



2021 MEMBER VALUE

SPP'S MEMBER VALUE STATEMENT AND METHODOLOGY

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Published April 6, 2022

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OVERVIEW: SPP'S VALUE

INTRODUCTION

What does SPP do for its members?

SPP oversees the bulk electric system and administers a wholesale power market in the central United States on behalf of a diverse group of electric utilities in 14 states. SPP is one of nine independent system operators/regional transmission organizations (ISO/RTO). SPP is mandated by the Federal Energy Regulatory Commission (FERC) to ensure reliable supplies of power, adequate transmission infrastructure and competitive wholesale prices of electricity.

ISO/RTOs do not own any assets that comprise the power grid; they independently plan and operate the grid to ensure affordable power gets to customers and to avoid power shortages. Planning and operating the grid are two key elements of SPP's robust portfolio of services.

What would the world look like without SPP?

If SPP did not operate the grid and provide centralized core services of reliability coordination, tariff administration, scheduling, transmission expansion planning, market operations and training services, its members would have to individually secure staff, expertise and technology necessary to perform these functions. Members are unable to perform these functions as cost effectively due to SPP's ability to achieve economies of scale. SPP's performance of these functions across a larger region leverages a broader, deeper pool of resources and provides additional benefits that cannot be replicated by members operating independently.

The benefits of SPP's services include reducing the number of required full time equivalent (FTE) staff, optimizing generation siting, regionally prioritizing transmission and running markets as a consolidated Balancing Authority (BA), and total **\$2.696 billion each year**.

Without SPP, we would have:

- Distributed reliability coordination and planning functions
- Independent operation of legacy balancing authorities (BA)
- Independently-conducted wind interconnection

However, without SPP, we would lose:

- Regional transmission organization
- Integrated market and consolidated BA
- Reserve sharing group
- Regional transmission expansion
- Facilitated stakeholder process

CALCULATING THE VALUE OF SPP (\$2.696 BILLION)

In 2021, SPP quantified benefits provided by SPP for four key functions: operations and reliability, markets, transmission and professional services.

Operations & Reliability	Markets	Transmission	Professional Services
<ul style="list-style-type: none"> Reliability Reserve Margin 	<ul style="list-style-type: none"> Markets Regulation 	<ul style="list-style-type: none"> Robust transmission Wind integration Planning Margin 	<ul style="list-style-type: none"> Compliance Settlements Engineering Tariff & scheduling Training

Staff used both quantitative and qualitative estimated values of various areas of SPP’s services to calculate the value provided to members through enhanced reliability; increased efficiencies and economics; consolidated functions that reduced resources; and improved environmental, public policy and local economic impacts. This methodology captures benefits both to SPP’s members and the region of the RTO’s bulk electric system produced by regional planning and operation.

The analysis of 2021 data found annual net benefits to members of **more than \$2.696 billion**, provided at a **benefit-to-cost ratio of 18-to-1**. Both these figures are significant increases from the 2021 MVS, and are primarily driven by increased fuel costs and increases in locational marginal prices. Historical net benefits provided annually to members are shown in Figure 1. Causes of benefit increases in 2021 are described in more detail in this report’s methodology.

Figure 1: Yearly Member Value 2014-2021



METHODOLOGY

OVERALL METHODOLOGY

Staff used both quantitative and qualitative estimated values of various areas of services to calculate the value of SPP. Staff measured the value its services provide to members through:

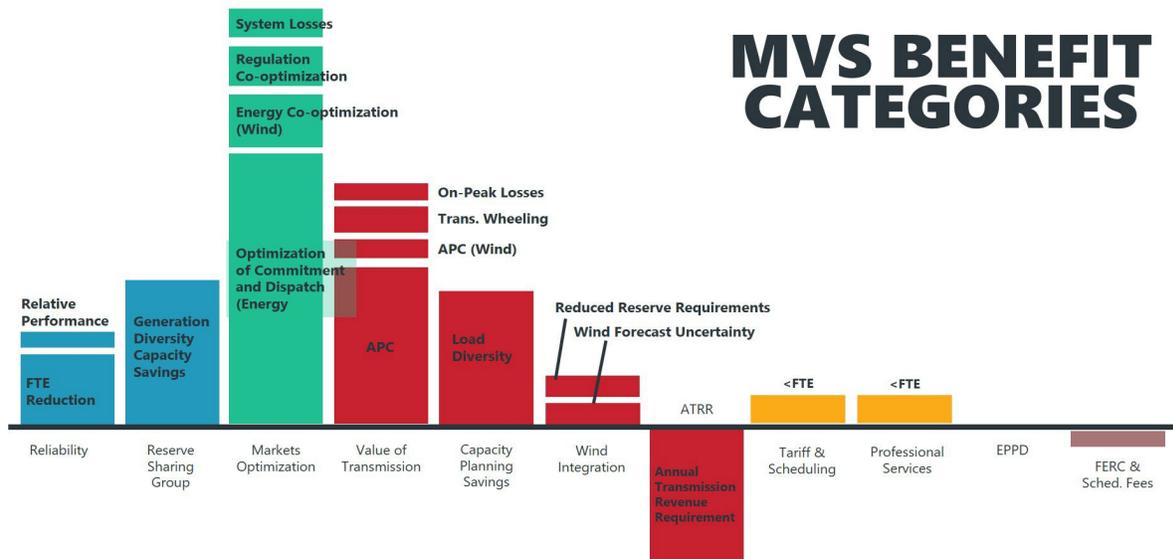
- Enhanced reliability
- Increased efficiencies and economics
- Consolidated functions that reduced staffing and/or technical requirements
- Improved environmental, public policy and local economic impacts

The member value statement (MVS) methodology captures benefits both to SPP’s members and to the SPP region. SPP defines RTO benefits as efficiencies gained through RTO services, including reduction in staffing for members, and increased efficiencies of regional operation.

These calculations take care to avoid overlaps in quantified benefits across service categories. SPP calculated the MVS at the regional level; benefits to individual members or market participants are not included in this study. SPP can use the foundational methodologies of this study to calculate individual member benefits if the necessary supporting data is available.

Figure 2 shows the factors considered by SPP’s MVS methodology. Throughout this report, staff have noted modifications to improve the calculation of SPP’s MVS.

Figure 2: MVS Benefit Categories¹



¹ Blocks in Figure 2 are not to exact scale and are for illustrative purposes only

RELIABILITY (\$61.6 MILLION)

SPP provides its members the following reliability services as it performs the reliability coordination (RC) function:

- Wide-area overview of the bulk electric system
- Increased system monitoring
- Improved congestion management
- Shared situational awareness application
- Alternative source of monitoring
- Improved coordination between entities internal and external to SPP

SPP quantifies the benefits of providing these RC services to its members as follows:

- **FTE reduction:** this component of the reliability services benefits reflects the reduction in full-time employees (FTE) staffing requirements resulting from consolidating the reliability functions and services that all SPP's legacy balancing authorities (LBA) would otherwise have to perform individually. To calculate this value, SPP estimated the cost for each LBA to perform these reliability functions with its own reliability coordinators. SPP estimated 29 FTE positions² (in Operations and IT departments) per LBA at an average cost of \$125,000 per FTE, across 17 LBA. This is an estimated **\$61.6 million benefit**.
- **[QUALITATIVE] Relative performance³:** SPP estimates that during the 2021 Cold Weather Event, the consolidated BA load interrupted less load than what each legacy BA would have needed to interrupt. The RTO was able to coordinate real-time interchange transfer between SPP entities. SPP's market was able to reflect the need for energy through scarcity pricing and LMPs that reflected the value of demand relative to the margin supply. Appropriation price formation on the seams was essential to minimize load interruptions. SPP coordinated energy transfer between members within the SPP RTO and with other RTOs and neighboring BAs.

Note: Not included in these benefits are avoided costs of systems and applications that each LBA would likely need to add or upsize in order to increase wide-area overview capability necessary to perform RC functions, such as bigger energy management system (EMS) models, increased Inter-control Center Communications Protocol (ICCP) links, voltage security tools and various other applications SPP utilizes as the RC.

² SPP estimates it eliminates the need for the following staff positions per LBA: two internal reliability coordination trainers, one administrator, one IT manager, one IT hardware staff, two IT applications staff, one IT network staff, two IT CIP staff, two operations managers, three operations engineers, 6 reliability coordinators, two operations analysis ATF review analysts, two EMS engineers, one ICCP engineer, two day support engineers and one operator in training.

³ In future MVS calculations, SPP may calculate a quantitative value of relative performance: the reduced expectation of loss of load derived from participation in an RTO.

RESERVE SHARING (\$817.2 MILLION)

SPP provides reserve sharing services to its members through its administration of the SPP Reserve Sharing Group (RSG). In addition to the SPP balancing authority, the Southwestern Power Administration (SPA) and Associated Electric Cooperative, Inc. (AECI) balancing authorities participate in the SPP RSG. Participants in the RSG leverage generation diversity across a larger geographical region to reduce reserve capacity needed to address unexpected losses of power.

To determine the value of participating in SPP's RSG, staff performed three separate calculations:

- **Generation diversity capacity savings:** SPP's criteria requires the RSG to carry enough operating reserve capacity to account for the group's most severe single contingency (MSSC) and half the second largest contingency. This reserve capacity requirement is shared among the participants. Without SPP's RSG, North American Electric Reliability Corporation (NERC) Standards would require each LBA to provide, at a minimum, sufficient reserves to meet its MSSC. To independently satisfy NERC Standards without participating in the RSG, each legacy balancing authority (LBA) would need more reserve capacity and would have to build new generation, purchase reserves from another entity, or carry the added reserves on their units (and withhold them from energy dispatch).
- **Loss of opportunity for energy sales:** if an LBA is required to carry an increased amount of reserves, a portion of that LBA's capacity is estimated to be withheld from energy sales opportunities at a value to be estimated based on resource offers compared to marginal energy costs.
- **Required capacity margin for reserves:** staff estimated the costs for an LBA with insufficient capacity assuming that 50% of needed capacity will be imported and 50% will be built. Imported capacity includes firm transmission service costs.^{4 5}

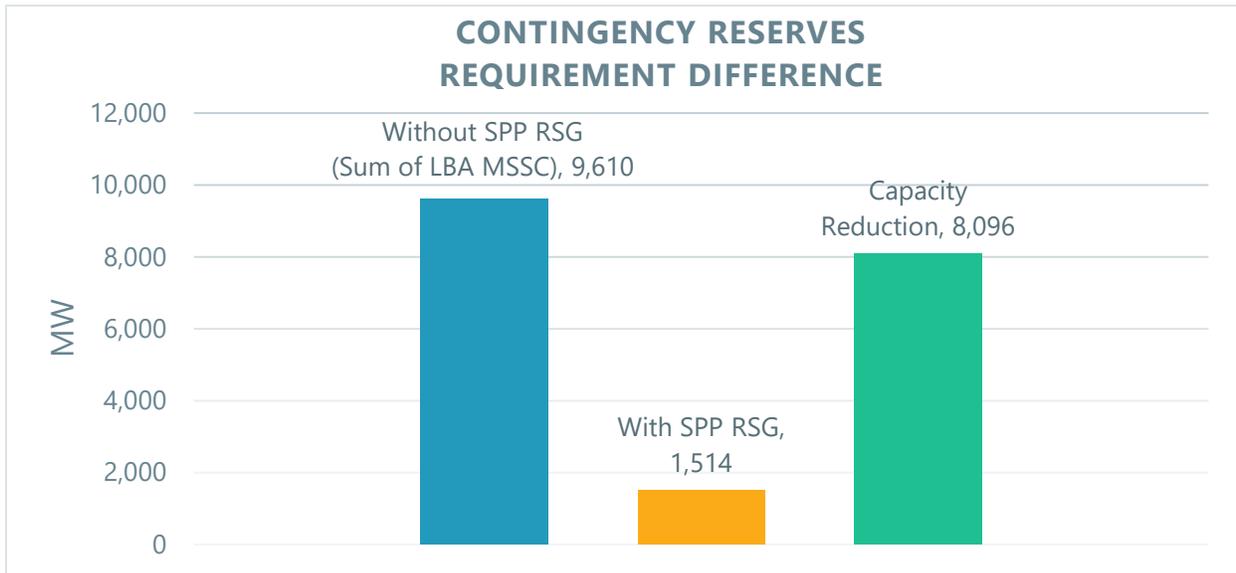
These calculations show that the sum of individual LBA's operating reserve requirements necessary on a stand-alone basis are much larger than the requirements of the SPP RSG. SPP calculates the benefits of RSG participation as the cost to build and import additional capacity needed for each LBA to supply the reserves needed to meet its stand-alone requirement.

SPP also includes the loss of opportunity for energy arbitrage if the LBA needed to withhold capacity for reserves. Together these values yield an estimated benefit of **\$817.2 million**.

⁴ Cost to import includes cost of transmission. All in cost per MWh of import was estimated to be **\$14/MWh**, an increase from the 2020 estimation of \$10/MWh.

⁵ Cost to build and run capacity needed for added reserve requirement per LBA beyond the PRM. Requirement was estimated to be **at \$18/MWh**. In the calculation, it assumed that **67% of PRM** may be used for CR. The discount is due to estimated operational needs to allow for a 5% generator outage rate. EIA report was used includes capital cost, fixed operations & maintenance (O&M) and variable O&M. We estimated O&M to be 30% of EIA reported with estimated 30% run time using a Combined Cycle plant type cost estimate model.

Figure 3: RSG Benefits in Megawatts (2021)



MARKETS OPTIMIZATION (\$1,422.6 MILLION)

SPP’s market system relies on centralized security constrained unit commitment (SCUC) and security constrained economic dispatch (SCED) algorithms to serve load in the BA utilizing the most economical generation while respecting transmission system limitations. SPP’s market system co-optimizes energy and reserve products with consideration to deliverability and losses on the transmission system. Staff analysis determines savings and quantifiable benefits of SPP’s market to members through:

- **Energy and regulation:**
 - Run SCUC/SCED for each LBA
 - Convert all units to “Market Status”
 - Build transactions if virtual bids or offers exist in current market
 - Co-optimize regulation with energy
 - Changed to assign each LBA a regulation amount equal to SPP’s
- **Contingency reserves:** Co-optimize benefit of SPP’s RSG share of CR across multiple LBAs. This is different from RSG benefits.
- **System losses:** compare losses for non-market reference cases to losses in RTO market
- **[FUTURE UPDATE] Interchange between LBAs:** In future versions of the MVS, SPP will simulate interchange between LBAs utilizing bilateral settlement schedules (BSS) and existence of virtual bids or offers existing in current market database.

Note: SPP’s value for contingency reserves reduction is included in the Reserve Sharing category. Co-optimization benefits of existing reserves are included in Markets & Regulation.

For the 2021 MVS, staff used nearly every hour and day of the market for 2021 to calculate the benefits. The times and dates of the week of the February winter storm event were excluded due to the abnormally high offers and repricing that took place. SPP modified the models to reflect each LBA’s balancing area, load and resources. Using the Market Clearing Engine, staff dispatched each LBA’s balancing area to serve its load and procure its required reserves independently.

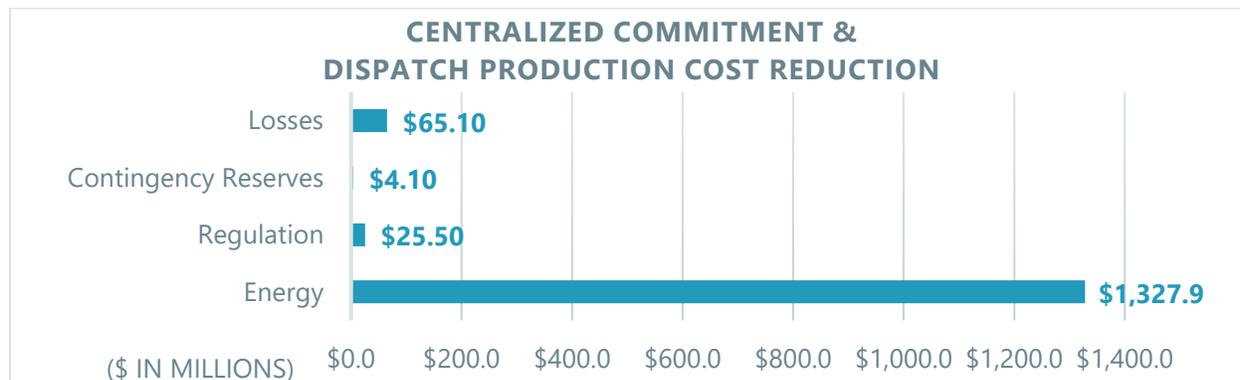
Staff summed the cost of performing the balancing responsibility for each LBA and compared the cost to the production market. This resulted in an estimated value of **\$1,422.6 million annually**. This is a significant increase in benefits from 2020 (\$744.3 million). This increase is directly related to the global increase in fuel costs in 2021, and the resulting substantial savings realized by SPP members by optimizing capacity commitments and dispatch across SPP.

Unquantified benefits: SPP and Midcontinent Independent System Operator (MISO) use a market-to-market coordination agreement to coordinate congestion on transmission constraints that are known to be impacted by both markets. This helps the markets more economically resolve that congestion than they could otherwise achieve on their own. Settlement processes are utilized, after-the-fact, to compensate for assistance provided by one market to the other.

Through this agreement, SPP has been able to increase revenues for its members by protecting members’ transmission rights and providing compensation for any utilization of the SPP transmission system in excess of allocated rights during congestion periods. Despite increased costs to SPP in February 2021 due to the winter storm event, by the end of 2021 SPP collected a net positive **\$86.8 million** through this process. At this time, this benefit is not included in the calculation of total MVS due to the need for additional analysis of some offsetting costs.

Additionally, SPP’s market provides added pricing transparency that may facilitate increased market activity, efficiencies, and appropriately signal to potential generation and transmission developers the opportunity that may exist to resolve any transmission system limitations to meet future energy needs. This benefit is not included in MVS calculations.

Figure 4: Markets Optimization Benefits



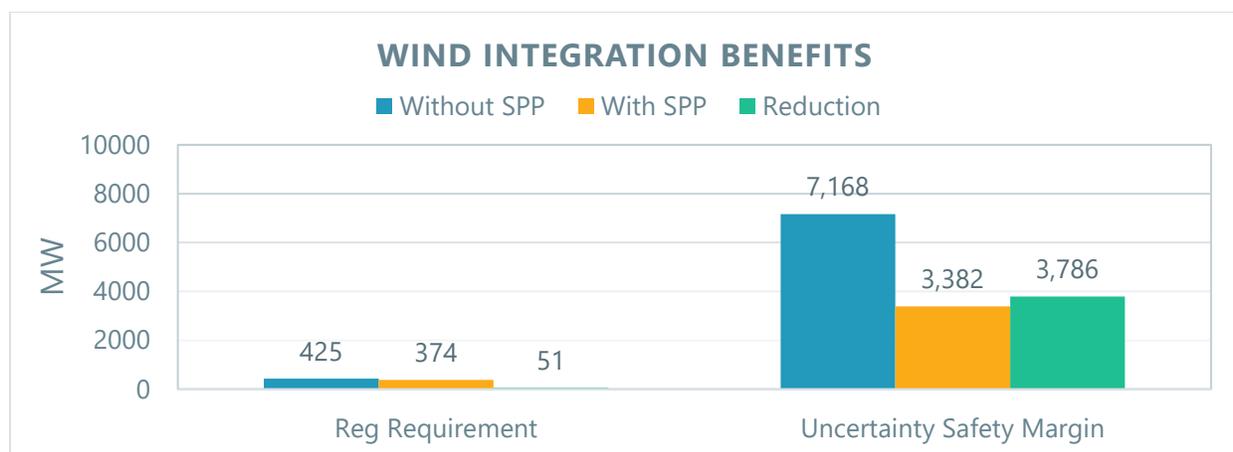
WIND INTEGRATION (\$238.9 MILLION)

SPP facilitates the integration of wind resources to the grid through its generation interconnection studies, transmission planning, consolidated balancing authority and the Integrated Marketplace. To quantify SPP’s contribution to wind integration, SPP estimates that the Market & Regulation and Value of Transmission calculations capture the RTO services that facilitate an increased amount of wind integration. Other benefits that SPP, as the BA, provide include geographical siting, wind uncertainty forecast and regulation reserves requirements:

- **Geographical siting:** Good siting avoids unnecessary wind investment costs by locating resources at wind-rich sites. This reduces installed capacity requirements to meet the same renewable energy requirements. SPP calculated the reduced requirement of installed capacity by comparing capacity at wind-rich sites and at load centers, and assuming \$1,400/kW for installed wind capacity. By locating wind at more attractive locations, rather than load centers, the costs of interconnecting generation at these load centers is avoided. SPP’s wind integration services, primarily Balanced Portfolio and Priority Projects, result in fewer, but higher quality, wind resources built in the region:
 - SPP assumes \$180/kW in costs of local transmission facilities to integrate wind.
 - SPP assumes 10% improvement in output from “mediocre” to “good” wind siting, saving 500 megawatts (MW) of wind per 5 gigawatts (GW) of optimal wind
 - SPP staff believe the majority of siting benefits are captured in the Market and Value of Transmission studies.
- **Wind forecast uncertainty:** Captures the capacity cost reduction in procuring reliability safety margin MWs needed to wind forecast uncertainty. For 2021, SPP estimates a \$207.2 million benefit.
- **Regulation reserves requirements:** Estimates the avoided cost due to reduction in required regulation reserves due to consolidated interconnected system. For 2021, SPP estimates a \$31.7 million benefit.

The sum of these three elements is an **estimated \$238.9 million value for members.**

Figure 5: Wind Integration Benefit



VALUE OF TRANSMISSION (\$450.1 MILLION)

SPP’s centralized transmission studies facilitate construction of transmission projects that improve reliability and deliverability of least cost generation to load centers, and increase the capacity factor of renewable and other low-cost generation.

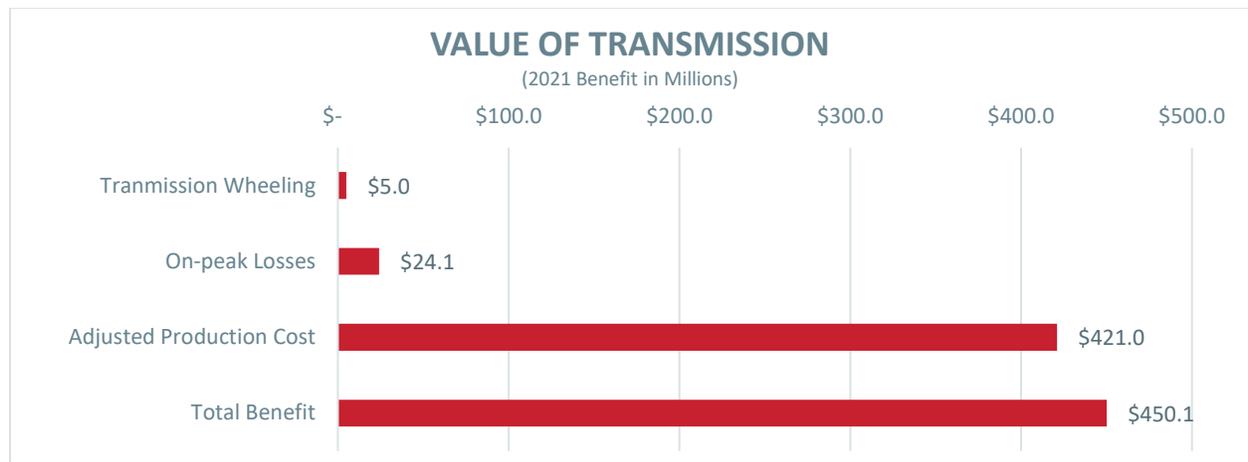
Staff used SPP’s 2021 Value of Transmission Study to inform calculations for this category. That study evaluated 348 projects from 2015-2019, representing \$3.4 billion of transmission investment. To calculate value of transmission for the MVS, SPP considered three key benefits:

- **Adjusted production cost (APC):** Savings of approximately \$421.0 million in 2021 were estimated by simulating the impact of added transmission on production costs, using operational models that captured actual prices from SPP’s Integrated Marketplace.
- **Transmission wheeling revenues:** SPP estimates approximately \$5.0 million in increased wheeling revenues resulting from additional point-to-point transmission service sold beyond what would have occurred without the RTO’s directed transmission expansion. This is significantly lower than previous MVS estimates (\$91.5 million in 2020) because the projects included in the 2021 Value of Transmission study did not provide as much increased wheeling revenue as the projects included in the 2016 study.
- **On-peak losses:** SPP estimates approximately \$24.1 million in capacity savings from reduced losses during peak consumption due to transmission expansion directed by SPP.

Note: the MVS calculation excludes other benefits outlined in our Value Transmission report: \$342.5 million in reliability benefits and \$237.0 million in optimal wind benefits. These exclusions are to prevent overlap with other calculations of reliability and wind integration benefits made in this report.

Staff estimate overall benefits for SPP’s directed transmission expansion to exceed \$27 billion over 40 years. The 2021 annual benefit to members has an **estimated value of \$450 million**.

Figure 6: Value of Transmission



CAPACITY PLANNING SAVINGS (\$236.0 MILLION)

SPP determines resource adequacy requirements for the SPP balancing authority. SPP specifies a minimum planning reserve margin that each load-responsible entity must maintain in order to assure adequate resource capacity is planned to meet reliability thresholds. SPP's administration of regional resource adequacy allows for recognition of load diversity benefits available through participation in a geographically diverse market supported by a robust transmission network. SPP uses the following measures to determine savings of capacity needs:

- **Planning reserve margin (PRM):** a function of peak demand for the entire region and an agreed upon percentage of required margin.
- **Capacity savings due to load diversity:** SPP measures the peak demand for individual Load serving entities (LSEs) that, in SPP's consolidated footprint, is reduced by load diversity in regional coincident peak, resulting in lower capacity requirements.
- **Capacity savings due to generation diversity:** SPP measures the reduction in capacity needs achieved through the diversity of its BA's generation fleet. The diverse resources in SPP's BA are better equipped than the limited resources of a single LBA to reliably respond to a generator loss.

SPP calculated the reduction in capacity and planning reserve margin requirements based on benefits realized due to load diversity, which compares SPP's coincident peak versus the sum of each load-serving entity's singular peak.

The realized reduction of capacity due to load diversity is estimated to be 2,755 MW. Taking into account SPP's cost of new entry, SPP's load-serving members are expected to save \$3.407 billion over the next 40 years. The 2021 annual **estimated value to members is \$236 million.**

Note: SPP does not calculate generation diversity capacity savings separately here. The benefit measured by the Reserve Sharing category provides a similar benefit. To avoid double counting, all diversity of generation savings are forgone in this section.

TRANSMISSION REVENUE REQUIREMENT (-\$548.1 MILLION)

For many members, SPP's annual net revenue requirement (NRR) represents only part of the costs they incur because of their membership in SPP. The benefits they receive from transmission upgrades and SPP's regional planning processes are offset by costs of annual transmission revenue requirements (ATRR) for certain projects.

SPP's Value of Transmission report calculates both the benefits and savings our members receive from transmission and the costs of ATRR for projects installed from 2015 through 2019. Though the ATRR is paid to SPP, it is passed through to transmission owners. SPP staff have included it in our calculation of the 2021 Member Value Statement to recognize this cost incurred by members.

This MVS study calculates the annual value for 2021 of some of the Value of Transmission benefits for projects built between 2015 and 2019. The 2021 MVS only accounts for 2021 annual ATRR for those same projects from that same period. For 2021, the **ATRR for these projects was -\$548.1 million.**

TARIFF & SCHEDULING (\$24.2 MILLION)

SPP's Tariff Administration group provides a centralized reservations "one-stop shop" for reserving transmission on the power grid. In addition to administering and maintaining open access same time information systems (OASIS) reservations, SPP provides engineering staff to assure that requests for transmission are valid and will not compromise power grid integrity.

SPP administration of tariff and scheduling services allows centralized transmission service coordination and procurement. SPP also administers and maintains tools and applications used by transmission customers.

If SPP did not exist, LBAs and transmission owners would provide these functions for themselves. There would also be a greater number of bilateral transmission agreements which would be more difficult to administer. SPP has calculated the value of Tariff and Scheduling based on the assumption that, absent SPP, the collective LBAs would need to staff 96 FTEs (engineering and reservation handling). Based on a fully loaded cost per FTE at \$125,000, the cost avoided by having SPP available is **approximately \$12.0 million per year**

Without SPP, each legacy balancing authority or transmission service provider would need to maintain OASIS software for Tariff and Scheduling, with an estimated yearly maintenance fee of \$720,000 per entity. The cost avoided is **approximately \$12.2 million.**

PROFESSIONAL SERVICES (\$13.6 MILLION)

Professional Services includes two categories of benefits: engineering, and training. SPP quantifies these benefits as the reduction in FTEs resulting from consolidating the functions and services that all SPP's LBAs would have had to staff and perform independently. Previous MVS calculations also included compliance and settlements. Since the dissolution of the SPP Regional Entity, compliance cost avoidance has diminished. An increase in FTEs for market settlement functions is offset by decrease in FTEs for transmission settlements, resulting in no additional reportable costs or savings. For the two services remaining in the current version of the calculation, the **combined sum of values is \$13.6 million.**

ENGINEERING SERVICES (\$8.4 MILLION)

SPP's engineering department provides a series of independent studies to assure that planned member actions (generation interconnection, transmission construction, etc.) will not create issues when integrated into the power grid. SPP serves as the unbiased "protector" of the integrity of the grid and its operation. When regulatory authorities review and approve requested actions, SPP's studies fulfill the role of "objective, unbiased, expert witness."

Without SPP, individual utilities would need to conduct the expert witness and the objective study functions. These functions would most likely require a combination of consultants and engineering staff from the requesting utility.

SPP calculates engineering services benefits as the reduction in 67 FTEs resulting from consolidating the engineering services that all SPP's LBAs would have staffed and performed independently:

- Planning coordination
- Resource adequacy
- Generator interconnection
- Transmission services

Based on a fully-loaded cost per FTE, the cost avoided is **approximately \$8.4 million per year.**

TRAINING SERVICES (\$5.2 MILLION)

SPP provides Training Services as a centralized service for its members. SPP acquires resources and equipment for shared use and develops training programs and curricula centrally to share with members. Depending on the specific training, if SPP did not exist as a leveraged resource, the alternative solutions for member training would come from three sources:

- Training and/or certification procured from training consultants or vendors
- Training developed by each of the 17 LBAs in the SPP footprint
- Training developed by each member organization.

SPP bases its valuation of Training Services on cost avoidance associated with centralized development and reduction in number of FTE training staff.

The value of training services includes cost-avoidance provided by:

- NERC credential maintenance courses
- Train-the-trainer courses
- Incorporation of power simulation technology per PER005

SPP's calculated Training Services benefits are based on Chapman Alliance research, quantifying the benefit of consolidating the training functions and services that all SPP's LBAs would have had to staff and perform independently. This resulted in an **estimated value of \$5.2 million**.

Figure 7: Professional Services Value



FERC FEES (-\$20.5 MILLION)

SPP analyzes FERC administrative fees as they apply to SPP members. This analysis addresses:

- Fees assessed by FERC to cover its administrative costs, which apply to all transmission service under an RTO
- FERC policy that categorizes transmission utilization differently in an RTO since *all* energy is considered interstate transmission
- Partial offset of the incremental cost, which results from increased through-and-out transmission service provided by the RTO

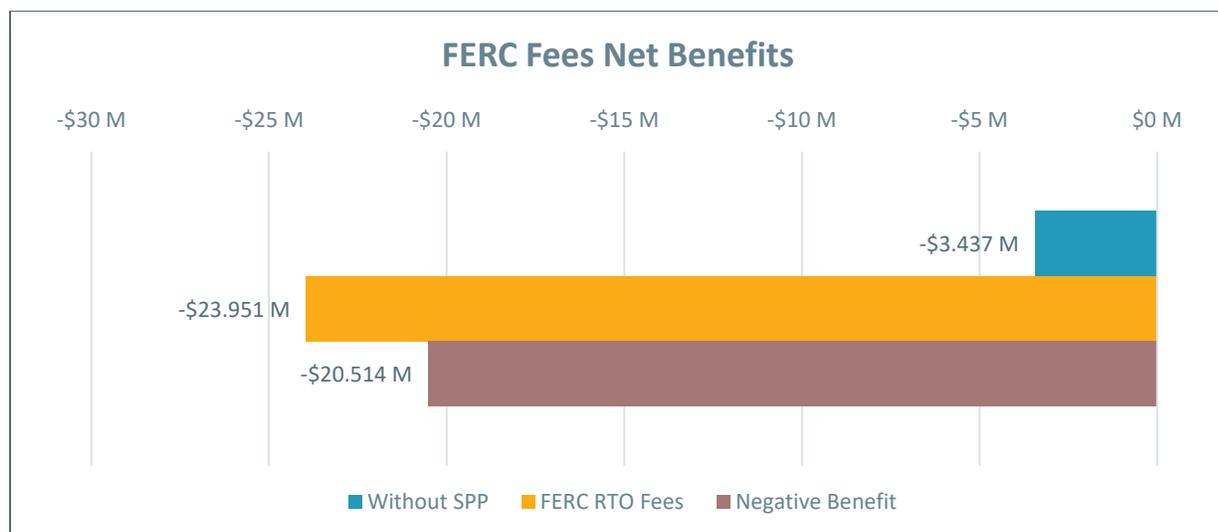
Total FERC fees paid by SPP members in 2021 exceeded what members would have paid if they were not part of an RTO. This is primarily because SPP members' native load is considered to be served by transmission in interstate commerce since it is under the RTO.

SPP captures these costs as:

- Increase in MWh considered "wholesale" energy because of RTO participation. For FERC-jurisdictional members, this is native load energy quantified in members' FERC Form 1 submittals. For non-jurisdictional members, this is all the energy each member serves.
- Point-to-point transmission service offset: this is based on the MWh of service through and out of the SPP transmission system, which provides some offset because it spreads FERC's fixed administrative cost over a greater number of billing units.

The 2021 estimate of FERC fees is \$23.9 million. When offset by the assessment members would pay if not participating in the RTO, the negative benefit (cost) to the region is **\$20.5 million**.

Figure 8: FERC Fees



ENVIRONMENTAL, PUBLIC POLICY, AND ECONOMIC DEVELOPMENT (EPPED)

SPP's services contribute to a reduction in environmental impact, improvement of public policies and an increase in economic stimulus in the region.

ENVIRONMENTAL

Membership in SPP creates an environmental impact on the region that SPP measures as three separate benefits:

- **Renewable penetration:** The factor of improved renewable penetration due to SPP's transmission expansion and centralized market.
- **CO₂ reduction:** Carbon reduction as a result of SPP's services contribution emissions reduction, defined as the difference in wind generation with and without SPP. SPP's centralized market and transmission expansion have improved access to renewables and reduced CO₂ emissions by 23.9% since 2014.
- **Reduced upgrades:** This qualitative measure looks at the reduction in transmission upgrades that occurs through more regional planning

PUBLIC POLICY

Membership in SPP results in improved public policy outcomes:

- **Renewable goals** at the state level are met more efficiently and competitively
- **Society benefits** from cleaner electricity and lower electricity rates
- **Deferred cost and construction** of new facilities
- **Alternatives** to new right-of-way acquisitions
- **Equitable and participatory** stakeholder processes for collective decision-making

ECONOMIC DEVELOPMENT

Membership in SPP creates an economic development impact on the region that staff have measured as one quantitative and one qualitative benefit:

- **Investment:** SPP enables capital investment through upgrades and increased wind integration resulting in economic investments throughout the SPP footprint. As an example, from the period 2008 through 2019 SPP added 24.4 GW of wind capacity. The state taxes associated with this added capacity is calculated as \$157 million per year. Land leases for these wind farms is calculated as \$73.5 million per year. The associated transmission investment associated with these capacity additions are not included in

these amounts but also contribute to additional revenues and taxes in the SPP region.

- **Increased competitiveness:** Wholesale electricity rates in SPP remain among the lowest in the United States, which when combined with the high availability of renewables, are attracting and retaining investment in the region.

BENEFIT-TO-COST RATIO (18-TO-1)

The total savings and benefits achieved by SPP's members are \$2.696 billion each year. Each year members fund the operations of SPP through a Net Revenue Requirement (NRR). The NRR is comprised of operating expenses (excluding depreciation and 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. SPP's 2021 NRR was \$149.0 million, resulting in a **benefit-to-cost ratio of 18-to-1**.

CONCLUSION

SPP continues to provide significant, measurable value to its members. The Member Value Statement Strike Team, formed in 2020 to re-evaluate and refine valuation SPP's methodology, confirmed this through its efforts. The valuation updates undertaken by the strike team:

- Considered SPP's previous calculation approaches as well as approaches taken by other entities
- Considered SPP and industry changes since initial development of metrics
- Focused on quantifiable benefits estimated utilizing avoided costs and increased efficiencies
- Added new considerations for qualitative benefits, including those achieved through EPPED
- Emphasized avoiding overlaps in benefit calculations
- Standardized FTE cost for all areas considered
- Reassessed, added and removed categories, as appropriate, based on SPP's estimated added value.
- Allow members to consider value on an area-by-area basis, as applicable

SPP benefits continue to fall within the four key functions: operations and reliability, markets, transmission and professional services. The benefits can be measured both quantitatively and qualitatively.

Quantitatively, the updated methodology continues to clearly show the value provided by SPP: **more than \$2.696 billion annually** at a **benefit-to-cost ratio of 18-to-1**.

Qualitative measurements include considerations of market-to-market coordination, environmental, public policy, and economic development value provided by SPP in the region and to the bulk electric system as a whole. These services enhance the SPP member experience and benefits to the region. **SPP's value to members and the region continues to grow.**