++Purpose

The 2010 Strategic Plan establishes a strategic direction for SPP, positioning SPP to fulfill its mission statement over the next decade and beyond. The plan creates three foundational strategies which are anchored in the mission statement and the five components of SPP’s value proposition to its members. Our strategies and initiatives for the 2010 plan support our three foundational, interdependent strategies. These initiatives, when implemented, will position SPP for the future while balancing operational priorities and financial considerations.

++Strategic Planning Process

With input from the members the 2010 Strategic Plan was developed by first establishing a baseline for where SPP is today. The Strategic Planning Committee then reviewed alternative visions of how the industry may change over the next decade. The three SPP foundational strategies and strategic initiatives were developed to leverage SPP’s capabilities and operational processes to create member value, build a robust transmission system, and create an effective, efficient, and highly liquid future markets capability. The Strategic Planning Committee members are:

- **Ricky Bittle**, Committee Chair, VP, Arkansas Electric Cooperative Corporation
- **Jim Eckelberger**, Chairman, SPP Board of Directors
- **Harry Skilton**, Vice Chair, SPP Board of Directors
- **Joshua Martin**, SPP Board of Directors
- **Les Evans**, Sr. VP & COO, Kansas Electric Power Cooperatives, Inc.
- **Robert Janssen**, President, Dogwood Energy
- **Mike Palmer**, VP, Commercial Operations, the Empire District Electric Company
- **Mel Perkins**, VP, Power Delivery, Oklahoma Gas and Electric Company
- **Patrick Pope**, VP & COO, Nebraska Public Power District
- **Michael Wise**, VP, Transmission & Operations, Golden Spread Electric Cooperative
- **Tim Woolley**, Director, Compliance Monitoring and Policy, Xcel Energy
- **Michael Desselle**, Staff Secretary, VP, Process Integrity, SPP
Our Mission

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

Value Proposition

SPP’s value proposition consists of five principles that have driven its history and frame its future. These principles are very familiar to SPP members, and they distinguish this organization from other regional organizations.

» Relationship-Based

SPP dates to 1941 when 11 utilities across seven states pooled their generation resources to serve a critical defense plant in central Arkansas. After the war, the organization continued to exist. It grew to a peak membership of 78 entities without any legal recognition, until it incorporated in December of 1993. Until 1998, the membership agreement consisted of a single paragraph obligating members to abide by the organization's bylaws. As in the past, relationships, rather than contracts, continue to keep this diverse organization together.

» Member-Driven

SPP’s organizational structure of broad-based committees, working groups, and ad hoc task forces is the true source of SPP’s success. More than 360 people are involved in efforts driven by these groups. These groups’ rosters match the organization’s diverse membership, requiring participants from across the footprint and recognizing the various member types and sizes. These principles promote member ownership in the organization’s products, reduce interventions in regulatory proceedings, and continue to keep SPP’s staff size the smallest in the industry.
» **Independence through Diversity**

Since its inception, SPP's membership has been one of the most diverse of any regional organization in the industry. With membership comprised of investor-owned utilities, independent power producers and independent transmission companies, municipal systems, generation and transmission cooperatives, state authorities, wholesale generators, and power marketers, any and all opinions are heard loudly and clearly in organizational group meetings. As a member-driven organization, meaningful stakeholder involvement drives SPP's efforts and effectively balances diverse opinions. Since 2004, this independence has been further enhanced with governance residing in an independent Board of Directors. When SPP was recognized as a Regional Transmission Organization, the SPP Regional State Committee was formed giving not only customers, but state regulators a formal voice in SPP's decisions as well.

» **Reliability and Economic/Equity Issues Inseparable**

In 1968, SPP took on the responsibility of serving as a regional reliability council under what became the North American Electric Reliability Corporation. The Federal Energy Regulatory Commission approved SPP as a Regional Transmission Organization in 2004 and a Regional Entity in 2007. As a Regional Transmission Organization, SPP provides transmission planning, tariff administration, reliability coordination, and wholesale market services to our members in an efficient and cost-effective manner. As a Regional Entity, SPP enforces reliability standards for our members and other users, owners, and operators of the bulk electric system in the SPP region. SPP members have long maintained that electric reliability issues cannot be debated in the absence of economic/equity issues. History has shown that attempts to separate reliability and economic/equity issues result in the same people meeting in different venues with confusion over which organization should attempt to resolve problems. A single organization providing both Regional Transmission Organization and Regional Entity services results in greater cost-effectiveness and organizational efficiency for SPP’s members.

» **Evolutionary vs. Revolutionary**

SPP’s original purpose was to pool power to support the war effort. In the decades since then, SPP’s mission and our members’ needs have changed. Reliability remains SPP’s preeminent focus; however, a deliberate evolutionary process has guided the growth in services delivered by the organization, resulting in a carefully staged continuous improvement.
SPP, June 2010

SPP administers reliability coordination, wholesale markets, and transmission services for the benefit of all electric utility operations in the region SPP serves, using members’ transmission systems. As a Regional Transmission Organization, SPP is mandated by the Federal Energy Regulatory Commission to ensure reliable supplies of power, adequate transmission infrastructure, and a competitive wholesale electricity marketplace. Regional Transmission Organizations are like “air traffic controllers” of the electric power grid. They do not own the power grid, but independently operate the grid minute-by-minute to ensure reliable delivery of power to end-users. SPP also serves as a Regional Entity of the North American Electric Reliability Corporation.

» Membership

SPP’s 58 diverse members serve over 5 million customers across nine states.

» Geographic and Operational Footprints

- 370,000 square miles
- 29 Balancing Authorities
- 50,575 miles of transmission lines
- 6,079 substations
- 847 generating plants
- 2009 peak load: 47,365 megawatts (non-coincident)

» Generating Capacity by Fuel Mix

- 42% GAS/OIL
- 40% COAL
- 6% DUAL FUEL
- 4% HYDRO
- 4% WIND
- 3% NUCLEAR
- .5% PUMPED STORAGE
- .5% BIOMASS
» **Primary Services Provided to Members and Customers**

**Reliability Coordination:** SPP monitors power flow throughout our footprint, takes action to manage congestion, and in emergency situations coordinates regional response.

**Tariff Administration:** SPP provides “one-stop shopping” for use of the region’s transmission lines and independently administers an Open Access Transmission Tariff with consistent rates and terms.

**Compliance:** SPP has functionally separated its compliance model in order to continue to provide value to its members in an efficient and cost-effective manner. The SPP Regional Entity as a delegated representative of the North American Electric Reliability Corporation enforces compliance with federal and regional reliability standards for users, owners, and operators of the region’s bulk power grid. Separately, the SPP Regional Transmission Organization has undertaken measures to promote reliability excellence to the entire SPP footprint through reliability forums, advice, and other guidance to SPP members and Registered Entities. The organization also supports an internal culture of compliance through ethics and compliance awareness training.

**Transmission Expansion:** SPP’s planning processes seek to identify system limitations, develop transmission upgrade plans, and track project progress to ensure timely completion of system improvements.

**Market Operations:** In the Energy Imbalance Service market, participants buy and sell wholesale electricity in real-time. If a utility requires more energy than it scheduled, the market provides the utility another option to buy the “extra” energy at real-time prices to make up the difference and meet its demand. Participants can use the Energy Imbalance Service market to get the least expensive available energy from other utilities and independent power producers.

**Regional Scheduling:** SPP ensures the amount of power sent is matched with power received.

**Facilitation:** The foundation of SPP’s independent stakeholder process is collaboration. SPP staff facilitates and fosters collaboration by helping our members work together by actively organizing meetings, developing straw proposals, and administering organizational decision-making processes. The SPP staff facilitates organizational continuous improvement and efficiency efforts as well as the accomplishment of strategic goals.

**Training:** SPP offers continuing education for operations personnel at SPP and throughout the region.
+Our Vision of the Future

Our vision for 2020 drives this Strategic Plan covering the next five years. As the vision materializes over the coming years the strategies and initiatives will evolve.

Our SPP 2020 crystal ball reveals the energy industry is in a period of dynamic transformation. There are many factors at work that may significantly alter the structure of the industry and will drive the future requirements for transmission capacity. The pace at which “game changer” technologies develop and are adopted has the potential to accelerate changes to the current environment. Change in public policy relative to carbon emissions, U.S. energy independence, and economic recovery may change the economics and mix of generation capacity and use. We considered several of the evolving factors affecting demand, resources, and transmission requirements of SPP and its members in the development of our strategic initiatives.

The plan envisions change, change we cannot define today. To continue to promote reliability excellence and meet the needs of our members in the footprint, the plan is intentionally flexible providing for the investment in assets that allow both the market and regulation to serve the end-users across the footprint in the most effective manner.

» Demand Growth

It is forecasted that the demand for electricity in the United States will grow at an average rate of 1.57% annually for the next decade, with growth for the SPP region averaging 1.16% annually*. This forecast, however, is subject to a number of factors. Significant changes in any of these factors could cause the aggregate demand to either increase or decrease substantially. We fully expect that the economic cycles and the energy market pricing fluctuations will produce wide swings in overall demand from year-to-year.

The actual annual growth rate for electricity usage over the next decade will fluctuate with the global economic cycles. Our plans should accommodate these peaks and valleys in demand growth. Long-term expected demand may be partially offset by the growth of behind the meter generation sources by end use customers, demand response, conservation, and improved efficiencies.

Over the next decade SPP expects electric vehicles in use to exceed 1.5 million. If properly managed, this demand will occur in off-peak periods.

* NERC 2009 Long-Term Reliability Assessment 2009-2018
Energy Generation Resources

One of the key strategic issues facing SPP and its members is the evolution from our current power generation mix to the generating capacity mix in 2020. There are many competing factors that will impact the economics, availability, viability, and acceptability of various solutions. This future mix most likely will be impacted by “game changer” technology breakthroughs and the evolution of public energy policy and legislation. SPP needs to stay informed about continuing developments and engineer maximum flexibility and adaptability into its future plans.

Renewable Resources – A combination of public policy, environmental concerns, and the possible long-term depletion of fossil fuels are forces driving the increased usage of renewable resources. New construction of renewable power generation facilities will require the expansion of transmission capacities and the development of new tools and capabilities, such as enhanced forecasting and balancing capabilities to reliably integrate renewables into the existing transmission system, particularly in the case of intermittently available resources.

Energy Storage – The continued evolution of energy storage technologies or reutilization techniques is expected to complement the growth of renewable generation by enhancing its reliability and improving its cost effectiveness.

Carbon Policy – Future federal legislative initiatives restricting carbon emissions and its attendant pricing policy, as well as the introduction of carbon capture and storage technologies, will most likely impact the economics of coal, and perhaps natural gas, as a base load energy generating resource.

Solar – Solar energy panels may experience significant improvements in efficiency and effectiveness due to exponential improvements in nanotechnology, which will advance the commercial viability of solar power. Initially, this would result in the emergence of large solar fields and, over time, could spark a significant growth in distributed generation.

Nuclear Power – There could be a major shift in the increased support for expansion of nuclear power generation. It is possible that smaller, distributed nuclear plants could become more viable in the future.

Fuel Cells – Fuel cells, powered by natural gas or biomass, have the potential to be new sources of “clean” energy. They also have the potential to be effective distributed generation sources.

Shale Gas – Technology breakthroughs in shale gas production are allowing producers to tap huge resources that were previously uneconomic. Shale gas could have an important role as the industry moves to cleaner, renewable energy sources. Gas is a cleaner option than coal and oil, but it still is a carbon emitting fossil fuel.

Coal Gasification – The prospect exists for continued advancement of coal gasification technology that will prolong the usage of coal as a viable alternative from an economic and a carbon emission perspective.
Transmission

The electric transmission grid must evolve as generation capacity grows and the generation mix changes. The transmission system must be engineered for reliable and efficient operations, meeting both current and anticipated needs. Factors impacting the operation and build-out of the future transmission system include at least the following:

Expansion of Renewable Resources – Many of the sources of green, renewable energy will be located in areas not now connected to the existing grid or the capacities will need to be greatly expanded. The development of these generation resources will spur development of the transmission system, tools, and operating structures, to help reliably integrate significant amounts of renewable resources.

Inter-Regional Planning Coordination – The introduction of renewables, clean coal, revamped nuclear, and distributed generating resources into the mix of traditional generating resources will require greater inter-regional perspective, planning, cooperation, and coordination.

Market Development – To extend and expand the benefits of utilizing the most efficient, effective, and reliable resources across the region for electric energy products, in the midst of a changing marketplace, the future will require more robust market capabilities. To fully optimize Independent System Operator/Regional Transmission Organization markets, regional grid operators will need to develop better mechanisms to extend benefits across the seams between market areas.

Smart Grid – Advanced technologies will be available in the future to both support robust grid operations and to help end-use customers make more informed decisions about their energy use and even providing energy to the grid.

Land Acquisition Restrictions – Land acquisition and “right of way” issues will likely continue to become more complex and time-consuming. This may be a limiting factor in the ability to adjust the transmission system in a dynamic manner as dictated by the rapidly changing generation and regulatory landscape.

Reliability Standards – Reliability standards are likely to grow in complexity and will require the ability to deal with multiple simultaneous contingencies. Zero tolerance and immediate remediation will become the expected norm.
SPP’s Three Foundational Strategies

The Strategic Planning Committee identified three foundational strategies to create the capabilities and operational processes needed to fulfill SPP’s mission and maintain or improve its value proposition in the face of a rapidly-changing environment. These three strategies are interdependent; however, the creation of member value is at the core of all SPP strategies.

The foundational strategies are long-term, fundamental components of the SPP business model. This plan focuses on three broad strategies to be continued, initiated, and/or completed over the next five years. The identified initiatives become the tactical implementation of our strategies. These initiatives are longer-term and strategic in nature, but are likely to change over time as the baseline for SPP operations changes and as future changes require new initiatives to improve value and competitiveness. The key is planning ahead to flexibly adapt to a rapidly changing environment. We will be ready to take full advantage of future opportunities and respond to future constraints, to the advantage of the end-users in our footprint.
Historically, the transmission system was designed primarily to serve local systems. The location of generation drove the majority of investment in transmission. Historical planning involved trade-offs between generation and transmission within a zone. It generally involved transmission needs assessments to minimally meet reliability objectives on a utility-by-utility basis. In fact, limitations in transmission system capacities (bottlenecks) have significantly constrained the optimal utilization of capital-intensive generation assets.

SPP, through its market, will be able to deliver increased value to members by facilitating the implementation of and managing a robust transmission system flexible enough to reliably accommodate any number of future scenarios. Transmission must become an enabling asset. Grid expansion will be required to add additional renewable and non-renewable resources into the generation mix. A robust system is one that contains an optimal mix of “highways” (300 kV+) and byways (below 300 kV) and minimizes future transmission constraints without over-investing in transmission capacity. A robust system creates immense new value for SPP members and end users in the SPP region.

Creation of highly liquid and efficient Day Ahead and Real Time Balancing markets will enable SPP customers/members to better take advantage of the region’s diverse generating resources. The SPP market will allow unit commitment to be performed on a region-wide basis. Utilizing information on the availability of the lowest-cost energy in the market will enable all market participants an opportunity to minimize their net energy acquisition/production costs. Demand Response can also be used as dispatchable energy resource to meet load and will be an integral component of SPP’s market. As the Consolidated Balancing Authority, SPP will balance supply and demand for the market footprint, reducing individual participants’ balancing duties and the amount of operating reserves and energy each has to provide from its own resources. Our strategy is to develop the information systems and management tools to create efficient, effective, and transparent market processes for our members.

SPP continually strives to improve the value it delivers to its members. In addition to the strategic initiatives noted above, SPP will create and continually improve work processes to ensure they are efficient and effective. SPP recognizes the importance of prioritization of strategic initiatives. SPP will continue to share with the Change Working Group of the Markets and Operation Policy Committee costs and benefits of member-facing project initiatives and quarterly provide visibility of the entire portfolio. SPP will further develop processes to demonstrate to members, regulators, and customers the general inter-zonal equity of costs and benefits for strategic initiatives.
## Overview of Strategic Initiatives

<table>
<thead>
<tr>
<th>Initiatives</th>
<th>Foundational Strategies</th>
<th>Accountable Parties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Build a Robust Transmission System</strong></td>
<td>PRIMARY</td>
<td>SUPPORTIVE</td>
</tr>
<tr>
<td>Implement Priority Projects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop/Implement Integrated Transmission Planning Process</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional Cost Recovery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inter-Regional Optimization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operational Optimization</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Develop Efficient Market Processes</strong></td>
<td>SUPPORTIVE</td>
<td>PRIMARY</td>
</tr>
<tr>
<td>Implement Day Ahead Market with Transmission Congestion Rights</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implement Reliability Unit Commitment Process</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incorporate Operating Reserves into Real Time Balancing and Day Ahead Markets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implement Consolidated Balancing Authority</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demand Response Integration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manage Implementation</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Create Member Value</strong></td>
<td>SUPPORTIVE</td>
<td>SUPPORTIVE</td>
</tr>
<tr>
<td>Reliability Excellence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benchmarking and Measurement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enhance Market Monitoring Tools</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuous Process Improvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategic Membership Expansion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication and Education</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Primary** These initiatives provide primary support for this strategy.  
**Secondary** These initiatives also provide enhanced member value.  
**Supportive** These initiatives help support, enable, or increase the effectiveness of this strategy.
# Strategic Initiative Timelines

<table>
<thead>
<tr>
<th>BUILD A ROBUST TRANSMISSION SYSTEM</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement Priority Projects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop/Implement Integrated Transmission Planning Process</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional Cost Recovery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inter-Regional Optimization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operational Optimization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DEVELOP EFFICIENT MARKET PROCESSES</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>CREATE MEMBER VALUE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reliability Excellence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benchmarking and Measurement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enhance Market Monitoring Tools</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuous Process Improvement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategic Membership Expansion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication and Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
+ Strategies and Related Initiatives Defined

» Build a Robust Transmission System

We all depend on a reliable electric grid to power our homes and businesses. Traditionally, electric transmission lines and infrastructure were built in response to specific requests to utilize generation to serve loads. The development of the SPP market will necessitate the planning of transmission on a regional basis. National concerns and initiatives are changing the traditional paradigm. The nation is seeking to be more energy independent, economically prosperous, and environmentally conscious. These initiatives can all be enabled by supporting the development of a robust transmission infrastructure. Continuing the efforts initiated by SPP’s most recent strategic plan, SPP has been sharing a vision of transmission as an “enabling asset”; a transportation asset to maximize the use of capital-intensive generating resources for the benefit of end-use customers in the SPP footprint. SPP’s planning processes prior to the Balanced Portfolio and Priority Projects were comprised of fairly discrete solutions based solely on reliability requirements. Our thrust of recognizing transmission as an enabler is a relatively new concept in SPP, coming out of the Synergistic Planning Project in 2009. This conceptual expansion has yet to fully develop its enabling network, including the EHV transmission facilities necessary to achieve SPP stakeholder goals and address the region’s long-term transmission needs.

As part of SPP’s effort to improve its transmission planning process, in 2009 a Synergistic Planning Project team identified several goals to facilitate the creation of a robust, flexible, and cost-effective transmission network: implementing an Integrated Transmission Planning process, establishing a Highway/Byway cost allocation mechanism, working with state commissions to establish the appropriate method of rate recovery for regionally-allocated transmission costs, and recommending Priority Projects. While two of these goals, approval of the Highway/Byway cost allocation and Priority Projects, are substantially complete, SPP will now focus its efforts on these initiatives in the following areas.

Implement Priority Projects

“Priority Projects” are an aggregation of six transmission expansion/upgrade projects identified in numerous prior SPP transmission planning studies. Development and implementation of these transmission projects will: “jump start” the transition to the new Integrated Transmission Planning process; relieve grid congestion; improve SPP members’ ability to deliver power to customers; improve transfers between SPP’s east and west regions; and facilitate adding new generation to the grid. The SPP Board of Directors approved the Priority Projects for construction in 2010.
FERC accepted SPP’s proposed Highway/Byway transmission cost allocation methodology effective June 19, 2010. Now that "Notifications to Construct" have been issued, progress during construction will be tracked as part of the ongoing project tracking effort. SPP will monitor the implementation for inter-zonal equity and unintended consequences and take action to rectify any significant inequities associated with these projects.

**Develop and Implement Integrated Transmission Planning Process**

The continued growth of SPP’s transmission system and markets - as well as the challenges and opportunities presented by changing federal and state energy and environmental regulations, growing NERC compliance requirements, and the potential for efficiencies in SPP’s generation interconnection and aggregate transmission service study processes - demand the adoption and implementation of more progressive, forward-thinking, regional planning processes. Planning engineers should: determine the value of enhancing their tools to include the use of stochastic modeling techniques; commence planning the transmission system beyond the traditional planning criteria of “N-1”; get ahead of the transmission asset life cycle curve; take into consideration the changes which will result with the implementation of Transmission Congestion Rights in the future markets; and begin utilizing the data collected by operators to better plan the transmission system to meet operational contingencies.

The Integrated Transmission Planning process is an iterative three-year process that includes 20-Year, 10-Year, and Near-Term Assessments. Critical elements of the Integrated Transmission Planning process that remain to be completed include developing criteria for defining the “robust transmission system” and completing the Integrated Transmission Planning process manual. Implementation would then consist of meeting the Board-established interim completion goals prior to the initiation of the inaugural triennial schedule of planning studies.

**Regional Cost Recovery**

SPP has long developed and produced plans for a regional transmission system, but the efforts have only recently begun to be capitalized upon because of cost allocation issues. SPP’s Regional State Committee of retail regulators, member committees and working groups, and staff have taken meaningful and concrete steps forward in developing new transmission cost allocation policies. These reasoned, balanced, independent policies will enable significant transmission investment and provide significant benefits; however, we must continue to support and improve cost recovery mechanisms. These mechanisms need to consider transmission investment from the broader geographic perspective, consider transmission expansion drivers, and consider the time frame on which to calculate value and benefit of new facilities. SPP, working with its members, is committed to actively supporting member’s efforts to secure cost recovery of these expenses through state regulatory jurisdictions.
Inter-Regional Optimization

As SPP develops and produces regional plans it is identifying transmission projects that could provide opportunities to realize benefits across SPP’s regional boundaries. SPP must work to foster cooperative and joint transmission projects with its neighboring systems to support broader inter-regional planning. Progressive development will prevent inter-regional optimization from being the next limiting factor to SPP’s progress. These kinds of opportunities are identified in the Extra High Voltage Overlay studies produced by SPP in 2008/2009. SPP, working with the newly established Seams Steering Committee, will work to improve Seams Agreements to not only improve operational coordination, but also address inter-regional planning and transmission cost allocation. Our objective is to identify specific projects across seams and work with neighbors on how to plan and build with equitable cost allocation and recovery methods. We intend to learn by doing and update our tariffs to achieve what today is a stumbling block on the road to better economies.

Operational Optimization

While SPP facilitates the future development of a robust electric transmission infrastructure that will enable the maximum use of capital-intensive generating resources for the benefit of all end-use customers in the SPP footprint, it should continue to develop and enhance policies, tools, and practices to optimize the use of the existing transmission system. This will involve SPP and its stakeholders taking a fresh look in a consolidated, coordinated manner at how the existing system is managed, maintained, and could be improved, with a particular emphasis on any progress that could be made toward making additional transmission service available to SPP’s customers on the existing system without unduly compromising system reliability.

» Develop Efficient Market Processes

Implementing new electricity markets is another major area in SPP’s strategic plan to provide additional regional benefits. These markets will allow SPP’s members and customers to take better advantage of our region’s diverse and changing generating resources, including coal, natural gas, hydro, wind, and nuclear. SPP’s future markets initiative will substantially expand the scope of SPP RTO-administered markets. Plans include adding a Day Ahead market with Transmission Congestion Rights and a Reliability Unit Commitment process. Operating Reserves will be included in both the Day Ahead and Real Time Balancing market. For these new market processes to work effectively and efficiently, SPP will become the Consolidated Balancing Authority for the market footprint.

Future market development is monitored by SPP’s Regional State Committee, comprised of state regulatory commissioners. The committee facilitated rigorous cost-benefit studies before SPP began new market development. A 2009 study determined SPP’s future markets would generate an additional $100 million in average net savings per year for the SPP footprint. Our expectation is that SPP’s new transmission initiative will importantly expand those savings for the entire region.
SPP and its stakeholders developed a high-level future markets design which includes Day Ahead and Operating Reserves markets, a Reliability Unit Commitment function, and financial Transmission Congestion Rights. This high-level design has been reviewed by the SPP stakeholder committees, the Regional State Committee, and the Board of Directors, who then directed the Market Working Group to move forward with the more detailed design and market protocols. SPP will continue to support the design effort, including facilitating the development activities of the Market Working Group, coordinating functions between working groups, and providing educational forums as necessary to support the ultimate approval of the future market protocols. SPP’s support of this future markets implementation will be achieved through the following initiatives.

**Implement Day Ahead Market with Transmission Congestion Rights**

The Day Ahead market will help optimize generation choices for the entire SPP footprint. The market will determine which generating units should run the next day for maximum cost-effectiveness based on resources available for the region and transmission limitations.

The Day Ahead market and its concurrent Operating Reserves market provide participants with the ability to submit offers to sell energy and reserves (regulation-up, regulation-down, spinning, and supplemental) and/or to submit bids to purchase energy. The Day Ahead market produces the least-cost solution to supply the load bid in by market participants using the resources offered. Participants have an estimate of the cost of energy the next day since the Day Ahead results are financially binding. The only energy exposed to real-time pricing is that amount of deviation from the Day Ahead results.

Congestion on the transmission grid can impact market decisions and prices. Congestion occurs when the electricity from the desired resources is unable to flow due to limitations on the physical transmission system, such as generator outages or storm damage. Congestion impairs the ability to use least-cost electricity to meet demand. Cost-effective management of congestion includes such actions as redispatch of generation, targeted transmission expansion, and other measures.

For generation owners to allow their resources to be optimized for the region rather than their own needs, they need assurance they will be protected from the cost impacts of market instructions. Protection against congestion costs is needed to provide that assurance. SPP’s market will include a financial hedging mechanism called a Transmission Congestion Right that helps reimburse market participants if they incur congestion costs and as such, functions as a hedge against congestion cost. The congestion “credit” or “charge” will be based on price differences between locations on the grid. As energy prices diverge because of congestion, the financial instrument adjusts an equal amount to provide offsetting value to the Transmission Congestion Right holder.
Implement Reliability Unit Commitment Process

SPP will run a series of Reliability Unit Commitments in addition to the Day Ahead market to ensure there is sufficient deliverable capacity throughout the market footprint. The first, multi-day Reliability Unit Commitment is executed prior to the Day Ahead market to consider resources with long lead time. Long lead time resources would have to begin their start-up process prior to completion of the Day Ahead market to be available for the operating day. If these resources require long start-up times and are determined to be necessary for reliability, the SPP operator may commit the resources in advance of the Day Ahead market. Once the Day Ahead market is complete, SPP will run a Day Ahead-Reliability Unit Commitment to commit any additional resources needed to meet the full capacity requirements and operating reserves for each hour of the next day.

Regional commitment of generation (rather than individual utilities committing their own generation) will reduce overall costs for the footprint and will be responsible for most of the additional $100 million in benefits projected by the Regional State Committee cost-benefit study.

Incorporate Operating Reserves into Real Time Balancing and Day Ahead Markets

The Day Ahead and Real Time Balancing markets will provide participants with greater access to reserve electricity, improve regional balancing of supply and demand, and facilitate the integration of more renewable resources. In these markets, participants can buy and sell reserve electricity to meet emergency needs and to provide regulation for load changes.

The Real Time Balancing market will continue to be a 5-minute market that dispatches energy, similar to today’s Energy Imbalance Service market (the Real Time Balancing market is the expanded Energy Imbalance Service market). As with the Day Ahead market, the Real Time Balancing market will include the opportunity for price-based procurement of Operating Reserves (regulation-up, regulation-down, spinning, and supplemental) on a security constrained, co-optimized, least-cost basis.

Implement Consolidated Balancing Authority

It is recognized that a consolidation of the Balancing Authorities for the market footprint is necessary for SPP’s new energy markets to operate efficiently. Balancing Authorities ensure that at every moment in time, and in plans for future times, there is sufficient generation to reliably supply electricity. As the Consolidated Balancing Authority, SPP will balance supply and demand for the region, maintain frequency, maintain electricity flows between adjacent Balancing Authorities, as well as meet numerous North American Electric Reliability Corporation standards and criteria. SPP will work to insure it is prepared with the procedures, systems, staff and training necessary for SPP to implement these functions to facilitate a timely implementation of the future markets.

The Consolidated Balancing Authority will provide economic incentives and structure for the most efficient regional grid operation. The amount of regulation reserves individual market participants
are required to carry will be reduced once the Balancing Authorities are consolidated into a single entity. The consolidated structure is intended to offer market participants more reserve resources from which to draw, allowing the region to meet North American Electric Reliability Corporation standards more efficiently. The Consolidated Balancing Authority will also facilitate Reliability Unit Commitment processes.

**Demand Response Integration**

Demand Response can also be used as a dispatchable energy resource to meet load and can provide additional value to market participants as a component of SPP’s Day Ahead and Operating Reserves markets by incrementally minimizing net energy acquisition/production costs. This non-generation resource is currently not on par with generating resources in the marketplace, but nevertheless can provide value. SPP is developing protocols and business processes to enable non-generation to be an integral component of the full suite of RTO market resources to allow Demand Response to be fully competitive.

**Manage Implementation**

SPP and its stakeholders are developing the protocols for the future markets, including: energy and operating reserve market processes; calculation of market prices; Transmission Congestion Rights process; market registration; outage and error handling; market mitigation; Protocol Revision Request process; and system change process. Protocols must be approved by the Markets and Operations Policy Committee and the Board of Directors.

SPP is responsible for the procurement and implementation of the SPP systems necessary to implement the future markets and Consolidated Balancing Authority. SPP will use best industry practices to manage the associated implementation project(s). These should strive to make sure that system contracting and development does not get ahead the market design; appropriately manage cost; and provide all necessary information to market participants to support their own budgeting and system development efforts. The Training Department will be involved with all phases of market development and will offer internal and stakeholder training.
» Create Member Value

Reliability Excellence

Reliability is the bedrock of SPP’s mission of helping our members work together to keep the lights on – today and in the future. As such, SPP is committed to promoting excellence in reliability for the organization, its members, and its registered entities. Working as a Regional Entity whose role it is to develop and enforce reliability standards, SPP will accomplish this goal through reliability forums, lessons learned, advice, and other guidance intended to train, educate, and assist. SPP will further promote reliability excellence by focusing on improving language of national reliability standards as they evolve to performance based measures. SPP will continue to foster and support its internal culture of compliance through ethics and compliance awareness training and through Operational Quality Assurance programs. The goal of reliability excellence is achievement of zero-defect compliance to NERC and regional reliability standards in the most cost-effective manner possible.

Benchmarking and Measurement

All major SPP projects include cost/benefit studies as part of the investment justification process. By leveraging system wide economies of scale, it is expected that SPP will be able to produce benefit levels not available to individual members acting alone. Today, when projects are completed and implemented, there is no definitive project tracking to determine if the level of benefits projected in the cost/benefit study have been realized, exceeded, or not fully realized.

An effective benchmarking and measurement process will be created as an extension of the cost/benefit development process for the development of the Day Ahead and Operating Reserves markets and new transmission investment. The concept of benchmarking is to establish a baseline of the cost profile of operations assuming the investment in the Day Ahead market or proposed transmission will not be made. This baseline becomes the foundation for measuring realization of incremental benefits. It is prudent to reach agreement on the benchmarking assumptions and the benefits measurement metrics before projects begin implementation. By doing so, baseline data is readily available and removes the potential bias associated by implementing measurements after the fact.

The advantages of developing and implementing benchmarking and measurement processes for major investment projects include:

• Provides feedback on the assumptions made in the cost/benefit justifications by evaluating the actual experience compared to the projected benefits, thereby improving the cost/benefit estimation process.
• Provides a baseline for evaluation of transmission upgrades, inter-zonal equity, and unintended consequences.
• SPP retains a focus on achieving maximum benefits realization.
• Tracking actual benefits improves SPP’s transparency for its members. Over time, SPP members will not only be able to track the level of aggregate SPP fees, but also will be able to quantify the benefits associated with incremental investments.
It is expected that the initial benchmarking and measurement methodology will be developed in conjunction with a cost/benefit study and piloted in the first half of 2011. The process should be refined and become part of all major investment projects beginning in the second half of 2011.

**Enhance Market Monitoring Tools**

Annually, the Market Monitoring Unit provides a report to the SPP Board of Directors on electricity market conditions. SPP’s Energy Imbalance Service market has been in operation for three years, and the Market Monitoring Unit recently completed a study assessing performance in 2009, concluding that SPP has performed as a healthy Regional Transmission Organization in 2009. The report indicates that for SPP to keep or improve its good health, certain actions should be taken. Most notably, SPP should move to standardize categories accounting for transmission outages which would allow for the easy reporting of extent, causes, and location of such outages. At a minimum, this type of reporting alleviates concerns of market power abuses and can enhance SPP’s transmission planning and real-time operations. SPP should also expand its monitoring capabilities to report trends in transmission congestion and use of temporary flowgates so that the system planning activities (Integrated Transmission Planning process) can prepare to address issues proactively rather than reactively. Finally, SPP’s offer cap calculation methodology should be modified to include temporary flowgates as well as permanent flowgates. These efforts are designed to: ensure that the market effectively contributes to the resolution of congestion; ensure that offers are “capped” effectively over time, regardless of the use of temporary flowgates; and build a systematic methodology to ensure real-time knowledge of transmission shortfalls is incorporated into the models in the transmission planning systems.

**Continuous Process Improvement**

A key component of SPP’s ability to continue to create member value is the ability to continually improve the effectiveness and efficiency of all administrative, coordination, planning, and operational processes. Without periodic objective reviews, processes and procedures tend to grow in complexity as they are continually revised to address the latest issue. As each small fix is added to a process or procedure, the complexity grows. Eventually, processes and procedures become more cumbersome than they need to be.

Healthy organizations periodically review their processes and procedures to ensure they are most effectively achieving their original business intent. This continuous process improvement strategic initiative targets both lowering operating costs and building more efficacious operating methods through objectively reviewing primary SPP processes and procedures. Frequently, unnecessary steps can be eliminated, processes can be automated, or the ultimate – some processes may be found to add little marginal value and can be eliminated.

Groups who work with and utilize the current processes on a routine basis know the business requirements better than anyone else; however, these same work teams are likely too engaged to step away from the work, take a different perspective, and design better work methods. By taking a structured review approach in conjunction with the staff involved on a routine basis with the process,
the end work product is more likely to become more efficient. Those affected will have participated in the development, and will be more supportive of adopting the reengineered processes.

Staff will ensure implementation of this strategic initiative and assure that resources are allocated to support this function. A methodology for identifying high impact processes to be considered for improvement will be developed. A plan for systematically reviewing all key processes will also be developed. Each year the process improvement plan for the following year will be updated.

**Strategic Membership Expansion**

Another way to create member value is to expand SPP’s membership base to better leverage the aggregate economies of scale and minimize seams issues. As opportunities are identified, SPP will continue to strategically pursue expansion of its membership and geographic footprint to further leverage its capabilities and lower costs. The SPP officer group and stakeholders will be involved as appropriate to support potential expansion. SPP is committed to defining a structured and transparent process under which the impact of adding prospective new members will be disclosed to existing stakeholders prior to agreements being finalized, as well as a transition process so that issues are identified and dealt with in working groups in which members will participate. Each new member integration will be unique, making it difficult to develop a standard integration process; however, SPP will develop an integration framework designed to minimize adverse impacts to existing members.

**Communication and Education**

There are a large number of rapidly changing industry developments that could dramatically transform the future operating environment for SPP and its members. These developments are likely to be in the form of breakthrough technologies or major legislative initiatives coming from a wide range of sources. SPP and its members must stay informed of new developments to have as much lead time as possible to position for emerging issues.

SPP will continue its efforts to communicate with and educate various audiences about SPP’s initiatives and external issues potentially impacting the organization. In concert with the Regional State Committee and in conjunction with its members, SPP will visit the region’s federal/state regulatory and legislative constituencies to discuss issues of joint concern. Other audiences with which SPP needs to stay appropriately engaged include: members and stakeholders, the general public, other industry organizations, and the media.