under the HSA option, SPP contributes a fixed dollar amount to participants’ accounts on a semi-annual basis. Participants utilize the accumulated savings to cover medical expenses. Deductibles under this plan are much higher, which reduces SPP’s exposure. More than 130 employees participated in this option in 2020, up from about 100 participants in 2019.

Fees are paid to the insurance provider to cover administrative costs and insure against excessive losses at both the participant and corporate level. These fees are estimated to be \$1.2 million in 2021, which represents a \$0.1 million increase from the 2020 forecast due to the increase in the number of participants.

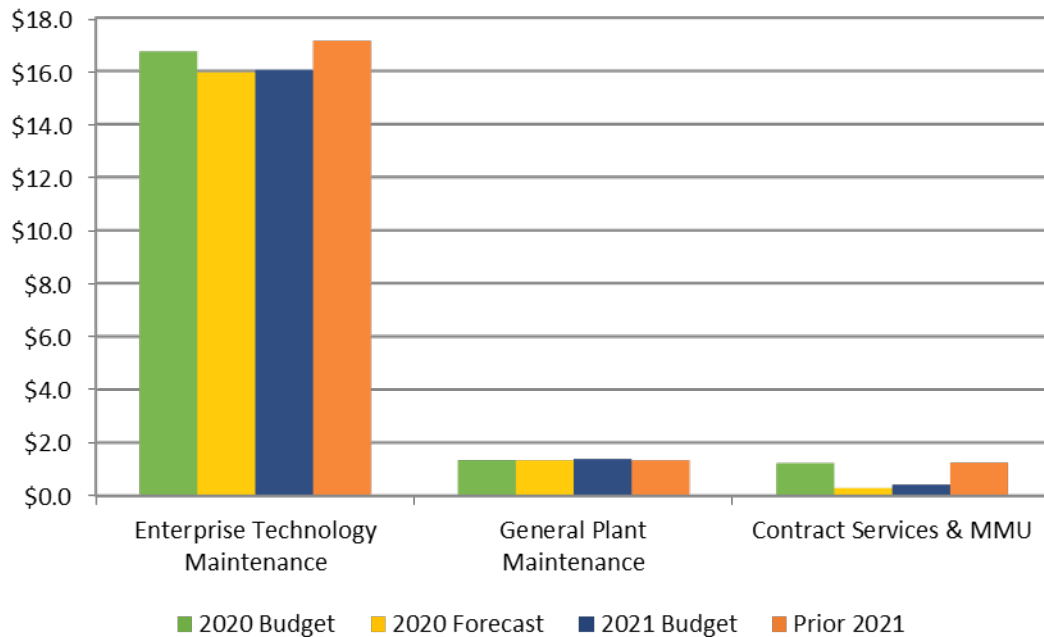
Employee contributions to the medical plan offset the overall cost and are estimated to be \$1.5 million in 2021, which is a \$0.1 million increase from the 2020 forecast. The net annual cost of the medical plan to SPP per participant is expected to be approximately \$9,100 in 2021. SPP’s human resource committee continues to target an 80/20 cost share between employer and employee for the medical benefit costs.

Healthcare Costs (\$ millions)			
	<u>2020 Budget</u>	<u>2020 Forecast</u>	<u>2021 Budget</u>
Gross Claims	\$5.5	\$5.8	\$5.9
Admin Fees	1.2	1.1	1.2
Employee Contributions	(1.4)	(1.4)	(1.5)
Net Expenses	\$5.2	\$5.5	\$5.6
Number of Employee Participants	605	603	616

MAINTENANCE

Maintenance expense is primarily related to contractual agreements covering technology hardware and software assets and expenses for general upkeep of physical facilities. The increase in the 2021 budget is primarily related to a 1% year-over-year inflationary increase on existing technology contracts and an increase in server replacements (driving the associated maintenance costs) due to the timing of end-of-life cycles.

Maintenance by Type (\$ millions)



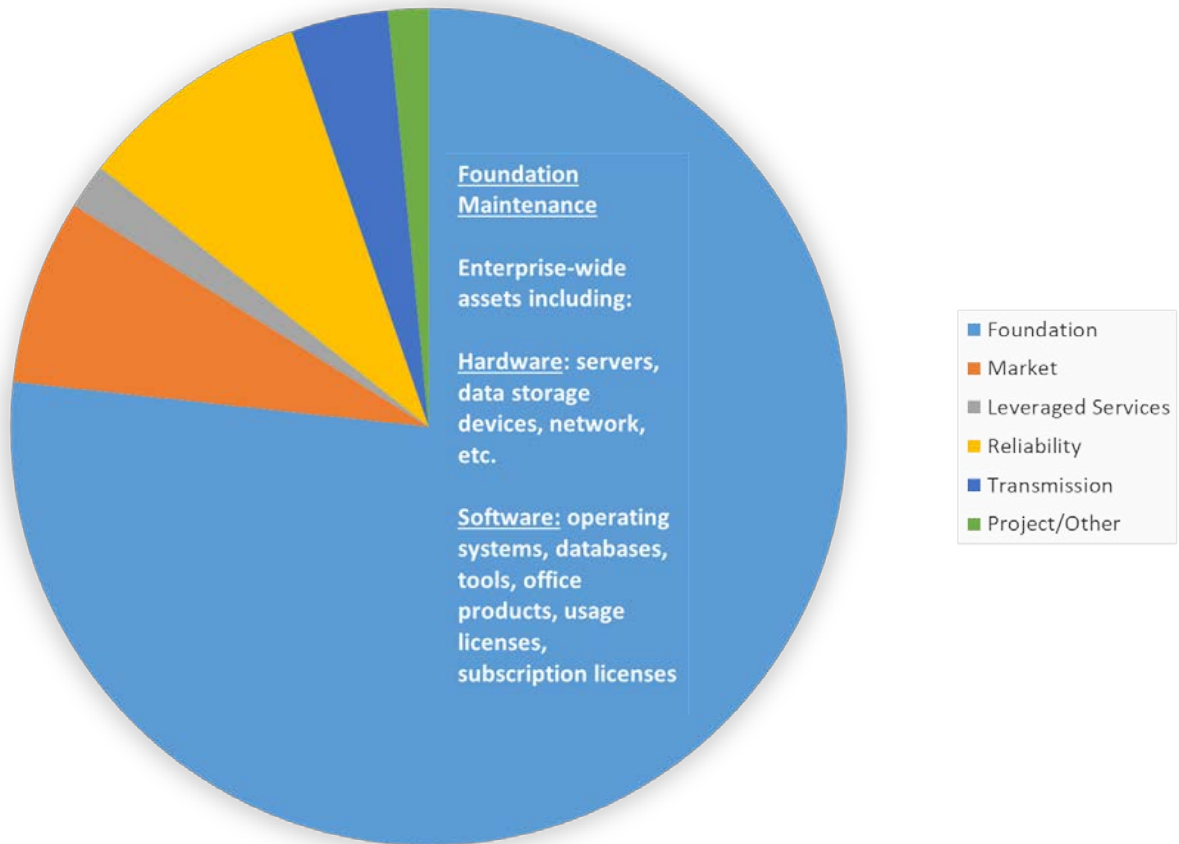
Maintenance Expense (\$ millions)	<u>2020 Budget</u>	<u>2020 Forecast</u>	<u>2021 Budget</u>	<u>Prior 2021</u>
Enterprise Technology Maintenance	\$16.7	\$15.9	\$16.1	\$17.1
General Plant Maintenance	1.3	1.3	1.4	1.3
Contract Services & MMU	1.2	0.3	0.4	1.2
Total	\$19.3	\$17.6	\$17.9	\$19.7

Enterprise Technology Maintenance

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

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

2021 Enterprise Technology Maintenance Budget



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

Components within each maintenance category include:

- Maintenance/support agreements for hardware (servers, storage, network, etc.)
- Maintenance/support agreements for software (operating systems, databases, tools, office products, usage licenses, subscription licenses)
- Maintenance/support agreements for business applications (market, reliability, transmission, settlements, leveraged services, etc.)

The scope of this budget encompasses over 1,500 hardware products and over 32,000 software entitlements. Approximately 83% of the maintenance budget is under a multi-year contract in support of the existing environment. The remaining 17% is attributed to variable time-and-

material contracts (expensed throughout the year as services are rendered) and one-time maintenance costs that are expensed at the time of product purchase (e.g., server warranties).

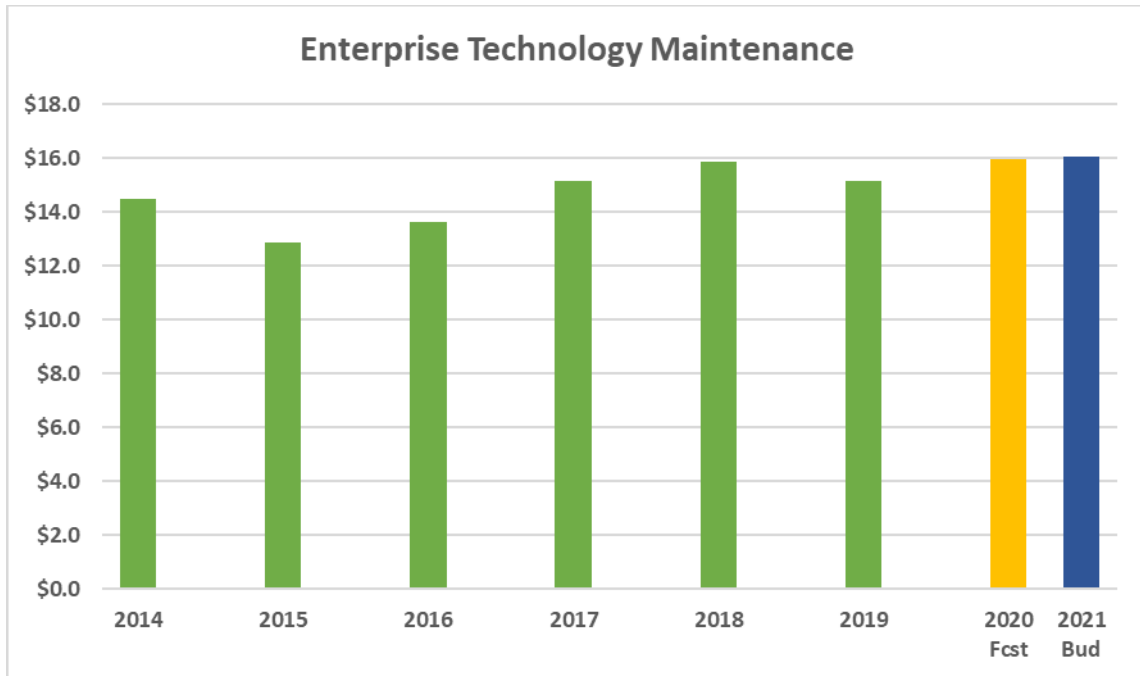
The marginal 1% increase over the 2020 forecast is based on the full-year impact in 2021 of partial-year maintenance during 2020 (due to timing of new contract agreements), as well as nominal increases in certain agreements expiring during 2021. The 2020 forecast for maintenance includes a partial year of maintenance for the old settlements system, whereas 2021 has zero maintenance costs given the new system is supported internally by SPP staff after implementation. This favorable variance provides a partial offset to the overall increase.



The scope of the maintenance budget encompasses over 1,500 hardware products and over 32,000 software entitlements. Multi-year contracts in support of the existing environment make up over 80% of the budget.

SPP staff remains focused on minimizing maintenance costs through negotiating multi-year term and price-protection agreements, leveraging product purchases and rightsizing the level of support with the criticality of the environment.

The physical operating environment (servers, storage, and networking) has continually grown by 10 – 12 percent annually since 2014 in order to support new projects and initiatives. The volume of incremental software products and applications has also increased steadily over this period in order to deliver new functionality, security and availability. The impact on maintenance expense from this growth would suggest a budget of roughly \$27 million for 2021; however, IT implemented a new maintenance strategy in early 2015 to suppress the impact on maintenance costs with this rising infrastructure. The strategy provided cost relief and a re-baselining of maintenance costs at a lower run-rate and growth curve going forward. As a result of these efforts, maintenance costs have become more consistent year-over-year with marginal inflationary increases.



General Plant Maintenance

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

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

Contract Services and MMU

The WEIS 2020 maintenance budget assumed more storage would be required for implementation than was actually necessary. The increase in the 2021 WEIS maintenance budget is due to a full year of maintenance included costs in 2021 as compared to a partial year in the 2020 forecast.

The 2020 RC West maintenance budget inadvertently included some costs under maintenance that should have been classified as outside services. The 2021 budget for RC West maintenance is more accurately aligned with the 2020 forecast.

The MMU numbers are less than \$0.1 million and remain relatively consistent year-over-year.

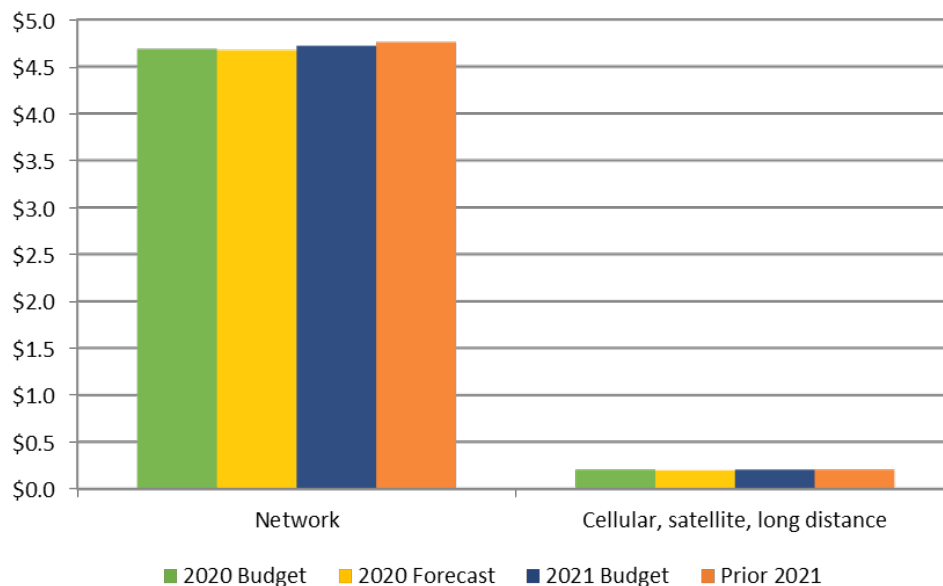
Maintenance Expense (\$ millions)	2020 Budget	2020 Forecast	2021 Budget	Prior 2021
WEIS	0.6	0.1	0.3	0.6
RC West	0.6	0.1	0.1	0.6
MMU	0.0	0.0	0.0	0.0
Total	\$1.2	\$0.3	\$0.4	\$1.2

COMMUNICATIONS INFRASTRUCTURE

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

The 2021 budget has been nominally increased to support circuits for new members and market participants. The amount of budgeted growth is lower than in prior years, resulting in a risk that expenses may exceed budget due to a larger increase in member circuits.

Communications Infrastructure (\$ millions)



Communications (\$ millions)	<u>2020 Budget</u>	<u>2020 Forecast</u>	<u>2021 Budget</u>	<u>Prior 2021</u>
Network	\$4.7	\$4.7	\$4.7	\$4.8
Cellular, satellite, long distance	0.2	0.2	0.2	0.2
Total	\$4.9	\$4.9	\$4.9	\$5.0

OUTSIDE SERVICES AND CONSULTING

SPP engages outside resources for professional services, staff augmentation and run-time services for areas outside SPP’s normal business capabilities and SaaS subscriptions.

Outside services consist of third-party expertise to assist SPP in deploying a variety of services. These type of actives include professional services (engaged to provide services such as outside legal counsel, board of directors, audits), staff augmentation (utilized where staffing constraints require additional resources), run-time services (utilized to perform certain functions outside of SPP’s normal business capabilities such as OATI services, Interchange Distribution Calculator (IDC), and weather forecasting services) and SaaS subscriptions.

The table below summarizes various outside services by function:

Outside Services by Function

	<u>2020 Forecast</u>	<u>2021 Budget</u>
<u>Professional Services</u>		
Outside legal counsel, FERC and regional	\$1.7	\$2.0
Board of directors fees and expenses	1.3	1.3
Cybersecurity 3rd party assessments (vulnerability, cyber risk, security patch)	0.7	0.7
FERC Order 1000 (IEP offset by revenues)	0.7	1.2
Campus security contract	0.8	0.9
Human resources / corporate services (training, EAP, new hire screening, etc)	0.2	0.2
Regional State Committee	0.1	0.5
Audits (SOC 1, financial audit, benefit plan audits)	0.5	0.5
HR benefits and compensation surveys	0.1	0.2
BOD / CEO search firm, special assignments	0.6	0.1
Outside legal counsel, MMU	0.2	0.2
Total Professional Services	\$7.0	\$7.8
<u>Staff Augmentation</u>		
Engineering GI studies (offset by revenues)	\$1.9	\$3.3
Engineering Planning, Modeling & Congestion Hedging	0.3	0.7
Engineering Support & Resource Coordination	0.5	0.3
Compliance, CIP & GRC support	0.1	0.1
Training, customer service, project management	0.2	0.2
Operations market support and market design (HITT, PMU)	0.7	0.3
IT, storage and backup, project implementation	0.4	0.6
Seams & Market Design (EIPC membership)	0.0	0.1
Engineering R&D	0.1	0.2
Credit and rating services	0.1	0.1
Insurance brokerage fees	0.1	0.1
2020 forecasted reduction	(0.5)	0.0
Total Staff Augmentation	\$4.0	\$5.9
<u>Run-Time Services</u>		
IT ongoing services (DDOS, security assessments, etc)	1.3	1.0
Engineering operations weather forecasting analysis, special studies	0.8	0.6
Operations reliability, Interchange Distribution Calculator (IDC) tool	0.5	0.6
Total Run-Time Services	\$2.6	\$2.2

Outside Services by Function

	<u>2020 Forecast</u>	<u>2021 Budget</u>
<u>Software-as-a-Service</u>		
Operations, OATI service fees (reflected in IT department)	\$1.5	\$1.6
Cybersecurity 3rd party subscriptions (incident response, CRISP, CIS, etc)	0.3	0.3
Human resources (new system)	0.0	0.2
Human resources / corporate training	0.2	0.2
Project management, customer service, misc other	0.1	0.4
Total Software-as-a-Service	\$2.1	\$2.7
<u>Contract Services</u>		
WEIS (SOC audit/weather forecasting)	\$0.8	\$0.1
RC West (ECC/WIT subscriptions)	0.3	0.2
Total Contract Services	\$1.0	\$0.3
Total Outside Services	\$16.9	\$19.0

The majority of the outside services budget is related to engineering studies, IT initiatives, legal counsel and board compensation. IT utilizes outside services for a variety of functions including hosted services, data storage, consulting for key projects and initiatives, etc.

Outside Services and Consulting by Division (\$ millions)

	<u>2020 Budget</u>	<u>2020 Forecast</u>	<u>2021 Budget</u>	<u>Prior 2021</u>
Engineering	\$3.6	\$3.6	\$5.1	\$2.0
Information Technology	4.4	4.2	4.1	4.6
Regulatory, Legal & RSC	4.4	2.5	3.7	4.0
Finance & Corporate Services	2.2	1.7	2.0	1.8
Officer & Administrative	1.8	1.5	1.5	1.6
Operations	0.9	1.3	0.9	0.8
Process Integrity	0.9	0.8	0.9	0.9
Contract Services	1.4	1.0	0.3	0.2
Market Monitoring	0.2	0.2	0.2	0.2
Corporate Comm. & Gov't Affairs	0.1	0.0	0.1	0.1
Total	\$19.7	\$16.8	\$19.0	\$16.3

The overall increase in outside services from the 2020 forecast is the result of various offsetting factors.

Outside Services 2021 Budget vs. 2020 Forecast

(\$ millions)	Fav/(Unfav)
Engineering studies (offset by revenue)	(\$1.5)
Order 1000 IEP (offset by revenue)	(0.5)
Regional State Committee	(0.4)
Legal zonal placement litigation	(0.3)
New HR system (software-as-a-service)	(0.3)
WEIS implementation (no NRR impact)	0.7
Operations market studies in 2020	0.4
Immaterial other fav/unfav	(0.3)
Total	(\$2.2)

Engineering

The engineering organization engages consultants primarily for planning and tariff services processes associated with 1) SPP tariff or NERC required engineering studies, 2) support of reliability and economic planning processes during peak periods associated with the ITP process, and 3) administering the detailed project proposal (DPP) process and transmission project cost estimation related to FERC Order 1000. Engineering also engages consultants to assess new approaches and tools to refine performance objectives that align with future planning needs.

Outside Services and Consulting (\$ millions)	2020 Budget	2020 Forecast	2021 Budget	Prior 2021
Pass-thru studies consulting	\$1.6	\$1.9	\$3.3	\$0.7
Transmission planning	0.7	0.3	0.7	0.0
Wind and weather forecasting services	0.8	0.8	0.6	0.8
Engineering support (Order 1000/DPP)	0.4	0.3	0.3	0.3
Research and development	0.2	0.2	0.2	0.2
Engineering Outside Services and Consulting	\$3.6	\$3.6	\$5.1	\$2.0

The largest component of consulting in engineering is largely attributed to work on generation interconnection studies, which is passed to study participants and offset by income.

Growth of renewable generation in the SPP footprint continues to drive increases in generator interconnection (GI) study requests. Engineering engages contractors to assist with completing these studies. SPP bills contractor costs as well as costs for SPP staff time to the study participants as part of overall study charges.

Engineering continues efforts to reduce the backlog of generation interconnection studies, some of which have remained pending since 2015. Future plans are to reduce reliance on outside consultants by having the majority of GI study activities performed by recent staff additions as they become more proficient; however, consultants are still necessary as the focus on reducing the backlog remains a priority.



The increase over the 2020 forecast is primarily comprised of \$1.4 million for GI studies staff augmentation, which is offset by pass-through revenues and has no impact to the NRR.

Of the \$9.5 million studies revenue, \$3.3 million is for pass-through contractor costs and \$6.2 million is for SPP engineering staff time.

Net Studies Income/(Expense) (\$ millions)	<u>2020 Budget</u>	<u>2020 Forecast</u>	<u>2021 Budget</u>	<u>Prior 2021</u>
Engineering staff time income	\$5.1	\$4.9	\$6.2	\$6.2
Pass-thru consulting income	1.6	1.9	3.3	0.7
Pass-thru consulting expense	(1.6)	(1.9)	(3.3)	(0.7)
Net Studies Income/(Expense)	\$5.1	\$4.9	\$6.2	\$6.2

The increase in the transmission planning budget is due to delaying the PROMOD replacement implementation from 2020 to 2021. PROMOD is the software utilized to simulate the electricity grid by using production cost modeling technology. The decision to delay the project schedule was the result of additional analysis by staff, stakeholders and the vendor to determine the best product and implementation process. Since the most recent PROMOD software version is only available as an externally hosted, software as a service (SaaS) offering, SPP will not own the software and therefore no future capital investment is anticipated. The SaaS costs will be equivalent to \$0.1 million annually over the period used as compared to \$1.0 million in capital expenditures in 2021. The remaining \$0.3 million includes re-development of processes and automation, training staff and implementation of the new software.

Outside Services and Consulting (\$ millions)	<u>2020 Budget</u>	<u>2020 Forecast</u>	<u>2021 Budget</u>	<u>Prior 2021</u>
Engineering Transmission planning	\$0.7	\$0.3	\$0.7	\$0.0

Although the majority of consulting is associated with GI studies and transmission planning, the operations engineering support division utilizes various wind and weather forecasting services which remain relatively consistent year-over-year. The 2020 forecast and budget included additional costs of \$0.1 million associated with planning and analysis for HIIT recommendations, which is not assumed in the 2021 budget.

Outside Services and Consulting (\$ millions)	2020 Budget	2020 Forecast	2021 Budget	Prior 2021
Engineering Operations Support	\$0.8	\$0.8	\$0.6	\$0.8

Information Technology (IT)

The largest component of the IT budget consists of ongoing services that continue year to year.

Outside Services and Consulting (\$ millions)	2020 Budget	2020 Forecast	2021 Budget	Prior 2021
Information Technology	\$4.4	\$4.2	\$4.1	\$4.6

The primary IT initiatives are centered on CIP security, automation and infrastructure consolidation activities. IT management continually analyzes options and seeks opportunities to leverage existing staff, but in many cases, the utilization of external entities is more cost-efficient based on the required skill sets or longevity of the project.



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

As illustrated in the table below, approximately 70% of the budget is related to ongoing services that continue from year to year (hosted services, security subscriptions, off-site data center, etc.). The remainder of the budget is comprised of short-term project engagements and staff augmentation assistance that vary in scope from year to year.

IT Outside Services and Consulting Expense (\$ millions)		
	2020 Forecast	2021 Budget
Ongoing/existing services <i>(OATI, CRISP, CICS, 3rd DC, DDOS, security assessments)</i>	\$3.0	\$3.0
Consulting services for keeping-the-lights-on upgrades and projects <i>(hosted services, remote data storage, etc.)</i>	0.7	0.5
Staff augmentation <i>(MRTS, reliability activities)</i>	0.5	0.6
Total	\$4.2	\$4.1

Ongoing/existing initiatives are primarily related to cybersecurity and short-term projects. The decrease from the 2020 forecast is based on reduced external consulting requirements for previous projects (IAM, Settlements) and fewer new IT/PRPC projects requiring additional external consulting resources.

Legal, Regulatory and Regional State Committee (RSC)

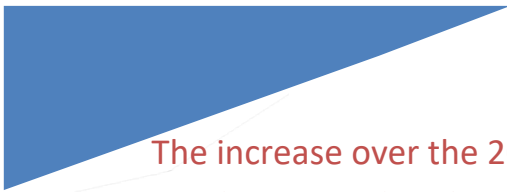
SPP employs outside legal counsel for various litigation matters throughout the year. These services provide unique legal expertise on specific FERC matters and allows SPP to leverage the counsel's experience with FERC, while utilizing their knowledge of RTO-specific issues.

Outside Services and Consulting (\$ millions)	2020 Budget	2020 Forecast	2021 Budget	Prior 2021
Legal	\$2.6	\$1.7	\$2.0	\$2.3
Regulatory (FERC Order 1000, IEP)	1.2	0.7	1.2	1.2
Regional State Committee	0.5	0.1	0.5	0.5
Regulatory, Legal & RSC	\$4.4	\$2.5	\$3.7	\$4.0

The largest driver of outside services legal costs is related to FERC litigation associated with the zonal placement process.

The 2020 budget was estimated based on the known zonal placement activity that began in 2019 and was scheduled to occur in 2020. FERC litigation related to the zonal placement process was scheduled to

proceed in the spring of 2020 but was delayed by FERC to September due to the pandemic. The 2021 budget is based on the 2020 forecast with the expectation of a slight increase due to delays carried over from 2020 associated with the pandemic.



The increase over the 2020 forecast in regulatory is related to higher IEP fees for Order 1000 activity, which is offset by pass-through revenues and has no impact to the NRR.

The 2021 regulatory department budget includes costs for an industry expert panel (IEP) to oversee the bidding process of two competitive projects in 2021 for FERC Order 1000. These costs are offset by revenue to be collected from the competitive process participants with no impact to the NRR.

Outside Services and Consulting (\$ millions)	2020 Budget	2020 Forecast	2021 Budget	Prior 2021
Regulatory (FERC Order 1000, IEP)	\$1.2	\$0.7	\$1.2	\$1.2
IEP Revenue from participants	(\$1.2)	(\$0.7)	(\$1.2)	(\$1.2)

The Regional State Committee (RSC) provides collective state regulatory agency input on matters of regional importance related to the development and operation of bulk electric transmission. The budget is created and submitted to SPP by the RSC each year and includes all costs associated with RSC travel, meetings and consulting. The 2021 budget assumes the

committee will resume to normal activities and therefore represents an increase over the 2020 forecast which reflects limited activities due to the pandemic.

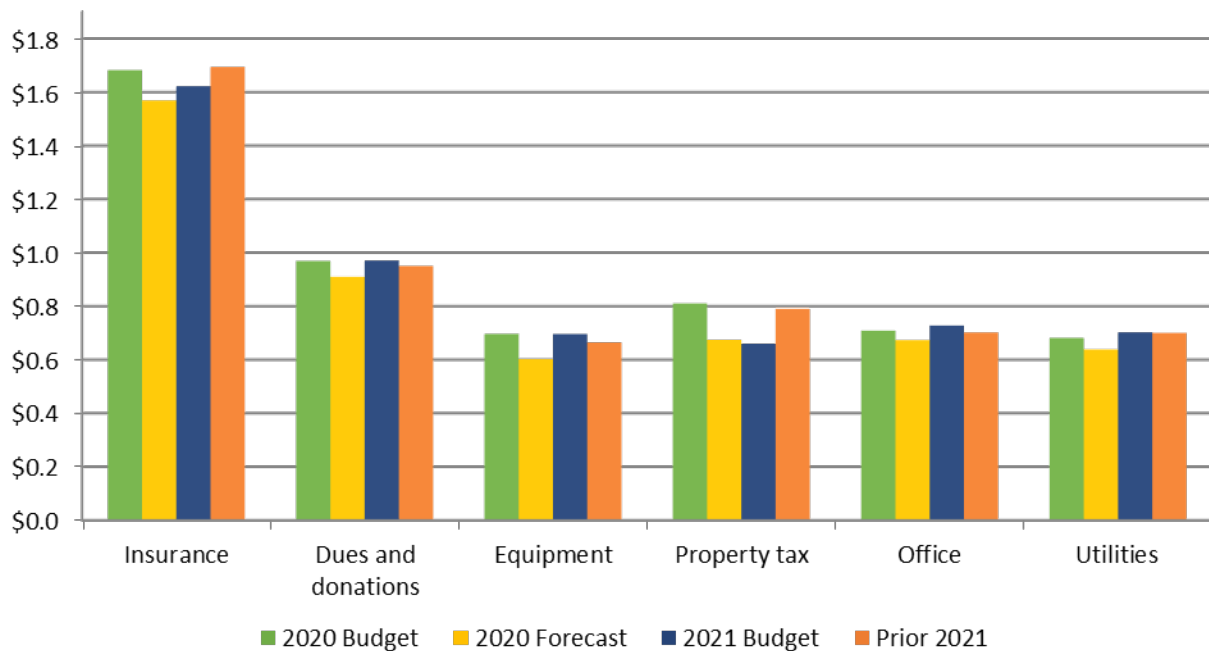
Outside Services and Consulting (\$ millions)	2020 Budget	2020 Forecast	2021 Budget	Prior 2021
Regional State Committee	\$0.5	\$0.1	\$0.5	\$0.5

ADMINISTRATIVE EXPENSES

Overall administrative expenses are expected to remain relatively consistent with the 2020 forecast, with increases noted in utilities and office expense which are anticipated for a full-year on campus for staff in 2021.

The largest component of administrative expenses is related to insurance costs, but also includes items such as small equipment purchases, property taxes, professional dues, charitable donations and utility and office expenses.

Administrative (\$ millions)



The largest component of administrative expense is insurance costs, with a decrease beginning in 2020 associated with lower pension insurance costs.

Administrative

Administrative (\$ millions)	<u>2020 Budget</u>	<u>2020 Forecast</u>	<u>2021 Budget</u>	<u>Prior 2021</u>
Insurance	\$1.7	\$1.6	\$1.6	\$1.7
Dues and donations	1.0	0.9	1.0	1.0
Equipment	0.7	0.6	0.7	0.7
Property tax	0.8	0.7	0.7	0.8
Office	0.7	0.7	0.7	0.7
Utilities	0.7	0.6	0.7	0.7
Total Administrative	\$5.5	\$5.1	\$5.4	\$5.5
Other *	10.1	2.8	7.8	9.1
Total Administrative & Other	\$15.6	\$7.9	\$13.2	\$14.6

* Other expense includes interest expense (2020 Forecast also excludes non-cash items).

Insurance Expense

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

Insurance Expense (\$ millions)	<u>2020 Budget</u>	<u>2020 Forecast</u>	<u>2021 Budget</u>	<u>Prior 2021</u>
Commercial excess liability	\$0.8	\$0.8	\$0.8	\$0.8
Pension insurance	0.7	0.5	0.5	0.7
General liability	0.1	0.1	0.1	0.1
Directors & Officers (D&O) liability	0.1	0.1	0.1	0.1
Workers compensation	0.1	0.1	0.1	0.1
Total	\$1.7	\$1.6	\$1.6	\$1.7

Commercial liability policies provide additional indemnification from claims arising from SPP's administration of its OATT and other contractual arrangements. Included within this classification is a policy specific to cyber-related liabilities and events.

As a plan sponsor SPP pays annual premiums to the Pension Benefit Guaranty Corporation (PBGC) based on its assessment rate and the discount rates used to measure the unfunded vested benefits. The 2020 budget projection reflected a significant premium increase due to an increase in the PBGC assessment rate in addition to a decrease in the discount rates. The actual premium in 2020 is somewhat lower than the initial budget projection mainly as a result of better-than-expected investment returns in 2019 and also 43 terminated, vested participants

taking cash distributions offered during 2019. The 2021 budget is based on the 2020 actual premium as no significant changes are expected.

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

Dues and Donations

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

Administrative				
Administrative Dues & Donations (\$ millions)	<u>2020 Budget</u>	<u>2020 Forecast</u>	<u>2021 Budget</u>	<u>Prior 2021</u>
Administrative, dues	\$0.7	\$0.7	\$0.7	\$0.7
Administrative, donations/contributions	0.2	0.1	0.2	0.2
Administrative, advertising/public relations	0.1	0.1	0.1	0.0
Administrative, licenses and permits	0.0	0.0	0.0	0.0
Total	\$1.0	\$0.9	\$1.0	\$1.0

The majority of the dues budget resides in the engineering organization and is designated for Electric Power Research Institute (EPRI) membership (\$0.4 million) which allows access to research related to the electric power industry. EPRI funding primarily supports projects in three general programs: P39 Grid Operations, P40 Grid Planning and P173 Renewables Integration. SPP’s long-standing relationship and engagement with EPRI enables efficient and effective participation in programs related to grid operations, planning and renewable integration and high voltage direct current (HVDC) ties applications. This agreement includes support for new markets initiatives, new tools to enable additional and more efficient NERC transmission planning compliance activities and operational needs such as tools for system restoration. The agreement also includes support for a long-term global pandemic response study as it pertains to Transmission Operators and ISO/RTOs. Engagement by SPP staff at EPRI provides value in terms of development of new tools and



The administrative dues budget includes membership in Electric Power Research Institute (EPRI) for access to industry-related research.

analytics such as case studies using SPP data to address ramping, frequency, and inertia needs for wind, solar, and energy storage integration studies.

The remaining dues and donations budget consist of engineering research and development partnerships with specific universities, SPP corporate donations and contributions, professional and technical license and memberships for staff and advertising/public relations associated costs.

The engineering organization's involvement with university research and development programs keeps SPP engineers up-to-date with processes and ideas coming out of respected engineering institutions. The major university projects include Power Systems Engineering Research Center (PSERC), Grid Advanced Power Electronics Systems (GRAPES) and the Cybersecurity Center for Secured Evolving Energy Delivery Systems (SEEDS). These relationships foster collaboration between SPP and regional university programs, which in turn attracts talented job candidates.

SPP establishes a budget for community relations and charitable donations as a means to give back and invest in the community and region. SPP believes in serving the community to make it a better place for employees and all citizens to live and work. The company and its employees take great pride in working with many worthwhile nonprofit organizations to build stronger families and a vibrant community. This involvement in the community increases awareness of SPP and serves as a recruitment tool in attracting career employees who share SPP's culture.

Other Administrative Expenses

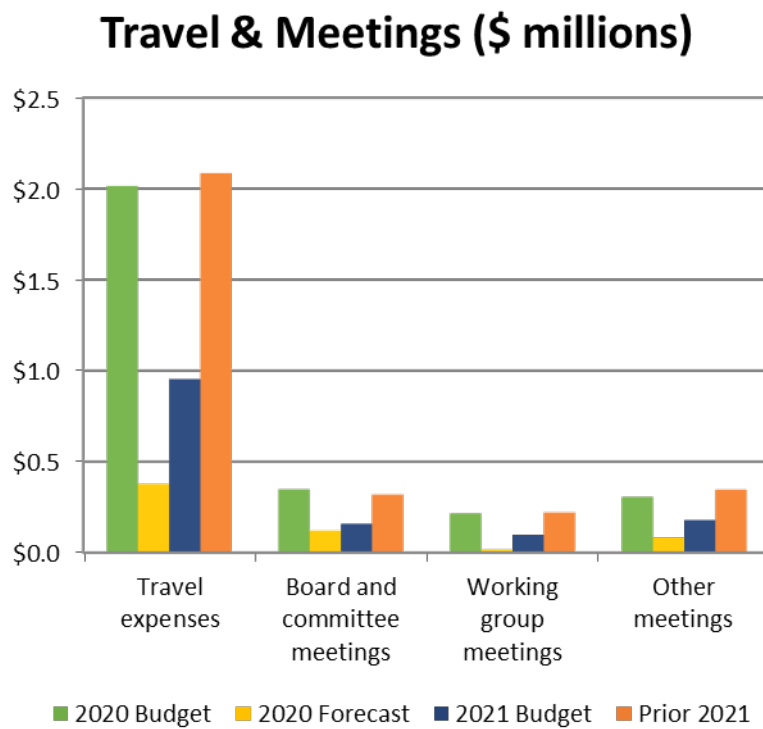
Small equipment purchases, property taxes, utilities and general office expenses make up the remainder of the administrative expenses and remain reasonably consistent year-over-year. Small equipment purchases are items less than \$5,000 in value (expensed rather than capitalized) and include purchases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

TRAVEL AND MEETINGS

Travel and meetings were essentially eliminated beginning in March 2020 as a result of proactive measures related to the pandemic. SPP assumes new practices will continue to be in place to conduct fewer face-to-face meetings in 2021. The baseline for the 2021 travel and meetings budget is equal to 50 percent 2019 actual costs.

Travel & Meetings (\$ millions)	2020 Budget	2020 Forecast	2021 Budget	Prior 2021
Travel expenses	\$2.0	\$0.4	\$1.0	\$2.1
Board and committee meetings	0.3	0.1	0.2	0.3
Working group meetings	0.2	0.0	0.1	0.2
Other meetings	0.3	0.1	0.2	0.3
Total	\$2.9	\$0.6	\$1.4	\$3.0

SPP will continue to encourage the use of corporate or member facilities when planning future face-to-face meetings including consideration of Little Rock in order to maintain lower travel and meeting expenses.



VIII. WESTERN CONTRACT SERVICES

SPP provides services to several utility customers in the western region under stand-alone contracts separate from the SPP regional tariff.

WESTERN INTERCONNECTION UNSCHEDULED FLOW MITIGATION PLAN (WIUFMP)

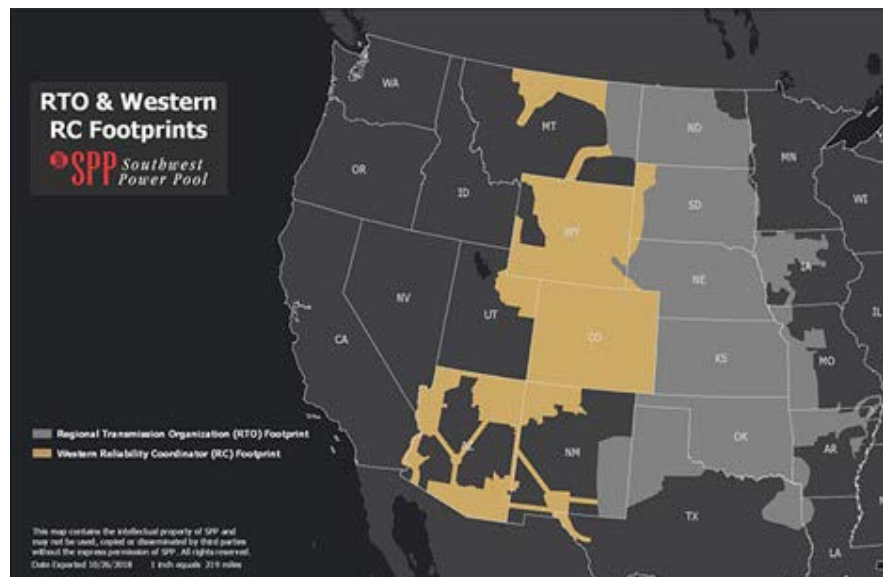
SPP administers the WIUFMP on behalf of SPP members (or affiliates of members) Northwestern Energy, Tri-State Generation and Transmission, and Western Area Power Administration as well as three entities unaffiliated with SPP which are California Independent System Operator, NV Energy and PacifiCorp. SPP's role as administrator is the collection of monies from users of phase-shifting transformers and other qualified devices on particular transmission lines in the western interconnection and distribution of those collections to the WIUFMP device owners.



The contract began in 2018 and automatically renews for one year terms on December 31 unless terminated by either SPP or the device owners. The contract specifies a fixed charge for this service which is recovered from collections prior to distributions to WIUFMP device owners.

WESTERN RELIABILITY COORDINATION (RC WEST) SERVICE

SPP serves as the reliability coordinator for 18 entities operating in the western interconnection, including the following SPP members (or affiliates of members): Western Area Power Administration-DSW, Western Area Power Administration-RMR, Tri-State Generation and



Basin Electric Power Cooperative. Services under the contract began in December 2019, and the contract's initial term ends in 2024. Annual payments under the contract are due in advance of the service year.

WESTERN ENERGY IMBALANCE SERVICE

SPP is scheduled to begin operation of the western energy imbalance service market on February 1, 2021. The market will be provided to those entities who executed the western joint dispatch agreement, including the following SPP members (or affiliates of members): Western Area Power Administration-UGP, Western Area Power Administration-RMR, Municipal Energy Agency of Nebraska, Tri-State Generation and Transmission and Basin Electric Power Cooperative. The initial four year term of the contract term runs through 2024. Annual payments under the contract are due in advance of the service year.

The rate for the initial term of the contract is fixed at 22¢/MWh of NEL. Thereafter the rate will adjust based on costs of service, true up from prior years, changes in NEL, etc.

SUMMARY OF WESTERN CONTRACT SERVICES IMPACT ON 2021 NRR

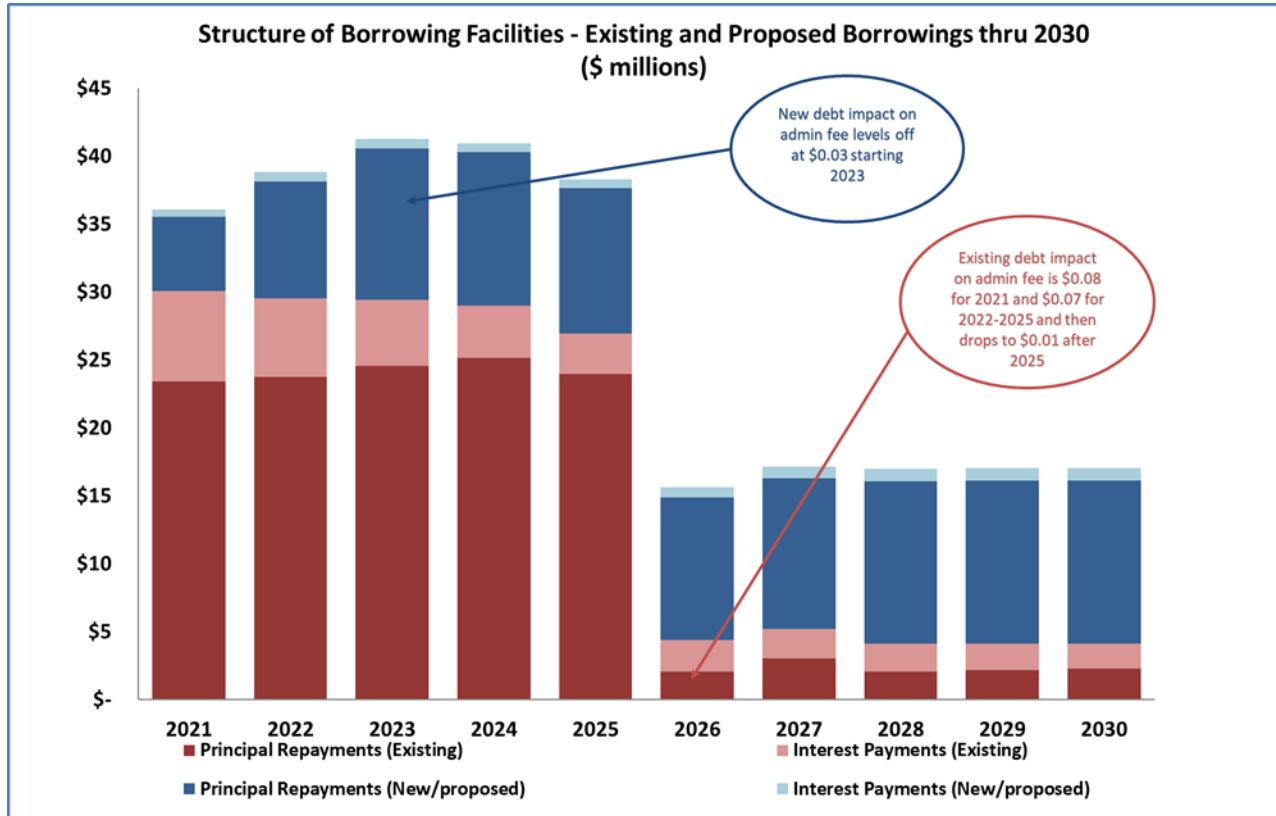
The contracts are administered to provide recovery of all direct costs incurred by SPP under the contracts as well as an allocation of shared overhead. It is this shared overhead that serves to reduce the NRR for SPP, Inc. The contracts are expected to generate revenues of \$9.9 million in 2021. The budget assumes \$2.2 million for shared overhead recovery under the contracts which translate 1 for 1 in reducing SPP's NRR in 2021. The reduction in the 2021 NRR related to western contract services shared overhead is comprised of \$1.8 million of overhead related to operational activities for both RC West and WEIS and \$0.4 million of overhead incurred during WEIS implementation.

IX. DEBT SERVICE

SPP's capital spending is financed through financial institutions and investors at competitive terms.

SPP's capital projects are funded from monies borrowed under medium and long-term credit agreements, primarily with institutional investors. SPP generally aims to match the duration of these borrowings to the useful life of the acquired assets. The capital project costs are not included in the NRR calculation; however annual principal and interest payments for borrowings (net of capitalized interest) are included. SPP's outstanding borrowings are projected to equal \$190.2 million as of Jan. 1, 2021, with principal payments of \$28.9 million, \$32.3 million and \$35.7 million in 2021, 2022 and 2023, respectively. Principal payments associated with contract services are excluded from the NRR calculation, as those costs are recovered through funding outlined in the respective contracts.

SPP utilizes an unsecured five-year \$80.0 million revolving line of credit to fund capital expenditures. SPP began drawing funds under this facility during 2019. Lenders convert advances from the credit line to four-year term notes at the end of each year. The following chart illustrates SPP’s principal and interest payment obligations including projected new borrowings through 2030.



The schedule below shows the principal amounts outstanding for each borrowing at the beginning and end of the 2021-2023 budget periods and annual principal payments (excluding principal payments associated with contract services).

Future Debt Repayments (\$ millions)								
	Issue Date	Issue Amount	Due Date	Balance 1/1/2021	2021 Prin. Pmts.	2022 Prin. Pmts.	2023 Prin. Pmts.	Balance 12/31/2023
5.51% notes due 2027	3/23/2007	\$5.1	Feb-2027	\$2.3	(\$0.2)	(\$0.2)	(\$0.2)	\$1.7
4.82% construction notes due 2042 (2010A, 2010B)	10/31 & 12/28/2010	\$65.0	Dec-2042	\$55.5	(\$1.5)	(\$1.5)	(\$1.6)	\$50.9
3.55% integrated markets notes due 2024 (2010C)	3/30/2011	\$70.0	Mar-2024	\$22.8	(\$7.0)	(\$7.0)	(\$7.0)	\$1.8
3.00% capital funding notes due 2024 (2012D-1)	5/30/2012	\$50.0	Mar-2024	\$16.3	(\$5.0)	(\$5.0)	(\$5.0)	\$1.3
3.25% capital funding notes due 2024 (2012D-2)	11/30/2012	\$50.0	Sep-2024	\$18.8	(\$5.0)	(\$5.0)	(\$5.0)	\$3.8
3.8% capital funding notes due 2025 (2014-E)	3/21/2014	\$37.0	Dec-2025	\$37.0	\$0.0	\$0.0	\$0.0	\$37.0
4.95% senior notes due 2024	3/10/2014	\$33.0	Mar-2024	\$17.0	(\$4.8)	(\$5.0)	(\$5.8)	\$1.5
2.88% term note due 2024	4/15/2020	\$11.0	Mar-2024	\$9.0	(\$2.7)	(\$2.8)	(\$2.8)	\$0.7
New term note due 2024 (for 2020 advances)	1/1/2021	\$11.5	Dec-2024	\$11.5	(\$2.8)	(\$2.8)	(\$2.9)	\$14.6
New term note due 2025 (for 2021 advances)	1/1/2022	\$12.6	Dec-2025	-	-	(\$3.0)	(\$3.1)	\$6.5
New term note due 2026 (for 2022 advances)	1/1/2023	\$9.4	Dec-2026	-	-	-	(\$2.3)	\$7.2
Total		\$354.7		\$190.2	(\$28.9)	(\$32.3)	(\$35.7)	\$126.9

Western Services

SPP utilizes its unsecured revolving line of credit to fund implementation costs for western contract services. Total draws are converted into four-year term notes at the end of implementation. Principal and interest obligations are then recovered from contract customers as part of annual contract billing during the initial term of each contract. Implementation draws during 2020 of \$4.7 million were converted into term notes for reliability coordination services contract with western customers. The term note conversion for implementation of western energy market services is expected to take place early 2021 and projected to be approximately \$9.5 million.

Future Debt Repayments - Western Contract Services (\$ millions)								
	Issue Date	Issue Amount	Due Date	Balance 1/1/2021	2021 Prin. Pmts.	2022 Prin. Pmts.	2023 Prin. Pmts.	Balance 12/31/2023
2.88% term note due 2024	4/1/2020	\$4.7	Mar-2024	\$3.9	(\$1.1)	(\$1.2)	(\$1.2)	\$0.4
New term note due 2024	1/1/2021	\$9.5	Dec-2024	-	(\$2.3)	(\$2.3)	(\$2.4)	\$2.5
Total		\$14.2		\$3.9	(\$3.4)	(\$3.5)	(\$3.6)	\$2.8

X. SUPPLEMENTAL ANALYSIS AND SCHEDULES

INCOME STATEMENT 2020-2021 COMPARISON

(\$ millions)	<u>2020 Budget</u>	<u>2020 Forecast</u>	<u>2021 Budget</u>
Income			
Tariff Administration Service	\$172.3	\$171.6	\$155.3
Fees & Assessments	23.7	25.6	23.1
Contract Services Revenue	5.6	6.2	10.2
Miscellaneous Income	9.3	9.3	11.5
Total Income	\$210.9	\$212.7	\$200.2
Expense			
Salary & Benefits	\$104.6	\$107.6	\$107.8
Employee Travel	2.0	0.4	1.0
Administrative	5.5	5.1	5.4
Assessments & Fees	22.4	22.3	22.5
Meetings	0.9	0.2	0.4
Communications	4.9	4.9	4.9
Maintenance	19.3	17.6	17.9
Services	19.2	16.7	18.5
Regional State Committee	0.5	0.1	0.5
Depreciation	19.5	18.8	18.1
Other Expense	10.2	3.3	7.9
Total Expense	\$209.1	\$197.0	\$204.9
Net Income (Loss)	\$1.9	\$15.7	(\$4.7)
Debt Repayment	\$25.6	\$25.4	\$32.3
Net Revenue Requirement	\$172.3	\$155.0	\$155.3
Capital Expense	\$15.7	\$16.6	\$16.0
Headcount	656	656	653

INCOME STATEMENT 2021-2023

(\$ millions)	<u>2021 Budget</u>	<u>2022 Forecast</u>	<u>2023 Forecast</u>
Income			
Tariff Administration Service	\$155.3	\$178.7	\$184.3
Fees & Assessments	23.1	23.6	24.1
Contract Services Revenue	10.2	10.4	10.5
Miscellaneous Income	11.5	11.2	11.1
Total Income	\$200.2	\$224.0	\$230.1
Expense			
Salary & Benefits	\$107.8	\$111.0	\$114.3
Employee Travel	1.0	1.8	1.9
Administrative	5.4	5.5	5.6
Assessments & Fees	22.5	22.9	23.4
Meetings	0.4	0.6	0.6
Communications	4.9	5.1	5.2
Maintenance	17.9	18.3	18.8
Services	18.5	17.9	17.4
Regional State Committee	0.5	0.5	0.5
Depreciation	18.1	18.5	17.4
Other Expense	7.9	7.1	6.0
Total Expense	\$204.9	\$209.2	\$211.1
Net Income (Loss)	(\$4.7)	\$14.7	\$18.9
Debt Repayment	\$32.3	\$35.9	\$39.3
Net Revenue Requirement	\$155.3	\$179.0	\$184.4
Capital Expense	\$16.0	\$11.8	\$10.8
Headcount	653	659	661

FINANCIAL STATEMENT RECONCILIATION TO NRR

(\$ millions)	<u>2021 Budget</u>
Total expense per Income Statement	\$204.9
Less FERC fees & assesments	(22.5)
Less depreciation	(18.1)
Less interest expense	(7.9)
Total expense excluding deprec, FERC & int exp	\$156.4
Less western services operating expenses	(\$5.6)
Total expense excluding western contract services	\$150.8
RTO Debt service - principal & interest	36.3
RTO Capital expenditure reserve ⁽¹⁾	3.2
Western contract services shared overhead	(2.2)
Gross revenue requirement	\$188.1
NRR adjustments (non-cash pension adjustment, PY over-recovery) ⁽²⁾	(20.2)
Other RTO revenues (engineering studies, membership dues, etc)	(12.6)
Net Revenue Requirement	\$155.3

1) Capital expenditure reserve is equal to 20% of total RTO capital expenditures.

2) NRR Adjustments:

2020 Projected over-recovery	(\$16.6)
Pension expense (non-cash)	(3.7)
Total NRR adjustments	(\$20.2)

CONSOLIDATING STATEMENT

(\$ millions)	<u>SPP RTO</u>	<u>West Contract</u>	<u>Total SPP</u>
Income			
Tariff Administration Service	\$155.3	\$0.0	\$155.3
Fees & Assessments	23.1	0.0	23.1
Contract Services Revenue	0.3	9.9	10.2
Miscellaneous Income	11.5	0.0	11.5
Total Income	\$190.2	\$9.9	\$200.2
Expense			
Salary & Benefits	\$103.5	\$4.3	\$107.8
Employee Travel	0.9	0.0	1.0
Administrative	5.4	0.0	5.4
Assessments & Fees	22.5	0.0	22.5
Meetings	0.4	0.0	0.4
Communications	4.4	0.5	4.9
Maintenance	17.5	0.4	17.9
Services	18.2	0.3	18.5
Regional State Committee	0.5	0.0	0.5
Depreciation	16.8	1.3	18.1
Other Expense	7.6	0.3	7.9
Total Expense	\$197.6	\$7.2	\$204.9
Net Income (Loss)	(\$7.4)	\$2.7	(\$4.7)
Debt Repayment	\$28.9	\$3.4	\$32.3
Capital Expense	\$16.0	\$0.5	\$16.4
Headcount	620	33	653

BALANCE SHEET

(\$ millions)	<u>12/31/2020</u>	<u>12/31/2021</u>
ASSETS		
Current Assets		
Cash & Equivalents	\$60.4	\$26.7
Restricted Cash Deposits	448.3	515.6
Accounts Receivable (net)	73.7	73.7
Other Current Assets	<u>14.1</u>	<u>14.1</u>
Total Current Assets	596.6	630.2
Total Fixed Assets	70.7	68.6
Total Other Assets	7.0	8.2
Investments	<u>29.0</u>	<u>29.0</u>
TOTAL ASSETS	<u>\$703.3</u>	<u>\$736.0</u>
LIABILITIES & EQUITY		
Liabilities		
Current Liabilities		
Accounts Payable (net)	\$77.1	\$59.5
Customer Deposits	448.3	515.6
Current Maturities of LT Debt	27.2	32.9
Other Current Liabilities	62.4	62.7
Line of Credit	16.3	11.9
Deferred Revenue	<u>5.8</u>	<u>0.1</u>
Total Current Liabilities	<u>637.2</u>	<u>682.7</u>
Long Term Liabilities		
Long-Term Debt	154.1	137.1
Other Long Term Liabilities	<u>40.1</u>	<u>49.0</u>
Total Long Term Liabilities	<u>194.2</u>	<u>186.1</u>
Net Income	15.7	(4.7)
Members' Equity	<u>(143.8)</u>	<u>(128.1)</u>
Total Members' Equity	<u>(128.1)</u>	<u>(132.8)</u>
TOTAL LIABILITIES & EQUITY	<u>\$703.3</u>	<u>\$736.0</u>

CASH FLOW FORECAST

(\$ millions)	<u>2021 Budget</u>	<u>2022 Budget</u>	<u>2023 Budget</u>
Operating Activities			
Net income/(loss)	(\$4.7)	\$14.7	\$18.9
Less: Depreciation	18.1	18.5	17.4
Changes in current assets and liabilities	(1.8)	-	-
Net cash provided by operating activities	<u>11.6</u>	<u>33.2</u>	<u>36.3</u>
Investing activities			
Acquisition of property and equipment	(16.0)	(11.8)	(10.8)
Net cash used in investing activities	<u>(16.0)</u>	<u>(11.8)</u>	<u>(10.8)</u>
Financing activities			
Repayments of long-term debt	(32.3)	(35.9)	(39.3)
Issuance of long-term debt	21.0	12.6	9.4
Net cash provided/(used) in financing activities	<u>(11.3)</u>	<u>(23.3)</u>	<u>(29.9)</u>
Increase/(Decrease) in Cash and Cash Equivalents	(15.7)	(1.9)	(4.4)
Cash and Cash Equivalents, Beginning of Year *	<u>17.4</u>	<u>1.7</u>	<u>(0.2)</u>
Cash and Cash Equivalents, End of Year *	<u>\$1.7</u>	<u>(\$0.2)</u>	<u>(\$4.6)</u>

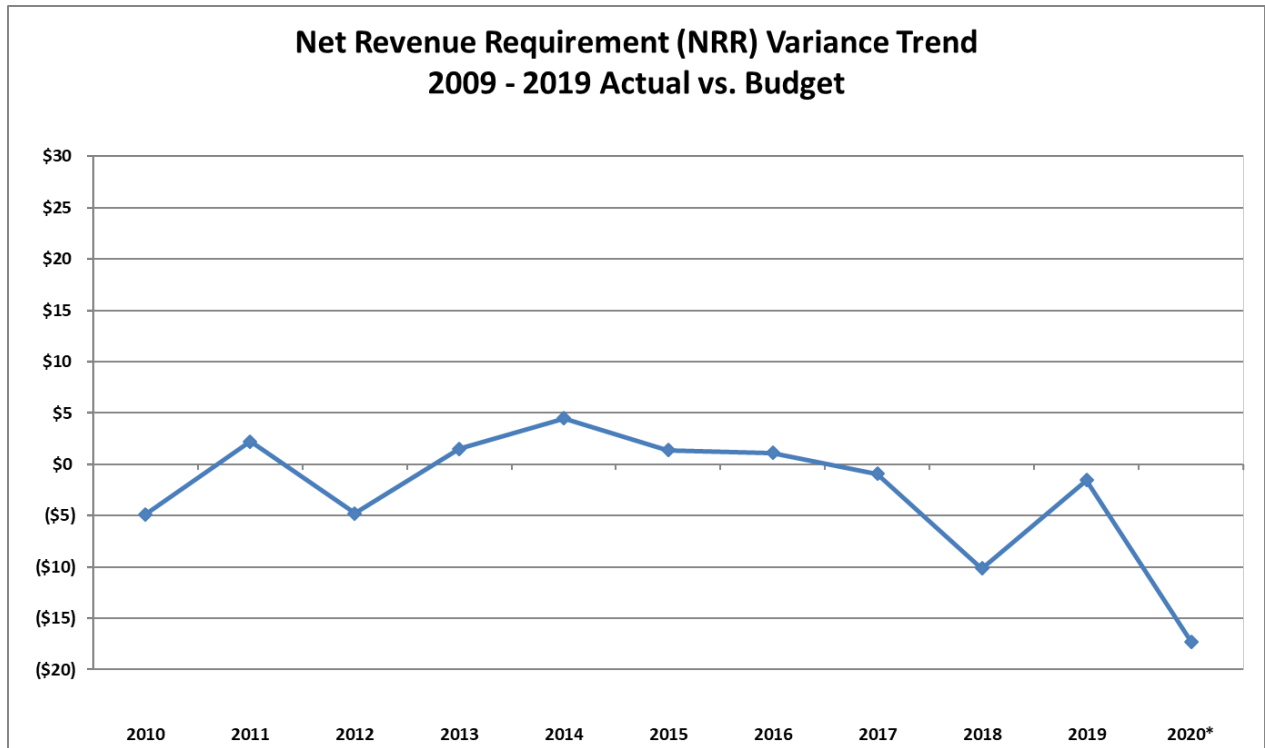
* Operating account only.

CAPITAL PROJECTS LIST

	Prior Year(s)	2021 Budget	2022 Forecast	2023 Forecast	Total Capital
Capital Projects					
EMS Upgrade	\$ 0.2	\$ 1.8	\$ 1.2	\$ -	\$ 3.2
Markets & Reliability Training Simulator (formerly DTS)	1.3	0.9	-	-	2.2
Ramp Product	0.3	0.5	-	-	0.8
Identity Access Management Deployment (IAM)	0.2	0.3	-	-	0.5
FERC Order 841: Electric Storage	0.2	0.2	-	-	0.4
Tagit/Scert Rewrite	0.1	0.2	-	-	0.3
Freeze Date Replacement	-	0.2	-	-	0.2
Fast-Start Resource Compliance	-	0.2	-	-	0.2
Interface Pricing & Pseudo Tie Modeling	-	0.2	-	-	0.2
Total Capital Projects	\$ 2.3	\$ 4.5	\$ 1.2	\$ -	\$ 7.9
Foundation					
Information Technology		\$ 7.6	\$ 7.9	\$ 8.1	\$ 23.6
Operations		2.9	2.3	2.3	7.4
Engineering Department		1.0	0.4	0.4	1.8
Facilities		0.1	0.1	0.1	0.2
Total Foundation *		\$ 11.5	\$ 10.7	\$ 10.8	\$ 33.0
Total Capital Budget					
	\$ 2.3	\$ 16.0	\$ 11.8	\$ 10.8	\$ 40.9
2021 - 2023 Capital Budget					\$ 38.6
Contract Services					
RC West - EMS Upgrade	\$0.0	\$ 0.2	\$ 0.1	\$ -	\$ 0.4
RC West - PMU	\$0	0.1	-	-	0.1
WEIS Ongoing WEIS Market Enhancements	-	0.2	0.2	0.2	0.6
Total Contract Services (funded thru contract revenues)	\$ 0.0	\$ 0.5	\$ 0.3	\$ 0.2	\$ 1.0

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

NRR VARIANCE HISTORY



	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020*</u>
Actual NRR	\$63.5	\$80.8	\$84.8	\$123.3	\$137.0	\$142.6	\$151.6	\$159.6	\$153.9	\$155.9	\$155.0
Budget NRR	\$68.4	\$78.6	\$89.6	\$121.8	\$132.5	\$141.2	\$150.5	\$160.5	\$164.0	\$157.5	\$172.3
Over/(Under) Budget	(\$4.9)	\$2.2	(\$4.8)	\$1.5	\$4.5	\$1.4	\$1.1	(\$0.9)	(\$10.1)	(\$1.6)	(\$17.3)
	(7%)	3%	(5%)	1%	3%	1%	1%	(1%)	(6%)	(1%)	(10%)

The graph and table above highlight the range of variance between SPP's actual and budgeted Net Revenue Requirement (NRR) by year.

* The 2020 NRR represents the forecast as of July 31, 2020.

SCHEDULE 1A RATES

(Internal Note: Rate schedule still under review, numbers below remain preliminary at this time)

Rates are calculated based on amounts presented in this budget document and are not considered final until published in the formula rate template. The template is required to be published within ten business days of the annual budget approval by the board of directors.

Schedule 1A Rate Allocation

<u>Rate Schedule</u>	<u>NRR</u>	<u>MWh</u>	<u>Rate/MWh</u>
1-A1 Transmission Service	\$61.9	392.2	\$0.158
1-A2 TCR Service	\$4.4	731.7	\$0.006
1-A3 IM Clearing	\$15.8	595.7	\$0.027
1-A4 IM Facilitation	\$73.2	550.2	\$0.133

Note: NRR and MWh represented in millions

XI. SPP OPERATING PLAN DOCUMENT



2021 OPERATING PLAN

By the SPP Finance Department

Published on July 13, 2020

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SPP OVERVIEW

Southwest Power Pool's (SPP) mission is "Helping our members work together to keep the lights on... today and in the future." SPP provides services independently on a regional basis, focused on electric reliability, cost effectiveness and bringing value to SPP members and their customers. SPP is mandated by the Federal Energy Regulatory Commission (FERC) to ensure reliable supplies of power, adequate transmission infrastructure and a competitive wholesale electricity marketplace. SPP's primary services are:

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

FERC directly regulates SPP. FERC must approve all changes to SPP's Open Access Transmission Tariff (tariff) before implementation. The tariff defines SPP's process for non-discriminatory access to transmission. SPP is required to report any failure to comply with tariff provisions or FERC directives and may be subject to penalties and fines for noncompliance.

GOVERNING DOCUMENTS

TARIFF

The tariff defines the majority of the required workload for SPP's operations and engineering departments. The Market Operations Policy Committee (MOPC) has oversight over the majority of changes to the tariff. Significant duties defined by the tariff include, but are not limited, to:

- Administering the tariff, including scheduling
- Providing ancillary services
- Operating the market
- Operating the Balancing Authority (BA)
- Settling all transactions under the tariff

- Administering credit services for tariff customers
- Completing system impact studies
- Completing the annual SPP transmission expansion plan
- Studying generation interconnection requests
- Evaluating long-term transmission service requests
- Administering the competitive process for transmission expansion
- Administering the Southwestern Power Administration transmission system beyond their tariff
- Monitoring activities in SPP's energy markets and exercise plans to mitigate market power

MEMBERSHIP AGREEMENT

The membership agreement is an agreement between SPP and each of its members that obligates SPP to perform outlined services, including those in the tariff. Changes to the scope of responsibilities are primarily within the purview of the MOPC and Board of Directors and Members Committee. The agreement describes other significant duties, which include, but are not limited, to:

- Acting as the reliability coordinator for the bulk electric system (BES)
- Developing regional reliability plans and emergency procedures
- Reviewing and approving all planned BES maintenance
- Coordinating generation unit maintenance
- Administering an open access same-time information system

BYLAWS

The bylaws describe SPP's organizational operation, specifically outlining duties of the board and its advisory committees. Changes to the bylaws are under the oversight of the Corporate Governance Committee and board. SPP has a responsibility to facilitate meetings of every organizational group:

- Board of Directors and Members Committee (1)

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

PROTOCOLS AND BUSINESS PRACTICES

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

ORGANIZATIONAL STRUCTURE

SPP operates via two distinct organizational structures. The governance structure (Appendix A), begins with the board and is composed of other board-level committees and working groups. This organizational structure is populated largely with representatives from SPP's member companies. These groups provide directives on the work SPP is expected to accomplish.

The internal staff structure (Appendix B) defines reporting relationships between employees. The staff structure begins with the SPP president and cascades into vice presidents, departmental directors/managers, etc. The staff structure is based on functional responsibilities. The governance structure provides directives to staff.

FUNDING

SPP funds its ongoing operating costs through charges to transmission customers under the tariff and customers of specific non-tariff services. SPP's operating costs include scheduled principal and interest payments on its outstanding debt but exclude depreciation and amortization expenses incurred. SPP is able to collect up to 100% of its operating costs from charges to transmission customers up to a cap of 43¢/megawatt-hour (MWh). SPP is charging customers 43.0¢/MWh for service in 2020.

SPP will move to an unbundled rate design effective Jan. 1, 2021, subject to the same overall cap described above. Generally, under the FERC filed and approved formula rate design, transmission customers will be charged for system dispatch and control costs, auction revenue rights and transmission congestion rights holders will be charged for costs to operate the congestion rights markets, generation, load, and financial-only participants will be charged the common costs to administer the energy markets, and generation and load will be charged the costs to operate the physical energy markets.

SPP's funds its capital expenditures with borrowings from periodic debt issuances and with 20% equity allocation included in the annual net revenue requirement. SPP's debt issuances are generally unsecured. They have a one-to-two year, interest-only payment period and then fully amortize by the maturity of the notes. SPP is required to obtain regulatory approvals before issuing new debt.

SPP carries an A rating from Fitch Ratings that was last affirmed in November 2019. SPP issued new notes in August 2018 to fund capital expenditures incurred through 2023.

SPP achieves short-term liquidity by managing its cash float. SPP has a committed \$30 million revolving credit facility with a commercial bank to provide additional liquidity support.

2021 EXPECTED BUSINESS ENVIRONMENT

SPP's business environment is constantly changing. The organization utilizes an evolutionary, rather than revolutionary, approach to managing change. Some of the opportunities and challenges affecting SPP are related to continued electrification, changing generation mix, transmission planning and cost allocation, evolving energy markets, expansion to the west, regulatory issues and cybersecurity risks. The full impact of the COVID-19 pandemic on SPP and its members is unknown but considered in SPP's 2021 budget.

ELECTRIFICATION

While many projections show U.S. energy consumption will continue to decline, overall electricity use is expected to increase with technologies such as electric cars and heat pumps. SPP anticipates continued growth in its members' demand response and energy efficiency programs. Over time, these changes will likely cause lower summer peaks, higher winter peaks and a flattening of load shapes due to an annual normalization of electricity use. Consumers will have more choices about how they use energy and interact with the electric grid. While major changes may not materialize over the next year, SPP is incorporating more of these evolving assumptions in its engineering models.

While load in the SPP region has been flat overall for the last several years, there are pockets of load growth. Commercial and industrial customers seeking low-cost, renewable service options are increasingly attracted to the SPP region. Companies such as Google, T-Mobile USA and Facebook have contracted with renewable generators to power their data centers or meet carbon-emission-reduction goals.

CHANGING GENERATION MIX

The generation fleet at SPP's disposal — more than 750 generators participating in its markets across a 14-state region — has changed dramatically over the last 10 years. SPP's current generation fuel mix is primarily coal, wind and gas. On average, these fuel types made up 35%, 27% and 26% of energy production generation. Coal has been on a continual decline in production and capacity since 2014. SPP members are planning no new coal generation, and older plants are being retired or projected to be retired.

The SPP region has seen a massive increase in renewable energy. In 2008, wind energy made up just 3% and solar a fraction of a percent of SPP's annual energy production. In 2019, wind comprised 27.4% and solar 0.2%. At a given moment, SPP has reliably met as much as 73% of its

load with wind. SPP's primary operational challenge is maintaining grid reliability as it becomes increasingly dependent on energy delivered from intermittent resources. The generator interconnection (GI) queue represents new generators "waiting in line" to be analyzed and connected to the transmission system. There are 54,000 MW of wind in the planning queue. SPP needs to develop economic and cost recovery strategies to use excess wind and identify upgrades across independent system operator/regional transmission organization (ISO/RTO) boundaries to move wind energy into other markets.

There is only a small amount of solar energy installed in SPP in 2020, but solar and battery storage are growing. There are 32,982 MW of solar and 7,069 MW of storage in SPP's generation interconnection queue. SPP expects these emerging technologies to continue to evolve and become more prevalent, presenting as utility-scale resources or transmission assets when connected to the transmission system and as reduced load when connected to the distribution system.

SPP has identified physical needs of the bulk power system that conventional generation inherently provide or has been designed to provide to maintain the reliability of the bulk electric system. New resources, such as wind, solar, and battery rely on inverter-based provision of AC power and thus do not inherently or physically provide those responses and physical need of the power system, including stored potential energy to respond.

TRANSMISSION PLANNING AND COST ALLOCATION

SPP works with its members annually to determine what new transmission is needed in the region. These projects benefit the region by connecting new generators and demand sources to the transmission system, ensuring utilities can deliver low-cost electricity to consumers, and solving power grid issues that, if not addressed, could impact the reliable delivery of electricity or cause power outages.

The determination of who should pay for transmission upgrades is a highly debated public policy issue. SPP works continuously to better align its transmission planning processes, Integrated Marketplace and transmission cost allocation methodologies. It is important to address the cost responsibility of loads and generators as well as cost allocation among loads.

SPP predicts additional challenges based on a changing generation mix. One challenge is determining how to both use storage for transmission reliability and provide economic benefits through the markets. As load also starts to respond to either reliability needs or economic benefits through the markets, planning will increase in complexity because load will no longer just be a forecast demand.

EVOLVING ENERGY MARKETS

Natural gas prices have been low, and wind has zero fuel cost and enjoys significant federal tax incentives. This is enabling an economic dispatch of SPP's changing generating fleet, reducing wholesale energy prices and shifting the region away from traditional generation. This economic dispatch is feasible due to both SPP's robust transmission system investment and Integrated Marketplace. The Integrated Marketplace has provided more than \$3.5 billion in savings to participants since it launched in 2014.

In 2019, SPP's spot wholesale energy prices remained the lowest of any organized market. SPP's primary financial challenge is to ensure that, despite declining wholesale energy prices, resources that provide reliability are appropriately compensated and incentivized to offer and deliver these services to the grid. SPP continuously works with stakeholders to enhance the Integrated Marketplace's ability to cost-effectively utilize its diverse generation mix, manage grid congestion and reliably respond to changes in load and generation.

WESTERN ENERGY SERVICES

SPP began operating in the Western Interconnection as a North American Electric Reliability Corporation (NERC)-certified reliability coordinator in December 2019. SPP works with customers to keep the lights on and mitigate operational contingencies that threaten reliability. In February 2021, SPP plans to launch a Western Energy Imbalance Service (WEIS) market and administer it on a contract basis. The market will centrally dispatch energy from participating resources every five minutes, enhancing reliability and affordability for western consumers. These partnerships with new customers will benefit SPP's existing customers through economies of scale and cost savings.

FEDERAL AND STATE ENERGY POLICIES

SPP regularly monitors and analyzes proposed federal and state legislative actions and determines the potential impact on SPP and its members and stakeholders. At the federal level, SPP has observed broad energy policy trends toward increased renewables, storage development, cybersecurity, grid security and modernization, and specific reforms for FERC. Historically, comprehensive federal energy legislation has been slow to become law. The pace at which regulatory rulemakings have been issued appears to have slowed, with finalized actions often facing lengthy court challenges.

At the state level, legislative changes happen more quickly. Hundreds of energy-related bills become law each year across the country. These state-level changes both reflect and drive energy development and investment trends. SPP has seen state energy policy trends similar to federal trends, as well as continued interest in renewable portfolio standards, retail choice, RTO participation and right of first refusal laws.

Federal and state energy policy trends toward increased renewables, storage development, cybersecurity, and grid security and modernization are likely to continue in the coming years. As states continue to increase their renewable energy goals and reduce their greenhouse gas emissions, interest in advanced transmission systems, RTOs and retail choice could continue to grow. Consumers, utilities and large private corporations are also likely to advance policy through independent actions.

REGULATORY

Directives from FERC impact SPP's business and operations.

FERC's Order 841 directed RTOs and ISOs to revise the rules of their organized markets to allow energy storage resources to participate. SPP worked with stakeholders to refine market participation practices to accommodate storage. In late 2019, FERC found that SPP's initial filings generally satisfied the directive but required SPP to submit another filing to incorporate minimum runtime rules and practices for all resource types. In February 2020, FERC granted an SPP request to delay implementation of storage market participation due to delays in the development of a new market and transmission settlement system and software changes associated with Order 841 reforms. FERC set Aug. 5, 2021 as the new effective date for SPP's tariff changes related to Order 841.

In February 2020, FERC denied SPP's request for a rehearing regarding Attachment Z2 of the SPP tariff, which defines how transmission customers are compensated for upgrades other entities subsequently use. FERC affirmed that refunds are the appropriate remedy, and any interest owed on the refunds should be collected from entities that received settlement payments from SPP. In April, SPP's board approved a modification to its tariff that eliminates Attachment Z2 revenue credits prospectively for certain network upgrades. SPP filed the revision with FERC the following day, asking for an effective date of July 1, 2020.

In 2019, FERC directed SPP to eliminate its exit fee for non-transmission owning (NTO) members, and rejected SPP's proposal to instate a lower, standard exit fee for all members. However, the Commission specified that SPP could submit a new proposal with "adequate explanation" for why NTOs should pay an exit fee, and ensure NTOs pay a smaller exit fee than transmission owners. In March 2020, FERC clarified that NTO members of SPP are still subject to a \$50,000 membership deposit, rejecting a complaint that the deposit constitutes a barrier to membership. In April 2020, SPP filed board-approved revisions to its bylaws and membership agreement for FERC's review. The revisions define and differentiate exit fees for transmission owning and NTO members.

CYBERSECURITY RISKS

The threat of cyberattacks continues to be a major risk to SPP and the electric utility industry. SPP must remain involved in developing NERC standards that are flexible enough to meet

security challenges while allowing the provision of reliable and affordable electricity. Evolving threats and emerging technologies surface more quickly than NERC has been able to revise implement related standards.

SPP remains committed to addressing the changing cybersecurity landscape. SPP will identify actions to address known and emerging issues, as well as post-event actions to mitigate the financial consequences of a cyber event.

CORPORATE AND DEPARTMENTAL 2021 OBJECTIVES

SPP's officers met in June 2020 to discuss corporate and departmental objectives for 2021. That discussion informed the 2021 operating plan and 2021-2023 budget.

CORPORATE OBJECTIVES

1. **Holistic Integrated Tariff Team (HITT) recommendations implementation:** The SPP board of directors approved a comprehensive slate of 21 recommendations from the HITT at its July 2019 meeting. The approved implementation plan includes completion of tariff changes or study work for the following in 2021:
 - a. January 2021:
 - i. Study offer requirements for variable resources
 - ii. Study mitigation of unduly low offers
 - b. April 2021: Implement ERS/ORS compensation model

The majority of the HITT recommendations are scheduled for completion of tariff changes or study work prior to 2021 but will either be awaiting FERC approval or in process of operational implementation. Recommendation R5 (Study additional operational tools) is ongoing, and recommendation T4 (Study three-phase GI process effectiveness) is dependent on implementation of the process.

2. **Reduce GI study backlog:** SPP entered 2020 with generation interconnection studies pending since 2015. Additional full-time personnel were approved in 3Q'19 to reduce the backlog to an acceptable level. SPP has now completed all 2015 studies and expects to complete all 2016 studies by the end of 2020. In 2021, SPP plans to complete all 2017-2019 studies.
3. **Z2: Legacy Z2 resettlement:** Legacy Z2 resettlement is on appeal to the D.C. Circuit Court of Appeals. SPP's objective is to participate in the legal process and drive towards a resolution that complies with court and FERC orders.
4. **New strategic planning process:** SPP launched a comprehensive strategic planning effort in 2020 to help determine strategic initiatives critical to SPP's members and stakeholders. This work will culminate with presentation of a new strategic plan to the board of directors in April 2021.

5. **Relationship-building:** Barbara Sugg and Lanny Nickell are leading efforts to further build relationships across SPP. Throughout 2021 they will lead outreach efforts to representatives of each SPP member and engage with neighboring systems, regulators, legislators, policymakers, non-governmental organizations and other groups critical to SPP's ongoing success.
6. **Improve operating efficiency:** SPP's cost of operations is the lowest of all U.S. ISO/RTOs. SPP will continue to search for and drive improvement in its cost of operations. The Customer Savings Innovation (CSI) program piloted in June 2020 is expected to uncover ideas for continuous improvement. SPP remains committed to implementing ideas that achieve savings without sacrificing quality or service levels. SPP intends to utilize virtual meeting technology to lower future meeting and travel costs.
7. **Design comprehensive transmission planning process:** Continuous improvement of the SPP transmission planning and services processes remains a subject of focus for 2021. SPP will develop a framework to combine planning and services processes where appropriate to develop a more comprehensive process that adds value for SPP's members and customers. Transmission planning and services processes should be enhanced to emphasize improving utilization of the existing transmission network and adding data analysis and risk management approaches to the assessment of transmission needs.
8. **Value and Affordability Task Force (VATF) Recommendations:** In 2019, the board created the VATF to seek opportunities to increase SPP's value and improve affordability while maintaining and protecting its mission. The VATF made 13 recommendations in the broad areas of 1) value of SPP and transmission, 2) stakeholder groups and services, and 3) internal processes. Two recommendations were targeted to be implemented in 2021:
 - a. A study to determine the value of transmission expansion in SPP. The VATF recommended that SPP staff work with the Strategic Planning Committee to develop a study scope by the end of 2020 and perform the study in 2021.
 - b. MOPC re-organization. The VATF recommended the MOPC continue to improve its organizational groups, minimizing meeting costs where possible and identifying other efficiency and effectiveness improvements, with a goal of implementation by April 2021.
9. **Western Energy Imbalance Services (WEIS):** SPP contracted to implement and administer an energy imbalance market for contract participants operating in the western interconnection. Development has been underway throughout 2020 and implementation is scheduled for February 1, 2021. The WEIS will initially include eight utilities, six of which are affiliated with existing SPP members. This development closely follows the implementation of western reliability coordination services.

10. **Mature and expand contract services:** The provision of contract services reduces the net revenue requirement (NRR) collected from tariff customers. SPP is currently administering several contracts and plans to implement its WEIS contract in February 2021. SPP will expand its business development efforts in 2021 to offer additional services that reduce its NRR. The SPP board of directors will closely oversee and monitor efforts to achieve this objective.

DEPARTMENTAL OBJECTIVES

OPERATIONS

Summary of key initiatives:

- Refine existing reliability tools and processes for improved efficiency without the need for additional investment. These include TSAT, VSAT, PMU, GAP and RTOP.
- Expand and improve market functionality with products for ramp capability, uncertainty and fast start resources.

ENHANCED RELIABILITY CAPABILITIES

SPP must maintain reliability excellence in the context of the bulk electric system's changing landscape. The industry continues to integrate more inverter-based technologies, mostly renewable energy generation. In the previous eight years, the amount of SPP load served by coal decreased from 63% to 35%, while the amount served by wind increased from 6% to 27%. The generation interconnection queue includes approximately 45 GW wind, 31 GW solar, 6.7 GW battery storage, and 390 MW traditional fuels.

Large transfers of variable energy continue to increase across the SPP footprint. Wind farms are often located in remote areas with little to no load density. Some traditional fossil generation that directly supports load centers is being retired. Fuel-mix dispatch changes and new generation technologies are creating new operational challenges, such as voltage and transient instability. Other areas that require closer real-time and sometimes multi-day-ahead monitoring are inter-area oscillations, inertia, primary frequency response and uncertainties in load and wind forecasting. The increased complexity of the bulk electric system's behavior will require SPP to further enhance processes, technologies and software to meet these challenges and present results comprehensively to system operators. To this end, operational efforts focus on these initiatives:

INTEGRATING NEW PROCESSES

SPP will continue to enhance several new processes throughout 2020.

The generation assessment process (GAP) was implemented in August 2019 and has been endorsed by the operating reliability working group. The GAP assesses submitted generation outages for capacity adequacy to ensure the SPP BA will have sufficient generation capacity for all possible scenarios of high load, low wind and high forced outage levels. For conflicts, generation operators are coordinating with SPP to re-schedule planned outages when there is maintenance margin available. The Generation Outage Task Force was formed to investigate if

further policy changes are needed in this area. SPP staff intends to continue to evolve and learn from this process as it adjusts to balance necessary outages and grid reliability.

The Uncertainty Response Team (URT) formed in July 2018 to mitigate increased exposure to error in wind and load forecast models. Weather models that forecast wind speed are highly dependent on accurate low pressure system forecasting. In general, wind-forecast error rates have improved over time, but the SPP footprint has experienced several stalled low pressure systems and complex interactions in the upper atmosphere that resulted in a sudden drop of wind generation not forecasted by weather models. It is the responsibility of the URT to review results of weather forecast models and determine if there is sufficient conventional capacity to respond to deviations in load and wind forecast over varying time horizons. Responsibilities generally include looking several days in the future and recommending actions for system operators such as extending existing commitments or committing new generation. SPP staff will continue to evolve and improve processes that can help determine uncertainty levels that require consideration in real-time operations.

MISO and SPP's transmission system seam stretches from Canada into Texas. Each BA's intra-market dispatch use the other's transmission system as a parallel path. Flows between MISO North and MISO South have a particularly high impact on the SPP transmission system, and MISO and SPP developed a regional transfer operations procedure (RTOP) to mitigate the impacts and specify early communication and actions. During their inquiry into the January 2018 cold weather event, FERC and NERC recognized several needs. They include ongoing monitoring of the impact of the regional transfer flows, performance of periodic impact studies, early communication between MISO and SPP RC, conducting capacity and energy emergency drills, and changes to the RTOP to address how to return regional transfer flows to their limits. SPP and MISO are working to improve processes and procedures and to provide increased visibility of the impact of regional transfer flows to system operators.

INTEGRATING NEW TOOLS

The voltage security assessment tool (VSAT) is part of the dynamic security assessment (DSA) suite of tools that has been in production since May 2018. VSAT provides shift engineers, operators and other support staff an analysis, complimentary to real-time contingency analysis, that considers real-time conditions and calculates the additional margin that could flow across an interface that is limited due to voltage constraints. The tool assists staff in protecting grid reliability for large system transfers in real time. VSAT results have been incorporated into custom displays that operators use to monitor the transmission system. SPP will continue to evaluate the effectiveness of the VSAT. Based on future transmission system conditions, new VSAT scenarios will be added as necessary.

The transient security assessment tool (TSAT) has been in production since August 2019 in a pilot phase. Validation of results is ongoing to ensure accurate and concise results that can be trusted for real-time decision making. TSAT provides operators time-domain analysis to determine the impacts of a fault on the transmission grid. The tool assists staff in protecting grid reliability from transient instability. SPP will continue to evaluate the accuracy and effectiveness

of the TSAT. Based on future transmission system conditions, new TSAT scenarios will be added as necessary.

In 2017, SPP deployed a suite of tools to receive, store, and analyze members' phasor measurement unit (PMU) data. The primary goal of SPP's PMU software is to detect and identify forced and inter-area oscillations. When the initial project concluded in 2017, most of the PMU data originated from a single member, but two additional members have begun voluntarily sending PMU data to SPP. Other members continue work on their own PMU deployments with plans to send data to SPP. As of November 2019, all new generators greater than 50 MW must include a PMU device and stream the data to the transmission operator and SPP. SPP is also working with other RCs and RTOs in the eastern interconnection to exchange data. This growth in available PMU data is allowing us to better study oscillations in the eastern interconnection. SPP is also working with a PMU software vendor to add source location to existing oscillation detection capabilities. This may enable SPP to determine if the source of an inter-area oscillation is in our footprint and take steps to mitigate it.

In 2016, SPP launched a multiyear project to upgrade its dispatcher training simulator (DTS). SPP is working with an external software developer to create a full training and testing simulated environment that performs more closely to real-time production systems. The first two phases are complete. The DTS upgrade will continue through 2020 to integrate dedicated market system and situational awareness displays. The DTS will provide realistic simulation training using market systems critical to SPP operators' readiness and increased reliability. This will improve operator training and greatly enhance support of reliability coordination, balancing authority and market operations.

EXPAND AND IMPROVE MARKET FUNCTIONALITY

UNCERTAINTY

As SPP's generation fleet includes increasingly more renewable resources, the majority of many days' planned operating capacity comes from a forecastable resource. Due to changes in temperature, humidity, cloud cover and human behavior, these resource forecasts are not always accurate. This can lead SPP to rely on capacity that cannot actually supply energy when needed to meet demand.

SPP is developing an *uncertainty product* that accounts for uncertainty in energy production from available capacity to ensure there is enough available during these events. A time horizon for this product has not been determined. Other markets have addressed this issue with products in the 30-minute time horizon. SPP's analyses indicate promise for one or more products in time ranges of up to four hours. SPP working groups are analyzing the results of SPP's uncertainty study and developing this product to ensure it meets the needs of SPP and the membership.

RAMPING CAPABILITY

SPP is creating a *ramping capability product* to ensure there is enough ramping capability to address potential wind forecast errors and concerns that SPP's real-time prices are overly volatile due to scarcity pricing. Resources' ramping capability is an essential component of efficiently and economically meeting the energy needs of SPP's market participants. A resource's asset age and technology impacts its ability to ramp.

SPP's market does not directly value the ability to perform ramping functions. This could result in new technology ignoring ramp as a valued product and older assets not optimizing their offers or maintenance to produce enough ramping capability to meet the region's needs. With the continuing development of forecastable resources, the ability to procure and value excess ramping capability to handle potential errors in renewable forecasts will help ensure a stable, reliable and economic grid. SPP filed Revision Request 361 (Ramping Capability) with FERC on April 21, 2020 and is awaiting the response to begin implementation planning.

FAST-START RESOURCES

A third area of focus to improve and expand market functionality is on *fast-start resources*, which are essential to the reliable provision of energy. These resources typically have short startup times, low minimum run-time requirements and faster-than-average ramp rates, characteristics that provide needed flexibility for managing SPP's operational challenges.

Although the need for fast-start resources could decrease with the implementation of ramping capability market products, SPP anticipates continuing to encounter unforeseen circumstances requiring a fast-start market product or service. While SPP currently has a participation model for fast-start resources, many market participants believe the model's compensation principles are lacking and do not adequately incent participation of fast-start resources. FERC and some stakeholders are concerned about the inclusion of start-up and no-load costs into the locational marginal price (LMP) calculation.

SPP and its stakeholders have initiated fast-start market product enhancements in the form of *RR375 (FERC Order on Fast-Start Pricing)* and *RR402 (HITT R3: Fast-Start Resources, Enhanced Intra-Day Reliability Unit Commitment)*. SPP has filed RR375 at FERC and is awaiting response. The Market Working Group has approved *RR402*, and SPP will implement these changes after gaining approval from FERC.

INFORMATION TECHNOLOGY

IT's foremost responsibility is maintaining the currency and availability of existing systems to fulfill SPP's core mission of keeping the lights on. To satisfy this obligation, a large percentage of IT's daily work is associated with efforts that support reliability.

IT plays a key role in the successful implementation of approved corporate capital projects included elsewhere in this document. An estimated 55,150 hours of IT resources are required to implement projects proposed in the 2021 capital projects budget. Additionally, IT provides support and refreshes for all capital assets throughout their useful life.

Beyond these critical responsibilities, IT is focusing on the following areas.

CRITICAL INFRASTRUCTURE PROTECTION STANDARDS (CIP) AND SECURITY

SPP is enhancing security efforts in accordance with a cyber strategic plan that is monitored by the oversight committee. This work includes:

- Modifying software development processes to include secure coding practices by design and default. These modifications will enable SPP to address security vulnerabilities upstream during development.
- Automating the monitoring and provision of logical access to information systems, including implementing an identity and access management system. Role-based access control limits user access to only the data necessary for their job. Creating patterns of risk mitigation through architecture or roles enables rapid risk reduction through common approved structures. Roles are one example of how security architecture can reduce burden while increasing security and lowering risk.
- Applying a corporate risk management process.
- Updating business continuity plans.
- Strengthening the information management program by establishing a data governance program. One of the first priorities will be to agree on enhanced classifications and labels of sensitive data, a precursor to implementing data-loss prevention and tracing the flow of sensitive information through SPP's infrastructure.

SPP is also reducing manual work associated with assessing and administering security patches issued by third-party software providers, most of which are driven by CIP requirements. IT resources are devoted to the daily care and upkeep of hardware and software. We manage a continuous stream of patches and updates across all installed hardware and software. SPP processes security patches for over 5,300 unique pieces of software installed on critical cyber assets, resulting in tens of thousands of patch assessments that must be conducted by staff and approximately 1,100 security patches deployed annually across 1,400 assets. In addition, SPP

processes and deploys security patches across its lower environment stack and non-CIP classified assets. IT is developing automated solutions and working with an outside vendor to conduct security and non-security patch assessments. Automating this solution reduces the opportunity for human error and related compliance and security risks.

Finally, in accordance with NERC standard CIP-013-1 (Supply Chain Risk Management), SPP is automating and refining supply chain processes to streamline intra- and interdepartmental efforts.

INCREASE OPERATIONAL EFFICIENCY

IT receives continuously more requests and resulting work that reinforces the need for ongoing process improvement and automation to gain efficiencies.

Efforts to identify and prioritize process optimization opportunities are ongoing. IT continues to focus on highly manual, repeatable administrative activities that carry a high risk of manual errors.

Another goal for minimizing risk is to identify and prioritize opportunities for automation, maintain a clearinghouse for automation activities, determine the cost/benefit of automation proposals, and develop a cohesive automation implementation plan. The automation framework has been established, and multiple automation initiatives are in flight and in the queue. Relevant efforts include automating and managing passwords to reduce overhead and ensure compliance and automating application deployments, server builds and decommissions, and the CIP supply chain process.

SPP has an extensive software portfolio including tools that provide similar functionality in source-code versioning, issue tracking, application build processes and information sharing. IT is standardizing platforms that will reduce SPP's software stack and costs associated with licensing, support and maintenance. The procurement process is being examined to clarify and consolidate the paths by which hardware and software are acquired, ensuring adequate architectural and security oversight, and auditable compliance with CIP-010-1 and CIP-013.

Finally, IT is working with stakeholders across the business to create and implement collaborative solutions with individual departments.

EVALUATE AND LEVERAGE EMERGING TECHNOLOGIES

IT continues to evaluate and implement technologies that increase and optimize SPP's functionality. The technology landscape continually changes, so it is prudent for IT to stay aware of evolving technologies with an eye toward integrating systems that support SPP's strategic initiative of enhancing member value and affordability.

For the vast majority of business applications, IT utilizes on-site infrastructure to run application systems and store critical business data. While there are advantages to this approach, there are

less-critical systems and data for which off-site cloud implementation may be appropriate. IT is evaluating on-site cloud solutions to enable more flexibility and efficiency while reducing equipment purchases. IT is developing cloud strategies, cloud usage and services policies, and associated processes and procedures. Cloud solutions increase efficiency by delegating responsibility for certain parts of the infrastructure to a third party that has economies of scale to manage it more efficiently. By separating infrastructure layers, we can eliminate dedicated, uniquely configured infrastructure to support each application in favor of a common infrastructure service. This is easier to support and more efficient to leverage, even if we choose an on-premise solution.

The amount of data required to support end-users continues to increase significantly, requiring additional investment in storage technology. Data must be appropriately available to end-users, perform satisfactorily and be backed up to secondary and/or offsite locations as required. In some cases, SPP applications must have data in multiple environments (test, development, member testing, quality assurance, and production) that may necessitate short-term and/or permanent retention periods, all of which require administrative oversight. A data governance program has begun that will define updated data classifications and label policies for SPP's major information systems.

MAINTAIN AND REPLACE ASSETS

Every system and tool SPP uses to perform its tariff, markets and reliability functions relies on technology. Physical technology assets (servers, hosts, storage devices and networking equipment) comprise approximately \$40 million of capital inventory. Importantly, these physical assets must be replaced periodically due to exposure to increased failure rates, discontinued or unaffordable vendor support, operating system incompatibility and the need for improved application performance and connectivity requirements.

An asset inventory management program is being implemented to accurately inventory SPP's hardware and software and integrate across IT to ensure license compliance, support status, cyber compliance, and reduce overlapped vendor solutions. Savings will come through reduced exposure to contractual non-compliance fines, reduced risk of purchasing multiple overlapping technologies, reduced risk of infrastructure getting to end of support, and expense reduction of automating what is today a manual, incomplete, and error-prone task.

FINANCE

CREDIT POLICY

SPP's Integrated Marketplace creates both opportunity and risk for market participants. Risk is manifested in the potential for credit default and subsequent socialization of that loss among all participants. SPP's credit group and its stakeholders have undertaken a robust review of TCR-related credit risk and have proposed three initial enhancements to strengthen the credit policy and associated processes.

While the group proceeds with approval and implementation of these enhancements in 2020, they are forming additional recommendations to address other areas of risk within the policy. This second phase of recommendations will focus on forward-looking risk metrics and potential enhancements to auction processes, both of which could improve visibility into portfolio risk valuation.

The groups' goals are to achieve consensus on second-phase enhancements by early 2021, then seek stakeholder and FERC approval. Implementation of the recommendations would occur in late 2021 for production in early 2022.

ENGINEERING

GENERATION INTERCONNECTION PROCESS

In 2020, SPP will implement its new FERC-approved, three-phase GI study process in DISIS 2017-001 and DISIS 2017-002. SPP staff and consultants will concentrate on clearing the backlog of almost 200 requests from 2017 (more than 36 GW).

The requirements of FERC Order 845 are resulting in requests for surplus interconnection service requests which will complicate GI processes and require new approaches to address customer needs. The self-build option resulting from Order 845 is expected to result in conflict between transmission owners and customers that will likely impact the generator interconnection agreement negotiation process and thus require more GI staff facilitation.

The new generation interconnection user group is being established to both educate stakeholders and identify process improvements to help clear the GI queue backlog. Hybrid requests are becoming more prevalent that will require procedures and policies to address the hybrid facilities' unique characteristics.

The approval of Wolf Creek – Blackberry in the latest ITP, eliminating the need for the Wolf Creek – Emporia solution identified in GI studies, will likely result in significant push by transmission owners to force interconnection customers to share costs of approved network upgrades. HITT recommendations should address this need for cost allocation changes.

RESOURCE ADEQUACY PROCESS

In 2018, FERC approved new tariff provisions that SPP will implement in 2020. Foremost among these are a new enforcement process and enhanced data collection and monitoring provisions to ensure load responsible entities plan sufficient resource capacity.

The Supply Adequacy Working Group recognizes a gap in SPP policies related to capacity accreditation for storage as a capacity resource. Staff is working to finalize a scope of work to evaluate capacity accreditation improvements for storage using the Effective Load Carrying Capability (ELCC) methodology. These efforts, with HITT initiatives and Engineering's PRPC ESR project, are expected to close technical and policy gaps related to storage capacity accreditation while rolling into the existing attachment AA high level requirements

PROCESS INTEGRITY

COMPLIANCE TOOLS AND AUDITS

Compliance and reliability standards staff will work to formalize a controls program that will:

- Capture the slate of existing controls in governance risk and compliance (GRC) tool for NERC compliance.
- Collaborate with the internal audit department to document controls foundation (control objectives, design, and effectiveness testing).
- Strive to expand GRC usage to other departments and controls uses (e.g., EMBC, risk management, internal audit).
- Develop and capture high-risk controls in GRC tool for NERC compliance.

The enhancements to the controls program will help SPP compliance staff in its oversight role and should assist in managing SPP's compliance with NERC reliability standards. In addition to responding to and mitigating potential non-compliance issues, compliance staff will continue strengthening its relationship with NERC, the Midwest Reliability Organization (MRO) and the Western Electricity Coordinating Council (WECC).

CUSTOMER TRAINING

Due to the spread of COVID-19, customer training took steps to safeguard the health and safety of SPP stakeholders while continuing to provide credential maintenance hours for NERC-certified system operators. With the health and safety of stakeholders still in mind, the 2021 customer training calendar will prioritize virtual training for the first half of 2021 and plan instructor-led training events in the last half of the year.

PERFORMANCE EXCELLENCE (PEX) RE-TOOLED

Beginning in 2020, SPP assessed prior years' PEX efforts. We recognized and acknowledged success towards the program's goals:

- Bridge staff ideas and leadership prioritization
- Provide a mechanism to:
 - Engage SPP Staff and leadership to improve processes.
 - Report to stakeholders the efforts and benefits of these improvements.

SPP also reaffirmed our commitment to the success of PEX by taking the following actions in 2020 and 2021:

- Shift from centralized facilitation to department ownership of PEX.
- Hold officers and directors responsible for their respective organization's improvements.
- Capitalize on the framework of successful PEX teams to enable continued success.

The PEX leadership team will identify opportunities for improvement of PEX efforts based on stakeholder feedback received from the annual stakeholder satisfaction survey.

2021 PROJECTS

SPP directors on the Project Review and Prioritization Committee (PRPC) reviewed enterprise project requests and approved those that align with SPP's foundational strategies and are justified by a business case. For the 2021-2023 budget planning cycle, the PRPC recommended a portfolio of 14 projects to the SPP executive team for their approval.

This 2021 recommendation is notable for at least two reasons: 1) it is the first time the PRPC submitted projects as a portfolio of projects in various stages of implementation and corresponding with the project pipeline and portfolio management principles adopted by the PRPC; and, 2) there were no new projects presented as part of the recommendation. The 14 projects are identified below with the following five projects highlighted because of significant schedule or budget revisions.

PROJECTS REVIEWED PREVIOUSLY, BUT NOT BUDGETED

- The fast-start resource compliance project was noted in last year's recommendation, and was prioritized in the portfolio, but the project has been on hold. This recommendation highlights the project because the PRPC prepares to stage the project in the current year.
- The freeze-date replacement project will update the data used in market interchanges. It was approved last year. The implementation has been postponed.
- The interface pricing and pseudo-tie modeling project was also in last year's recommendation and prioritized in the portfolio. The project has been on hold pending FERC directive and is being resubmitted as a 2022 project.

PROJECTS REVIEWED PREVIOUSLY WITH UPDATED BUSINESS CASE JUSTIFICATION

- The energy management system (EMS), centralized modeling tool (CMT) and markets upgrade projects will upgrade legacy EMS, CMT and markets software. This project was submitted in 2019 with an executive summary and is now represented with a full business case.

PROJECT WITH SIGNIFICANT INCREASE IN BUDGET

- The ramp product project was previously approved in 2019 with a total budget of \$200,000. After consultation with the vendor, a statement of work was recently received for this effort for a total cost of \$645,000. A revised three-year budget is presented in the documentation for this project.

Together, this portfolio of projects will address stakeholder requests and regulatory directives.

PRIORITY	PROJECT	TOTAL COST (\$M)	STAFF HOURS
1	FERC Order 841	\$0.4	22,118
2	HITT Program	\$0.0	Not Estimated
3	Ramp Product	\$0.7	7,850
4	Fast-start Resource Compliance	\$0.2	4,421
5	WEIS Market Program	\$6.2	75,295
6	Energy Storage Resource (Engineering)	\$0.1	5,140
7	IAM Deployment	\$0.5	3,910
8	Z2 FERC Remand Order (On Hold)	\$0.0	Not Estimated
9	EMS, CMT & Markets Upgrade*	\$3.5	8,880
10	Freeze Date Replacement	\$0.4	6,019
11	Interface Pricing and Pseudo Tie Modeling (On Hold)	\$0.2	3,827
12	TAGIT/SCERT Rewrite	\$0.3	4,360
13	Uncertainty Product	\$0.0	8,050
N/A	Market & Reliability Training Simulator (Formerly DTS Phase 2B)**	\$2.5	6,160

TOTAL COSTS OF PROJECTS FOR 2020 THROUGH 2023

TOTAL PROJECT COSTS (2020 – 2023) (\$M)					
	2020	2021	2022	2023	TOTALS
Project Capital	\$5.4	\$3.8	\$1.3	\$0	\$10.5
IT Capital	\$1.1	\$0.1	\$0	\$0	\$1.2
Dept. Operating	\$2.2	\$0.2	\$0	\$0	\$2.4
IT Operating	\$0.5	\$0.2	\$0.1	\$0.1	\$0.9
Total Cost	\$9.2	\$4.3	\$1.4	\$0.1	\$15.0

STAKEHOLDER INITIATIVES

STRATEGIC MARKET ROADMAP

In 2019, the SPP market design department completed the development of the strategic market roadmap process with the goal of reaching approval in June 2020. The process enhances current efforts in this area by adding a formalized structure and creating consistency in the prioritizing of market-related initiatives and efforts.

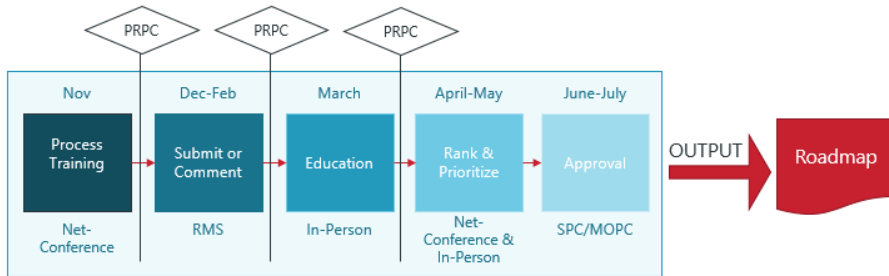
The SPP director team approved the process in early June noting the following benefits to all stakeholders:

- Increase transparency and collaboration.
- Balance of diverse interests.
- Ensure alignment with SPP’s strategic plan, budgeting and portfolio management.
- Ensure focus on greatest areas of need.
- Enhance internal coordination and support.

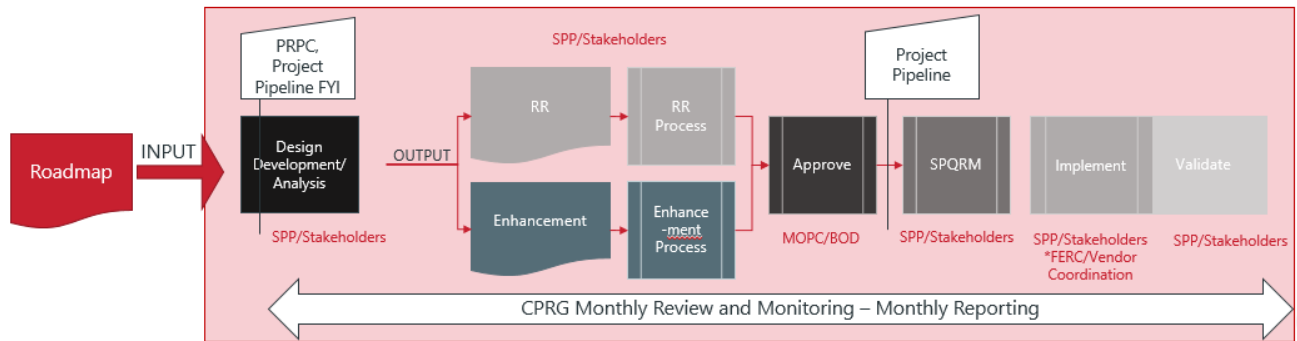
The initiative has been a joint effort of the Market Working Group and affected stakeholders and, upon approval by the SPC and MOPC in July 2020, will be reviewed and monitored on a monthly basis by the CPRG.

The diagram below illustrates the proposed process:

Annual SPP Strategic Roadmap Development Process



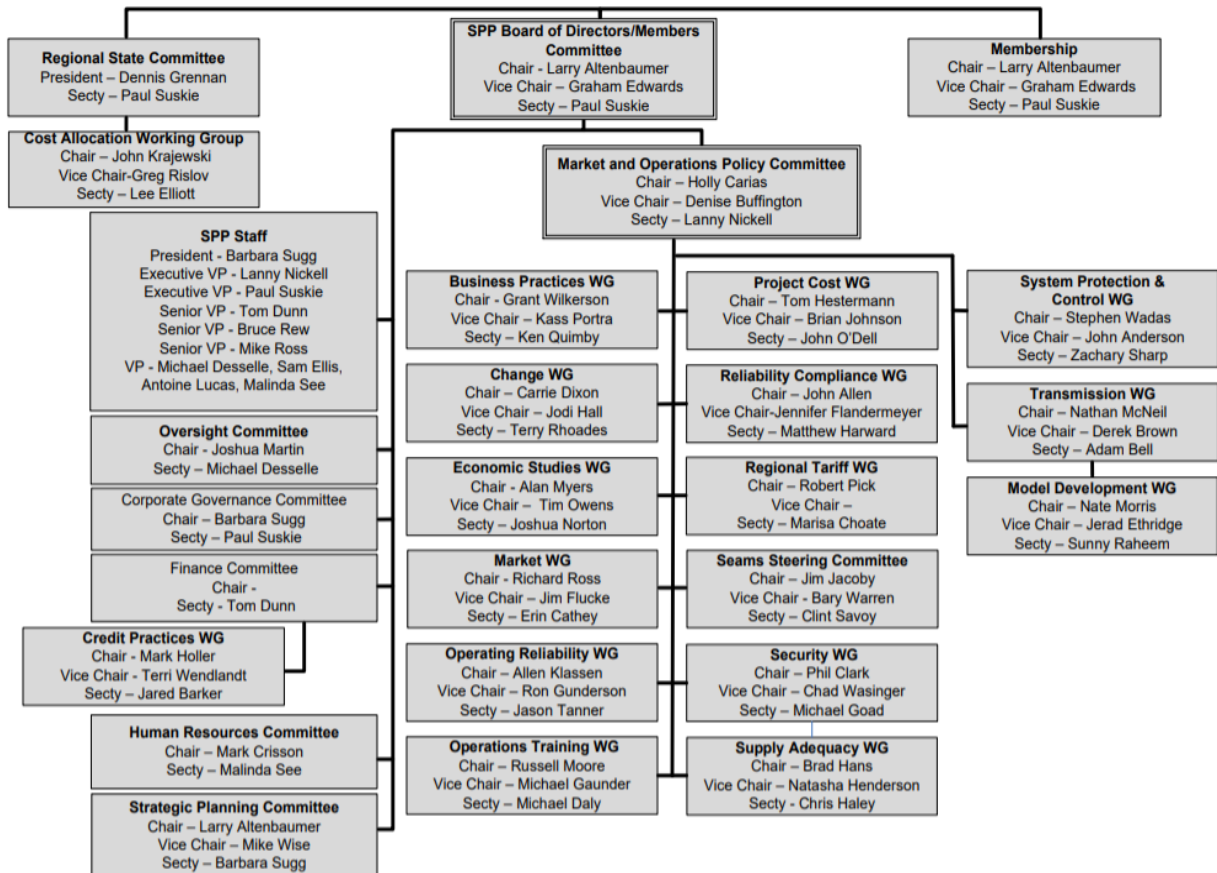
Continuous Initiative Design Development Process



APPENDIX 1: SPP WORKING GROUPS



Group Organizational Chart



Updated 04/01/20

APPENDIX 2: SPP STAFF ORGANIZATION

