

# MARKETS



Phase One Update

Feb. 16, 2023



*Working together to responsibly and economically  
keep the lights on today and in the future.*



SouthwestPowerPool



SPPorg



southwest-power-pool



Southwest Power Pool  
**WESTERN  
ENERGY  
SERVICES**

# WELCOME

ANTOINE LUCAS, SPP

# TODAY'S AGENDA

Welcome

Vision and Timeline for SPP Markets

Update on Markets+ Phase One Status

Introduction to Seams Coordination

Discussion of Future Meetings

Q&A

# VISION AND TIMELINE FOR SPP MARKETS

ANTOINE LUCAS, SPP

## VISION

- Southwest Power Pool (SPP) continues to expand its market services in the Western Interconnection.
- SPP provides regional transmission organization services in both the Eastern and Western Interconnections as early as 2026.
- SPP expects the combined services footprint will grow beyond 100 GWs, adding unique value to SPP stakeholders by leveraging geographic, time zone and resource diversity.

# GUIDING PRINCIPLES

SPP will deliver value-added products and services to western services participants and existing stakeholders by:

- Creating increased market opportunities while advancing high-quality services for existing stakeholders.
- Designing products desired by western participants with development costs appropriately allocated to those participants.
- Minimizing development costs by leveraging existing systems, market design and expertise as much as possible.
- Facilitating customer driven, independent governance for all participants.
- Adapting governance to assure stakeholders have appropriate input and voice for issues that matter to them.
- Minimizing risk to new and existing stakeholders.

# VALUE DRIVERS

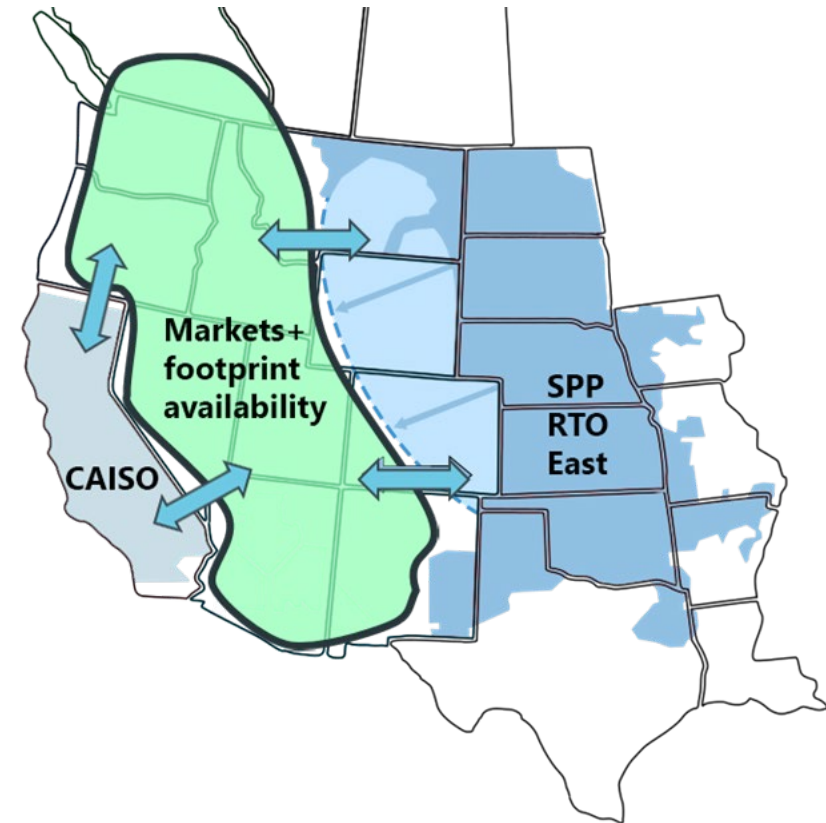
- **Governance:** Participant-focused market design, equitable stakeholder representation on decision-making committees, multi-state collaboration and independent board.
- **Environmental & Public Policy:** Facilitation of progress toward renewable goals and carbon accounting as determined by state needs.
- **Economics & Reliability:** Broad geographic, resource and time zone diversity provides greater economic and reliability benefits to new and existing participants.
- **Customer Savings:** Increased market opportunities and settlement efficiencies reduce energy costs for current and new participants.
- **Seams:** Effective peer-to-peer negotiation with neighbors to assure fairer usage and protection of current and future generation and transmission assets.
- **Transmission:** Optimization of grid capacity while respecting existing transmission rights and increasing transparency of and motivation for cost-beneficial expansion.
- **Resource Adequacy:** Leverages participant designed, region-wide resource adequacy program.



# ENVISIONED SCOPE OF WESTERN EXPANSION

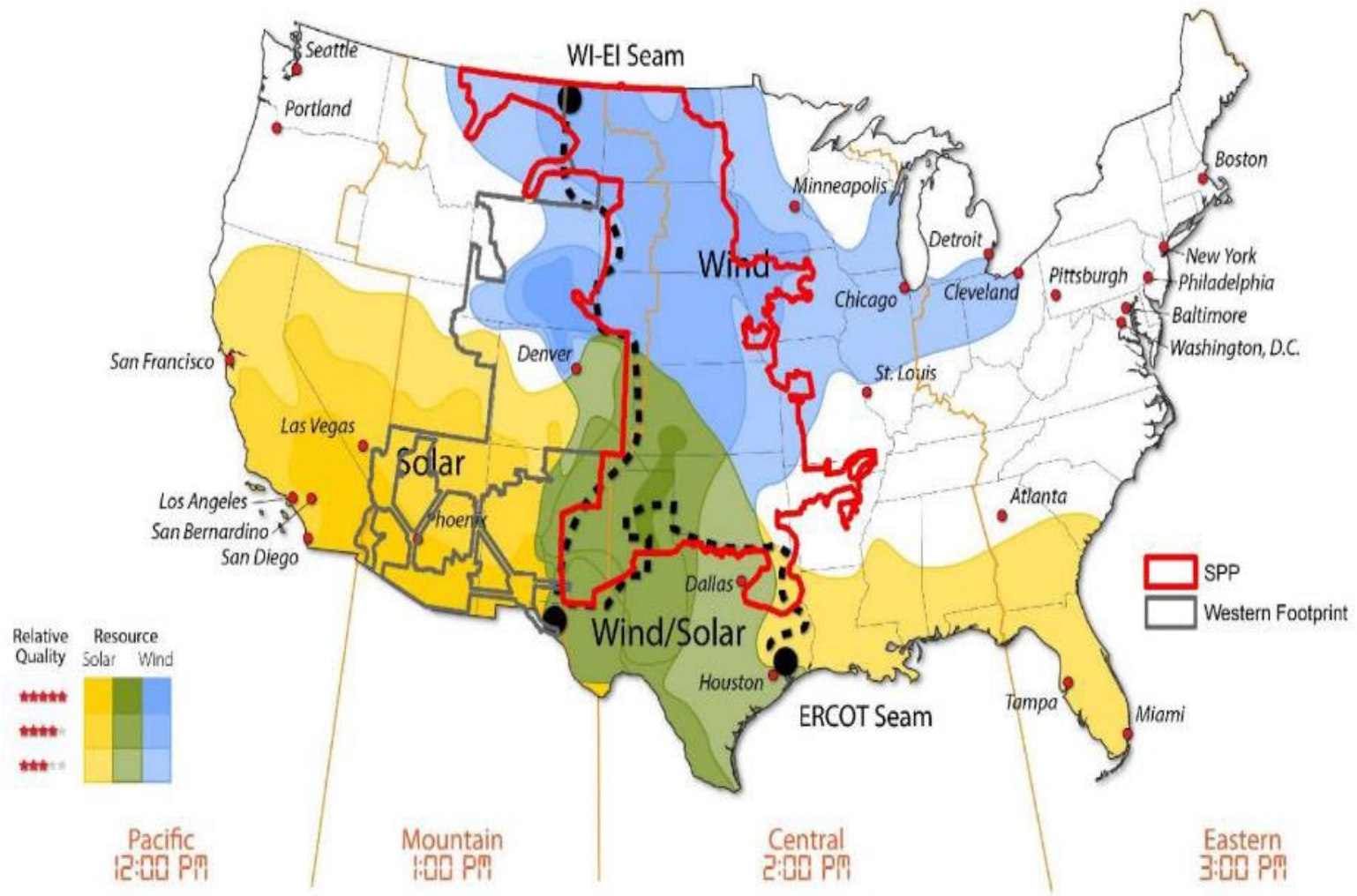
## Potential market scenario (could exceed 100 GW)

- Contiguous connection between the Rocky Mountains, Desert Southwest, Basin, and Pacific Northwest areas:
  - Leverages greater regional diversity of hydro, solar, wind and thermal.
  - Optimizes trade with the SPP RTO.
  - Realizes increased benefits from greater time zone diversity.
  - Facilitates market transactions with California.

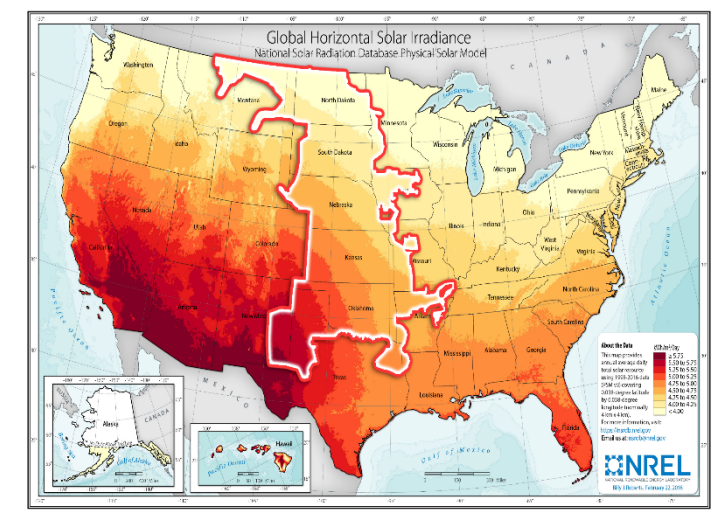
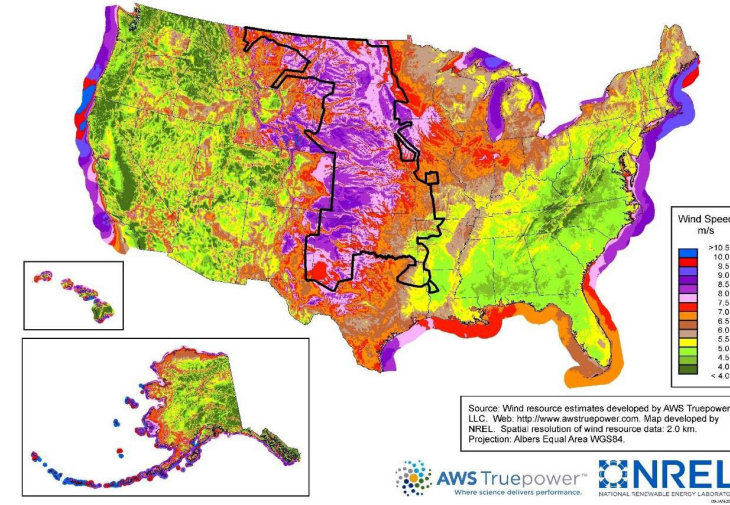




# LEVERAGING DIVERSITY



United States - Land-Based and Offshore Annual Average Wind Speed at 80 m



\*Areas not shaded have annual average wind speeds less than 7.0 m/s and solar production less than 4.75 kWh/m2/day (from NREL data)

# UPDATES ON PHASE ONE

CARRIE SIMPSON, SPP

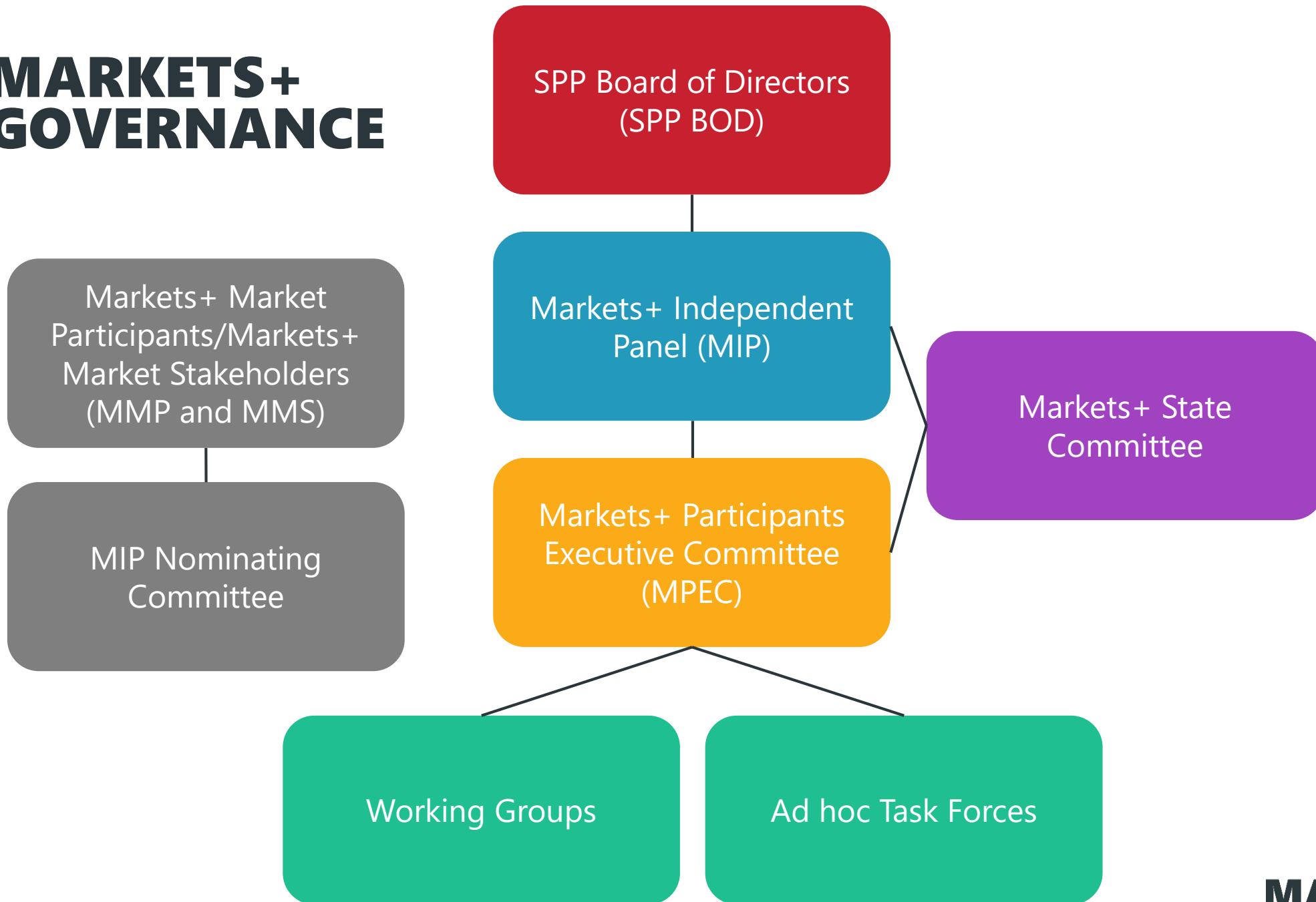
# PHASE ONE FUNDING UPDATE

- More than 20 entities involved in reviewing SPP's phase one funding agreement since mid-December 2022.
- Executable version ready this week.
  - Agreement is binding ahead of April 2023, if critical mass is achieved.
    - 150,000 GWhs of NEL and at least two contiguous balancing authorities.
- Participation agreement for non-governmental organizations/public interest organizations has been distributed to any entity who has requested it.

# GOVERNANCE UPDATE

- SPP developing plan for launch of Markets+ phase one governance in preparation for April 18-19 meeting.
- Details to be shared at virtual meeting in March:
  - Establishing three-member board of directors panel.
  - Engagement and role of the Markets+ State Committee.
  - Seating of the Markets+ Participants Executive Committee.
  - Identification of working group and task force composition and meeting cadence.

# MARKETS+ GOVERNANCE

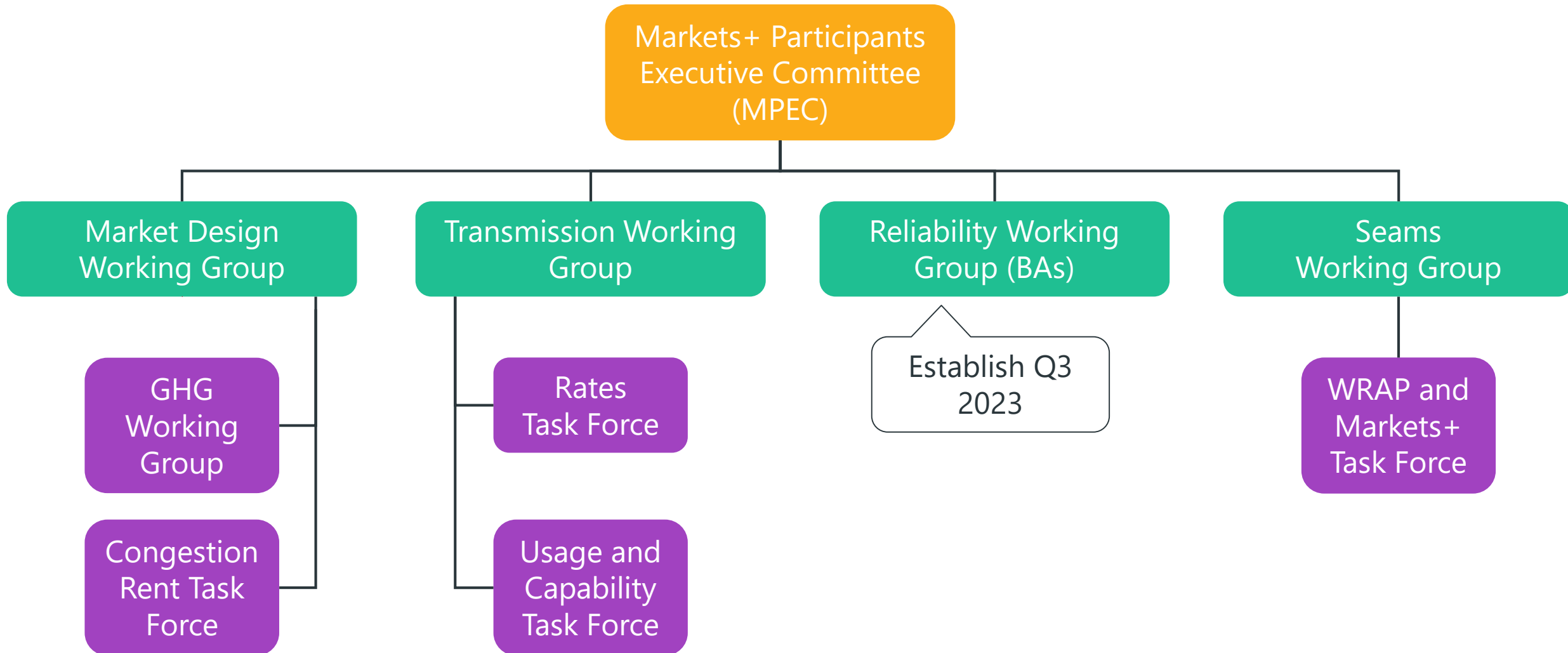


# GOVERNANCE: PHASE ONE





# WORKING GROUPS: PHASE ONE



# PHASE ONE: WORKING GROUP AND TASK FORCE CREATION AND COMPOSITION

## Working Groups



## Task Forces



# PARTICIPATION IN PROCESS

- All stakeholders are welcome to participate and provide input to all working groups, task forces and committees.
  - Meetings and materials will be posted on SPP.org.
  - Sign up for Markets+ distribution lists.
- Reach out to SPP staff if you have any questions.

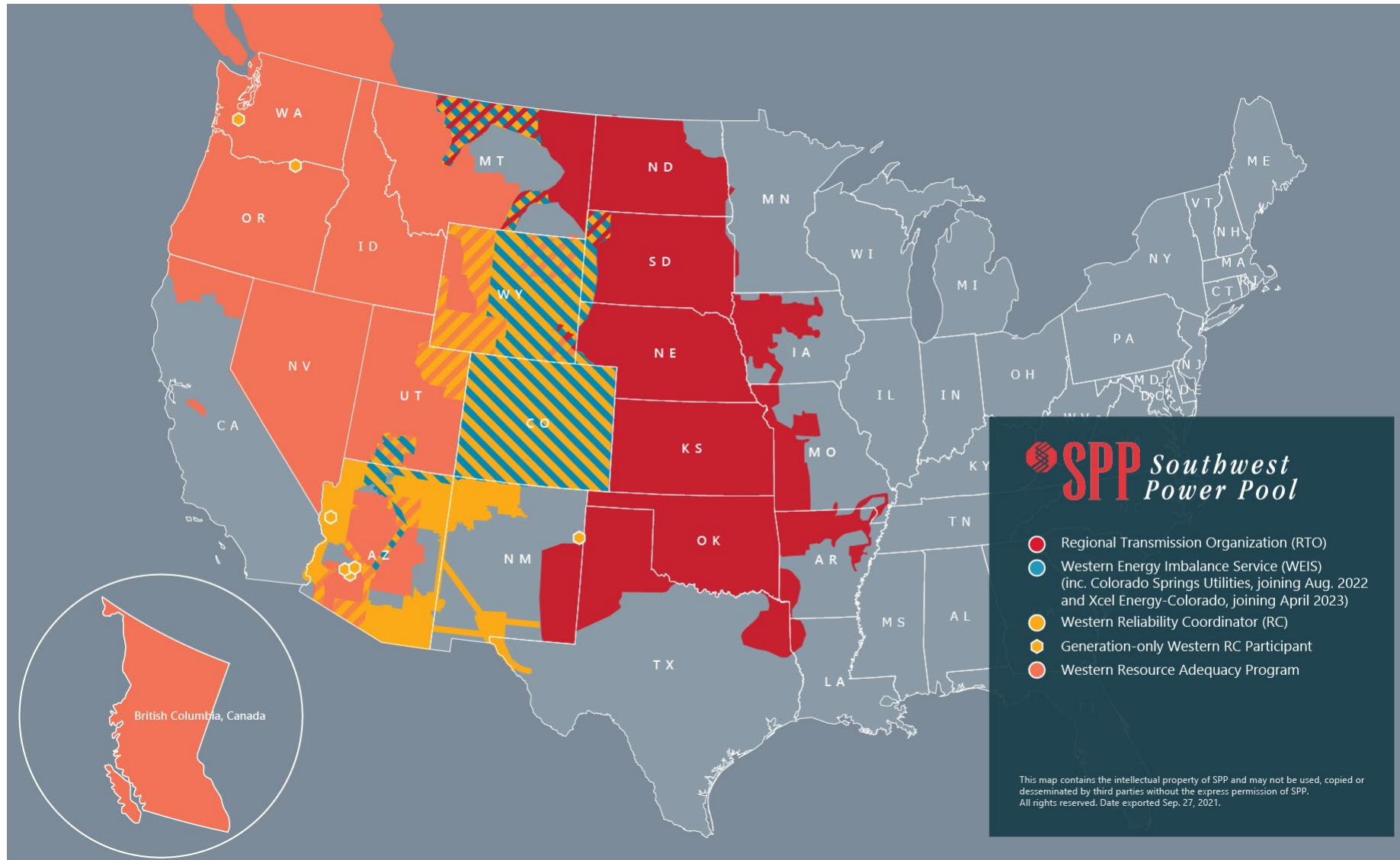
# INTRODUCTION TO SEAMS

CLINT SAVOY, SPP

# WHAT ARE SEAMS?

- Boundaries between neighboring entities performing similar functions.
  - Also boundaries within or along the geographic footprint of a function where some choose not to participate (embedded entity).
- SPP has seams with neighboring transmission service providers, reliability coordinators, market operators and planning regions.
- Neighbors often referred to as “first tier.”
- Generally limited to entities within the same interconnection.

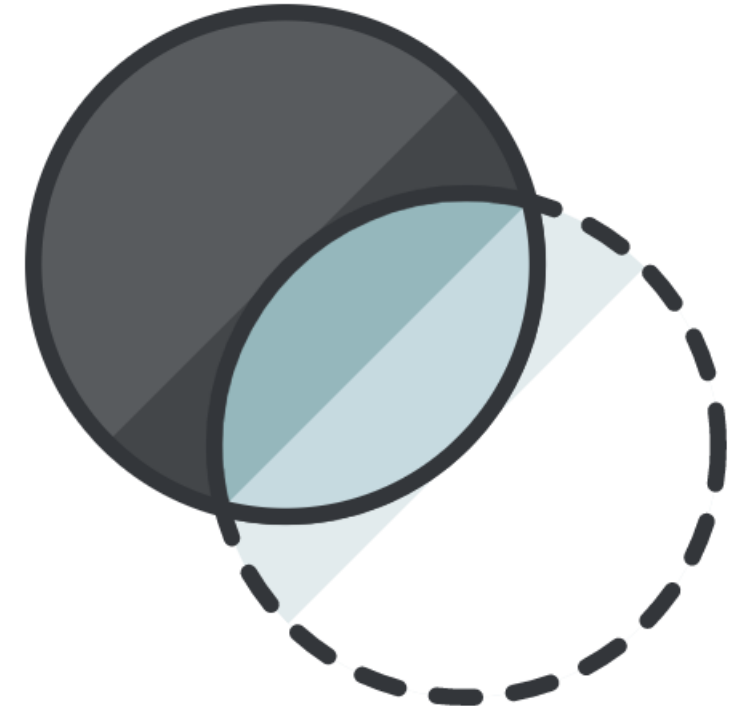
# CURRENT SPP FUNCTIONS





# SEAMS MANAGEMENT: **MARKETS+**

- 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.
  - Market operators calculate prices & determine who flows.
- Requires stakeholders to determine what is best for the markets **as a whole**.
- **Reduce impacts and/or gain efficiencies** of some seams by leveraging relationships between functions/services (resource adequacy, day ahead, real time).

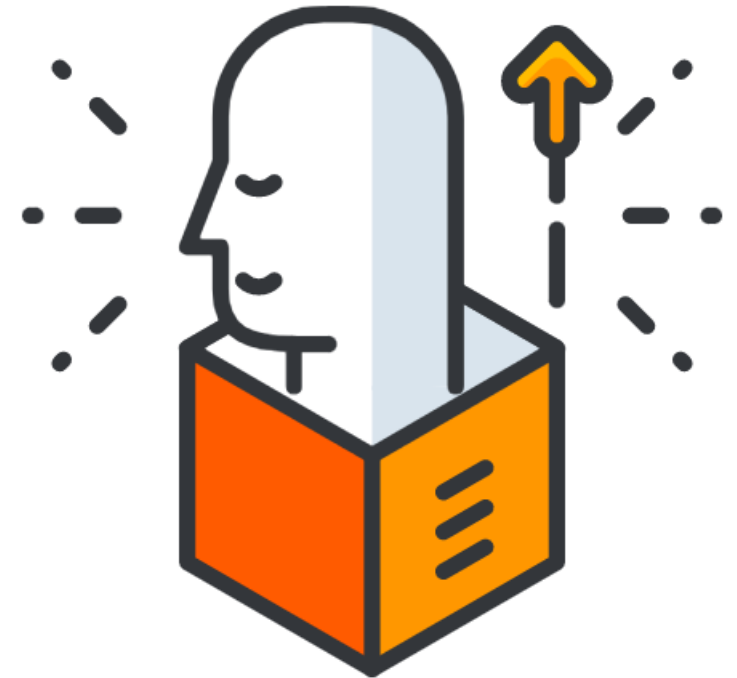


# SEAMS MANAGEMENT: **MARKETS+**

- 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 (balancing authority, reliability coordinator, transmission service provider, market, etc.) can be managed well with the right governance structure and adequate stakeholder engagement and participation .
    - Market-to-market and market-to-non market seams.
- Seams partners more likely to engage and compromise when relationship is peer-to-peer rather than superior-to-subordinate.

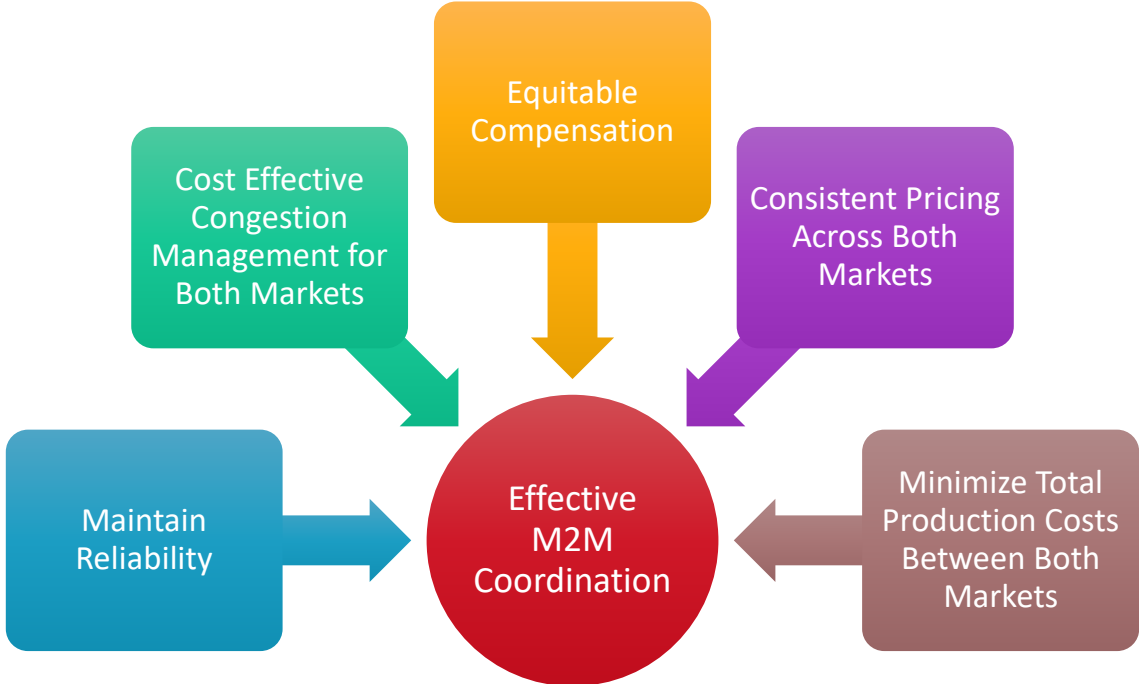
# SEAMS MANAGEMENT: **MARKETS+**

- 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.



# WHAT IS MARKET TO MARKET?

## Objectives of Market-to-Market (M2M) Coordination



# WHERE ARE THE OPPORTUNITIES FOR SEAMS MANAGEMENT? **MARKETS+**

- Interoperability of Western Resource Adequacy Program (WRAP) and Markets+:
  - Operational program and Markets+ market design.
  - Entities in Markets+ with WRAP obligations to the California ISO (CAISO) Extended Day-Ahead Market (EDAM) or non-market footprints.
  - Entities in EDAM with WRAP obligations to Markets+.
- Market-to-market coordination with EDAM neighbors and CAISO.
- Multi-market optimization between Markets+ and SPP RTO.
- Market-to-non-market coordination with neighbors.

# MARKETS+: SEAMS WORKING GROUP

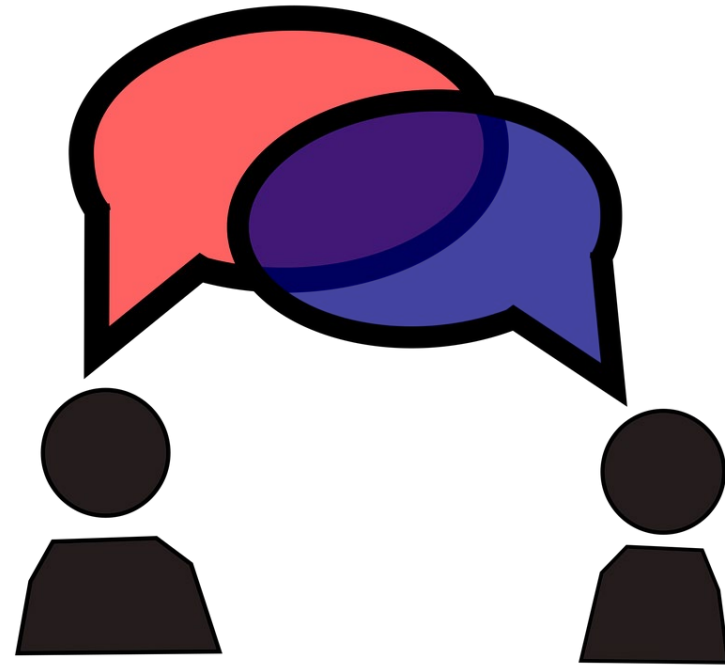
- Seams Working Group to report to the Western Markets Executive Committee (WMEC) within Markets+.
- Identify and propose policies to address market seams that may exist, including drafting protocol and tariff language.
- Representation on the group to be a diverse set of parties who signed the phase one funding and participation agreements.
- Policy recommendation to be coordinate with impacted policy groups with recommendations made to WMEC.



# SEAMS DOESN'T HAVE TO BE A NEGATIVE WORD

- Having more than one market option is a good thing.
- Effective seams management will require engagement from other market operators.
  - Market Liaisons concept

Market operators should invite and encourage each other to actively follow, and participate in when necessary, each other's market design, development, and administration processes



# NEXT STEPS

- Upcoming Markets+ virtual calls to include more educational information:
  - Stakeholder participation in SPP seams efforts
    - Liaison committee examples from East
    - Types of seams agreements
    - Market-to-market coordination
  - Proposal to establish CAISO-SPP coordination.

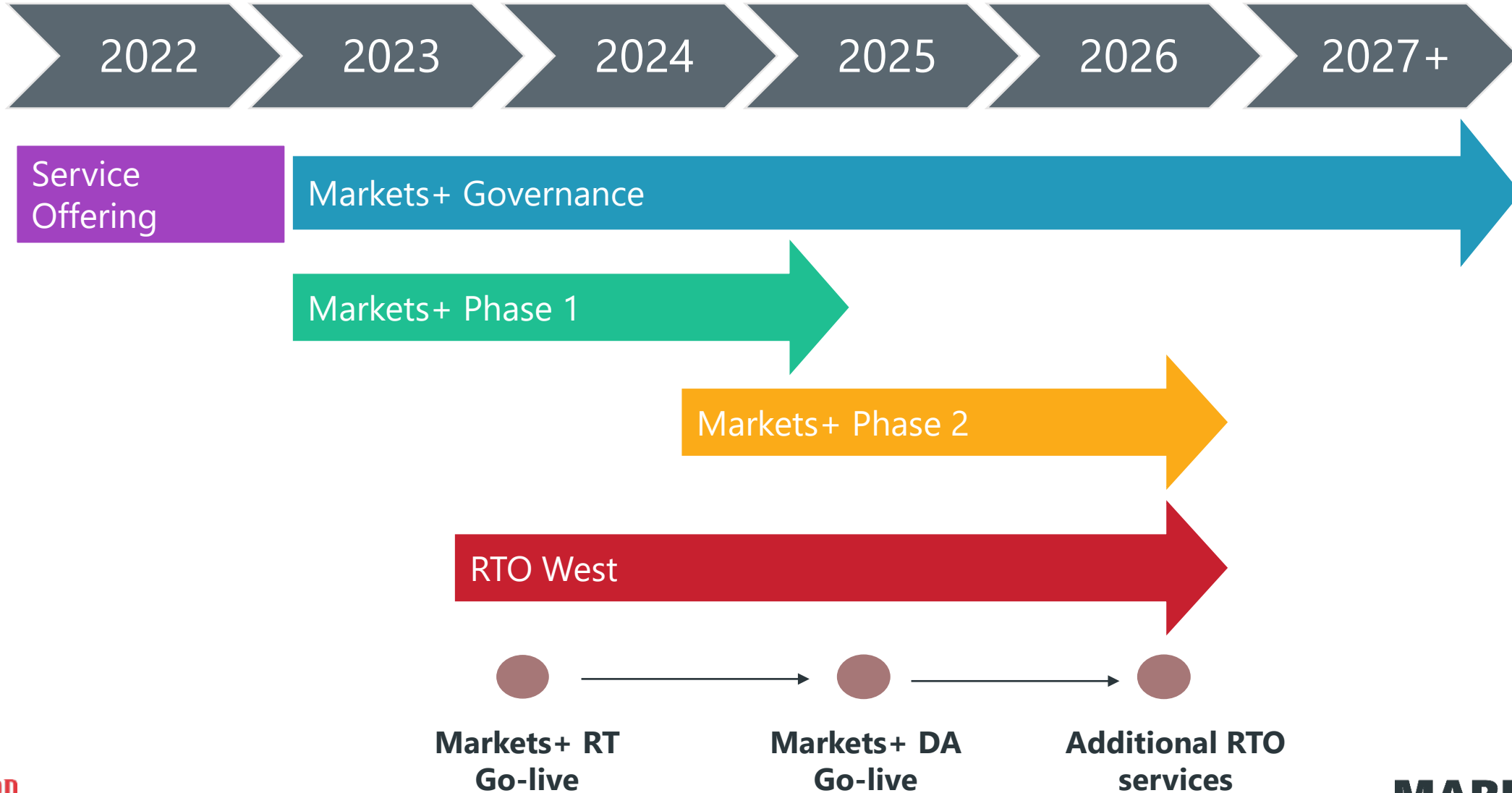
# FUTURE MEETINGS

CARRIE SIMPSON, SPP

# UPCOMING MEETINGS

- Phase one updates – virtual calls
  - March 2, March 16, March 30, April 11
  - Topics:
    - Governance launch
    - Seams education
    - Markets+ real-time market option
    - Timeline and expectations
- Phase one kick-off
  - April 18-19 at Tri-States offices in Westminster, Colorado

# OVERALL TIMELINES



# QUESTIONS?