MARKETS

NOVEMBER 17, 2021

Webinar will begin at
9:00 a.m. MST / 8:00 a.m. PST
INTRODUCTION

BRUCE REW
SENIOR VP OF OPERATIONS
TODAY’S AGENDA

• Introduction
• Governance
• Peer-to-Peer Seams
• Greenhouse Gas Treatment
• Western Markets Roadmap
• Next Steps
Ideally a single co-optimized unit commitment and dispatch under a robust governance framework with an independent board.

CAISO

Standard approach with import/export bids

or

Market-to-Market optimized transfers (preferred)

Markets+ (DA and RT)

SPP RTO

WEIS (RT Only)
## Incremental Possibilities

<table>
<thead>
<tr>
<th>Resource Adequacy</th>
<th>DA Market</th>
<th>RT Market</th>
<th>Transmission Planning</th>
<th>Transmission Service Provider</th>
<th>Balancing Authority</th>
<th>RC Services</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase 1</strong></td>
<td>WRAP</td>
<td>Markets+</td>
<td></td>
<td>Independent BAs/TSPs</td>
<td>RC (optional)</td>
<td></td>
</tr>
<tr>
<td><strong>Phase 2</strong></td>
<td>WRAP</td>
<td>Markets+</td>
<td></td>
<td>Independent BAs/TSPs</td>
<td>RC (optional)</td>
<td></td>
</tr>
</tbody>
</table>

Entities can choose whether and when to move into full RTO mode.
GOVERNANCE

LANNY NICKELL, PAUL SUSKIE, STEVE JOHNSON & KARA FORNSTROM
SPP GOVERNANCE: TODAY’S SPEAKERS

Lanny Nickell  
Executive VP & Chief Operating Officer

Paul Suskie  
Executive VP of Regulatory Policy and General Counsel

Steve Johnson  
Principal Operations Specialist

Kara Fornstrom  
Director, State Regulatory Policy
GOVERNANCE

• Western Models:
  • Western Resource Adequacy Program
  • Reliability Coordinator Service
  • Western Energy Imbalance Service

• Overview of SPP Governance:
  • Independent board of directors
  • Corporate Governance Committee
  • Markets and Operations Committee
  • Regional State Committee
  • Cost Allocation Working Group
GOOD GOVERNANCE ENABLES GOOD MARKET DESIGN

Governance is a Top Priority:

- Collaborative stakeholder process to determine elements under SPP independent board
- Leverage WEIS and WRAP successes to inform Market+ governance element design to meet western stakeholder needs
WESTERN MODELS
WESTERN RESOURCE ADEQUACY PROGRAM
NWPP CORP

NOMINATING COMMITTEE
Sector Representative

RA PARTICIPANTS COMMITTEE (RAPC)

COMMITTEE OF STATE REPRESENTATIVES (COSR)
*relationship dependent upon ongoing discussions

PROGRAM REVIEW COMMITTEE (PRC)

NWPP BOARD OF DIRECTORS
Independent

NWPP CEO

NWPP STAFF

INDEPENDENT PROGRAM EVALUATOR

SPP (as RA Program Operator)

ALL EXISTING NWPP SERVICES
(under a variety of contract mechanisms)
SPP’S RELIABILITY COORDINATOR SERVICE
SPP’S RELIABILITY COORDINATION
STAKEHOLDER GROUPS

Western Reliability Executive Committee (WREC)

Western Reliability Working Group (WRWG)

West Modeling Task Force
RC Readiness Task Force
Congestion Management and Seams Task Force
SPP’S WESTERN ENERGY IMBALANCE SERVICE (WEIS)
WEIS GOVERNANCE

- Separate and distinct from SPP’s role as a RTO and operating under a separately approved WEIS Tariff.
- Design leverages best practices from SPP’s administration of an EIS market 2007-2014 and foundational constructs already in place in the West.
- Established under SPP’s independent board.
WEIS GOVERNANCE

- State Commission Liaison
- WMEC
- WMWG
- SPP Independent Board
- SPP RTO
- Regional State Committee
WESTERN MARKETS EXECUTIVE COMMITTEE (WMEC)

• Representatives of each non-affiliated WJDA signatory

• Forum in which SPP and WEIS participants collaborate to finalize market rules

• WMEC has authority to:
  • Approve/reject tariff amendments
  • Establish market protocols
  • Recommend proposed amendments to the WJDA

• SPP board gives significant recognition to WMEC in their ultimate oversight of WEIS
WMEC VOTING

Voting – House and Senate style approach

- House vote weighted based on WMEC representatives NEL as a proportion of total NEL for all WEIS participants
- Senate vote equally weighted for all WMEC representatives
- Resolution must pass House and Senate to pass
# WMEC Voting

<table>
<thead>
<tr>
<th><strong>HOUSE</strong></th>
<th><strong>SENATE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Vote weighted by WMEC representative NEL in proportion to total market NEL</td>
<td>Vote weighted equally for all WMEC representatives</td>
</tr>
<tr>
<td>75% or greater of total NEL to pass a resolution</td>
<td>75% of all WMEC representatives affirmative to pass a resolution*</td>
</tr>
<tr>
<td>Deemed to pass if only one representative is the dissenting vote, even if 75% of the voting NEL is not in the affirmative</td>
<td>*For modifications to Attachment D and Schedule 2 of the WEIS Tariff, approval of 100% of the voting representatives who are also NERC-registered transmission service providers would also be required</td>
</tr>
</tbody>
</table>
SPP RTO OVERVIEW
TRUSTED RELATIONSHIPS & PASSIONATE ENGAGEMENT

107 Members*

- 20 Generation and Transmission Cooperatives
- 17 Independent Power Producers
- 16 Investor-Owned Utilities
- 14 Municipal Systems
- 13 Power Marketers
- 13 Independent Transmission Companies
- 8 State Agencies
- 4 Large Retail Customers
- 1 Federal Agency
- 1 Alternative Power/Public Interest

*As of November 2021
SPP’S GOVERNANCE MODEL: INDEPENDENT OVERSIGHT, INCLUSIVE AND TRANSPARENT
A CUSTOMER-CENTERED BUSINESS MODEL

- SPP is a customer-driven organization.
- Decades of operating a multi-state system with diverse interests and customers.
- Only market administrator to delegate real decision-making authority to market.
- Reputation as a peerless facilitator of win-win solutions.
- SPP designs, builds and operates its markets for the good of all participants.
BOARD OF DIRECTORS
AND CORPORATE GOVERNANCE COMMITTEE
BOARD OF DIRECTORS

Qualifications: Recent and relevant senior management expertise and experience in one or more of these disciplines:

- Finance
- Accounting
- Electric transmission or generation planning or operation
- Law and regulation
- Commercial markets
- Trading and associated risk management

Purpose: The board of directors will manage the general business of SPP pursuant to the SPP bylaws.
SPP BOARD OF DIRECTORS: SCOPE

- Direct activities of all SPP organizational groups
- Authorize all substantive contracts and debt
- Select and review the performance of SPP officers
- Approve amendments to the SPP bylaws
- Approve amendments to the SPP membership agreement
- Authorize regulatory filings
- Solicit and consider straw vote of Members Committee in advance of taking any action
- Appeals: any member can appeal to the board of directors if they disagree with an action or inaction from a committee
## CORPORATE GOVERNANCE COMMITTEE REPRESENTATION

<table>
<thead>
<tr>
<th>Member Type</th>
<th>Member</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPP president – chair</td>
<td>Barbara Sugg, SPP</td>
</tr>
<tr>
<td>SPP chair of the board</td>
<td>Larry Altenbaumer</td>
</tr>
<tr>
<td>(1) Investor-owned utility</td>
<td>Denise Buffington, Evergy</td>
</tr>
<tr>
<td>(1) Cooperative</td>
<td>Mike Wise, Golden Spread</td>
</tr>
<tr>
<td>(1) Municipal</td>
<td>Jason Fortik, LES</td>
</tr>
<tr>
<td>(1) IPP/Marketer</td>
<td>Betsy Beck, Enel</td>
</tr>
<tr>
<td>(1) State power agency</td>
<td>John McClure, NPPD</td>
</tr>
<tr>
<td>(1) Alternative power/public Interest</td>
<td>Steve Gaw, APA</td>
</tr>
<tr>
<td>(1) Independent transmission</td>
<td>Brett Leopold, ITC</td>
</tr>
<tr>
<td>(1) Large/Small retail</td>
<td>Holly Rachel Smith, Walmart</td>
</tr>
<tr>
<td>(1) Federal power marketing agency</td>
<td>Lloyd Linke, WAPA</td>
</tr>
<tr>
<td>Ex officio member</td>
<td>Josh Martin</td>
</tr>
</tbody>
</table>
SPP CORPORATE GOVERNANCE COMMITTEE

• Monitor the composition of the Board of Directors to ensure:
  • Balance
  • Independence
  • Maintenance of qualifications under any applicable laws
  • Avoidance of conflicts of interest
  • Periodic review of the criteria for independence

• Coordinate an annual review and assessment of the effectiveness of the Board of Directors, its structure, and process

• Recommend compensation levels for the Board of Directors to the Membership
MARKETS AND OPERATIONS COMMITTEE (MOPC)
MOPC PURPOSE AND SCOPE

• Purpose:
  • MOPC is responsible, through its designated organizational groups, for developing and recommending policies and procedures related to the technical operations for the company in accordance with its scope as approved by the board of directors.

• Scope of Activities
  • Recommend practices for system design, planning, adequacy, regional transmission service tariff, interconnections, operation, reliability, market designs and efficiency, and market power mitigation that will help to assure efficient and reliable power supply among the systems in SPP and SPP transmission customers
  • Review and assess the current and planned electric system of the region
  • Recommend to the board of directors criteria for planning, operations, and to assist in the efficiency and vitality of the wholesale electricity market
  • Monitor the current state and evolution of the electric energy supply industry and proactively recommend commercial practices that meet industry needs and promote commerce
  • Work with all SPP organizational groups to promote a high standard of operational reliability
MOPC REPRESENTATION

• Each SPP member shall appoint a representative to the MOPC.
• Each representative designated shall be an officer or employee of the member.
• The board of directors appoints the chair and vice chair.
• Each MOPC member may continue to be a member thereof until the appropriate member appoints a successor.
REGIONAL STATE COMMITTEE
AND COST ALLOCATION WORKING GROUP
2021 REGIONAL STATE COMMITTEE

Kristi Fiegen, RSC President*
South Dakota Public Utilities Commission

Randel Christamann, RSC Vice President*
North Dakota Public Service Commission

Geri Huser, RSC Secretary/Treasurer
Iowa Utilities Board

Andrew French
Kansas Corporation Commission

Dana Murphy*
Oklahoma Corporation Commission

Dennis Grennan
Nebraska Power Review Board

Jefferson Byrd*
New Mexico Public Regulation Commission

Mike Francis*
Louisiana Public Service Commission

Scott Rupp
Missouri Public Service Commission

Ted J. Thomas
Arkansas Public Service Commission

Will McAdams
Public Utility Commission of Texas

* Elected commissioner
# RSC: PRIMARY RESPONSIBILITIES

<table>
<thead>
<tr>
<th>4 Areas of Authority</th>
<th>Description</th>
<th>Times Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost allocation</td>
<td>Whether participant funding will be used for transmission enhancements &amp; whether license plate or postage stamp rates will be used for the regional access charge.</td>
<td>11</td>
</tr>
<tr>
<td>Financial transmission rights (FTRs)</td>
<td>FTR allocation, where a locational price methodology is used, and the transition mechanism to be used to assure that existing firm customers receive FTRs equivalent to the customers’ existing firm rights.</td>
<td>3</td>
</tr>
<tr>
<td>Planning for remote resources</td>
<td>Whether transmission upgrades for remote resources will be included in the regional transmission planning process and the role of transmission owners in proposing transmission upgrades in the regional planning process.</td>
<td>3</td>
</tr>
<tr>
<td>Resource adequacy</td>
<td>Determine the approach for resource adequacy across SPP.</td>
<td>2</td>
</tr>
</tbody>
</table>

“As the RSC reaches decisions on the methodology that will be used to address any of these issues, SPP will file this methodology pursuant to Section 205 of the Federal Power Act. However, nothing in this section prohibits SPP from filing its own related proposal(s) pursuant to Section 205 of the Federal Power Act.” – SPP Bylaws § 7.2

Link to the history of the Regional State Committee: [https://spp.org/documents/58610/history%20rsc%202021%2020210423%20web%20revision.pdf](https://spp.org/documents/58610/history%20rsc%202021%2020210423%20web%20revision.pdf)
# COST ALLOCATION WORKING GROUP REPRESENTATIVES

<table>
<thead>
<tr>
<th>State Regulatory Agency</th>
<th>Representative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arkansas Public Service Commission (APSC)</td>
<td>Cindy Ireland</td>
</tr>
<tr>
<td>Iowa Utilities Board (IUB)</td>
<td>Anna Hyatt</td>
</tr>
<tr>
<td>Kansas Corporation Commission (KCC)</td>
<td>Shari Albrecht</td>
</tr>
<tr>
<td>Louisiana Public Service Commission (LPSC)</td>
<td>Lane Sisung</td>
</tr>
<tr>
<td>Missouri Public Service Commission (MoPSC)</td>
<td>Adam McKinnie</td>
</tr>
<tr>
<td>Nebraska Power Review Board (NPRB)</td>
<td>John Krajewski</td>
</tr>
<tr>
<td>New Mexico Public Regulation Commission (NMPRC)</td>
<td>John Reynolds</td>
</tr>
<tr>
<td>North Dakota Public Service Commission (NDPSC)</td>
<td>Victor Schock</td>
</tr>
<tr>
<td>Oklahoma Corporation Commission (OCC)</td>
<td>Jason Chaplin</td>
</tr>
<tr>
<td>South Dakota Public Utilities Commission (SDPUC)</td>
<td>Greg Rislov</td>
</tr>
<tr>
<td>Public Utility Commission of Texas (PUCT)</td>
<td>Harika Basaran</td>
</tr>
</tbody>
</table>
COST ALLOCATION WORKING GROUP

• Member state agency staff members may participate at the discretion of their respective agencies, including but not limited to:

  • Attendance at RSC and SPP board of directors meetings in support of or in lieu of member state regulatory agency commissioners

  • Attendance and active participation in assigned SPP committees, working groups and task forces (including providing summaries of meetings and reporting to the SPP RSC members)

  • Active representation of the majority positions and minority reports or dissenting opinions of the RSC member state agencies; and attending and actively participating in assigned RSC board committees and work-groups created by the RSC board (including providing summaries of meetings and reporting to the SPP RSC members).
QUESTIONS & DISCUSSION

USE THE CHAT, OR TO SPEAK, CLICK THE RAISE HAND ICON IN THE PARTICIPANT PANEL OR DIAL *3 ON YOUR PHONE
PEER-TO-PEER SEAMS
CLINT SAVOY
SENIOR INTERREGIONAL COORDINATOR
SEAMS MANAGEMENT: MARKETS+

• Seams and seams issues exist today
  • SPP has a proven track record of working with stakeholders and neighbors to reduce or eliminate impacts of seams issues
  • All different types of seams (BA, RC, TSP, Market, etc.) can be managed well with the right governance structure and adequate stakeholder engagement and participation
  • Seams partners more likely to engage and to compromise when relationship is peer-to-peer rather than superior-to-subordinate
  • Seams performed very well during winter weather event
SEAMS MANAGEMENT: MARKETS+

• Open, transparent and accountable governance and market design are paramount.
  • An effective way to remove hurdles that limit intra- and inter-market trade.
  • Collaborative environment to ensure that all stakeholders have an equal opportunity to derive benefit.
SEAMS MANAGEMENT:
STAKEHOLDER INVOLVEMENT ISSUES IN THE EAST

• SPP Seams Advisory Group (SAG; previously Seams Steering Committee)
  • Initial group charter approved April 2010*
  • Responsible for providing direction to SPP staff regarding staff’s negotiation, development, implementation and maintenance of SPP’s seams agreements with SPP customers or transmission providers.
• Interregional Planning Stakeholder Advisory Committees (IPSACs)
• Other options?

SEAMS MANAGEMENT: MARKETS+
THOUGHTS TO LEAVE YOU WITH:

• Fundamental purpose is to enhance, not limit, both intra- and inter-market trading
• Entities will likely have increased benefits in a two-market system with a well managed seam
  • Second market operator will calculate prices & determine who flows
• Involve stakeholders in determining what is best for the market as a whole
• Reduce impacts and/or gain efficiencies of some seams by leveraging relationships between functions/services (RA, DA, RT)
SEAMS MANAGEMENT: MARKETS+
THOUGHTS TO LEAVE YOU WITH:

• Advocate on behalf of all market participants equally and independently.
• Ensure that dispatches, imports/exports and prices are efficient, reliable and equitable.
• Negotiate seams with other markets on peer-to-peer basis as the market operator to achieve improved outcomes.
• Working together collaboratively, we can find the right path forward.
QUESTIONS & DISCUSSION

USE THE CHAT, OR TO SPEAK, CLICK THE RAISE HAND ICON IN THE PARTICIPANT PANEL OR DIAL *3 ON YOUR PHONE
GREENHOUSE GAS TREATMENT

KARA FORNSTROM
DIRECTOR, STATE REGULATORY POLICY
WESTERN EFFORTS

• **Report**: Greenhouse Gas Accounting Systems in Wholesale Regional Electricity Markets: Considerations for the Western Interconnection by Deborah Kapiloff and Vijay Satyal, Western Resource Advocates

• **Report**: WIRED GHG Accounting Working Group Report from the Center for the New Energy Economy

• **Individual State Programs**: Colorado, Oregon, Nevada, Washington
GUIDING PRINCIPLES

• Robust and consistent framework
• Sufficient granularity to demonstrate compliance with state regulation
• Simple, cost-effective solution
• Avoid administrative burden and double counting
• No interference with market dispatch principles
QUESTIONS & DISCUSSION

USE THE CHAT, OR TO SPEAK, CLICK THE RAISE HAND ICON IN THE PARTICIPANT PANEL OR DIAL *3 ON YOUR PHONE
THIS ISN’T OUR PARENTS’ ELECTRIC GRID

Evolving grid

Smart meters, Generator retirements, Advanced technologies, Compliance, Prosumers, Fuel prices, Demand response

Environmental constraints, Cybersecurity, Wind, Energy efficiency, Prosumers, Advanced technologies

Microgrids, Electric vehicles, Battery storage, Solar, Distributed generation

Consumer demand
PARTNERSHIP TO EXPLORE

• A true partnership
• Develop together while leveraging strengths, expertise and past successes
• Stakeholder designed and driven, leveraging SPP’s facilitation and market expertise
MARKETS+

• Not an extension of WEIS, but something new that builds on past success
  • Will replace WEIS and EIM

• Leverage Western efforts to inform market design
  • WRAP
  • WEIS and EIM
  • RTO West DC Tie ATRR
  • Westconnect Pricing Experiment
MARKETS+ DESIGN FOCUS

Reliability
- Full use of available transmission DA and RT
- Peer-to-peer market seam management
- Flex and uncertainty products
- Co-optimization in day ahead reducing unit commitment
- Resource and supply adequacy

Economics

Environmental
- Greenhouse gas accounting
- Superior governance
WESTERN MARKETS TIMELINE

**SPP RTO West**

- **Q2– 2022**: Execution of Membership Commitment Agreement by the West Interested Parties
  - SPP Staff begin preparing tariff modifications

- **Q4– 2022**: File Tariff Modifications with FERC to implement SPP RTO West

- **Q2 - 2023**: FERC approves tariff

- **Q2 - 2024**: Launch SPP RTO in the West spring 2024

**M+**

- **Q1-Q2 2022**: Stakeholder meetings to vet market design concepts

- **Q3 2022**: Distribute gathered feedback, develop detailed timeline and next steps

- **Q4 2022 Forward**: Complete feasibility and cost benefit analysis
  - Conduct inclusive stakeholder process with committed parties
  - Obtain Board approval, seek FERC approval
QUESTIONS & DISCUSSION

USE THE CHAT, OR TO SPEAK, CLICK THE RAISE HAND ICON IN THE PARTICIPANT PANEL OR DIAL *3 ON YOUR PHONE
NEXT STEPS

BRUCE REW
SVP, OPERATIONS
We are here
WEBINAR: DECEMBER 1, 2021

- Transmission availability
- Market products
- Congestion rent allocation
- Accurate price formation
- Market power mitigation approach
2022 IN-PERSON MEETINGS

- **Phoenix**: February 1-2
- **Portland**: March 29-30
- **Denver**: June 1-2
CONTACT US

If you have any questions about SPP, our Western Services or Markets+ feel free to reach out to us at marketsplus@spp.org and we’ll help you find the right person and the right information!

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