

MARKETS



DAY-AHEAD AND REAL-TIME ENERGY MARKET



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



SouthwestPowerPool



SPPorg



southwest-power-pool

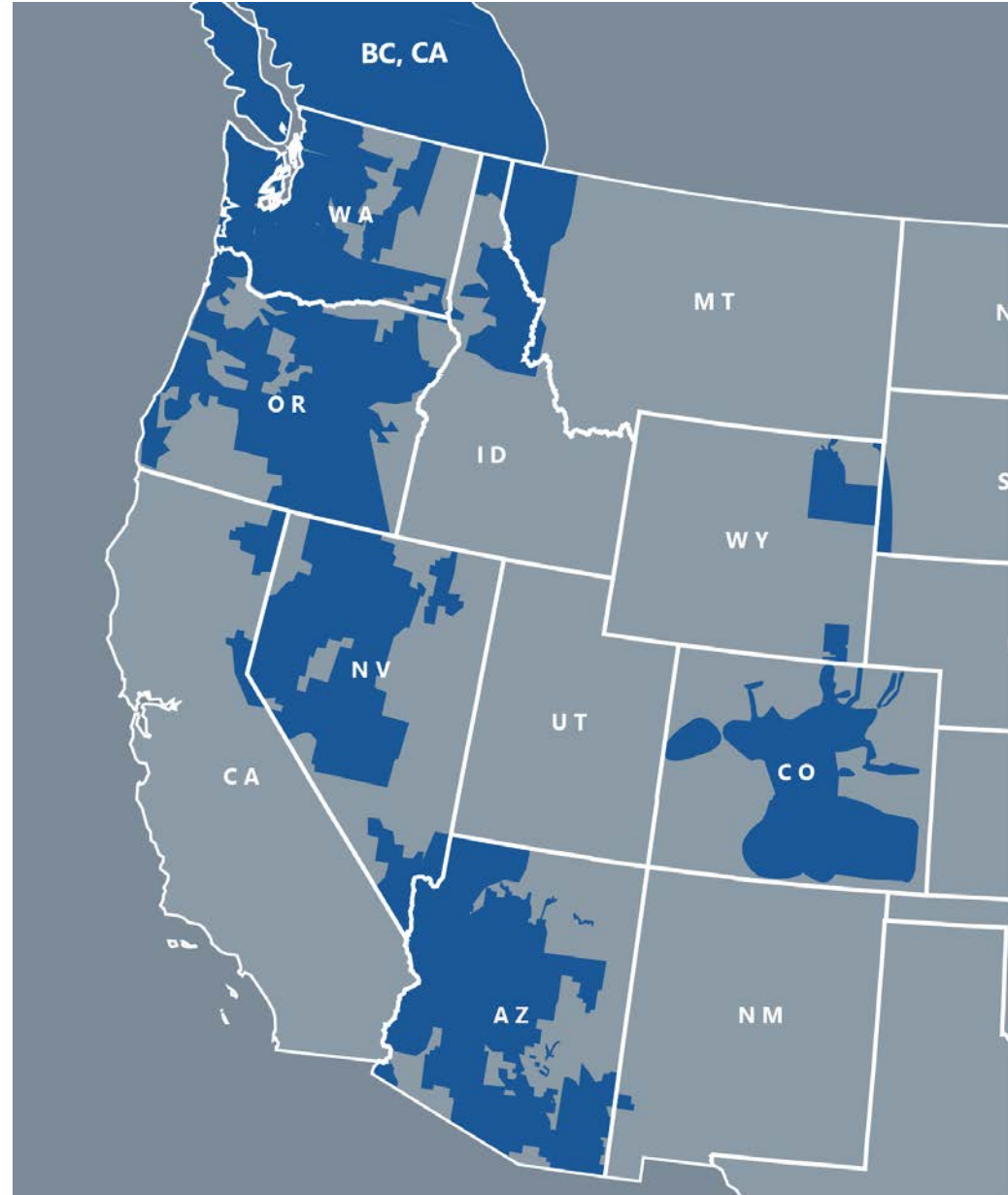


Southwest Power Pool
**WESTERN
ENERGY
SERVICES**

MARKETS+

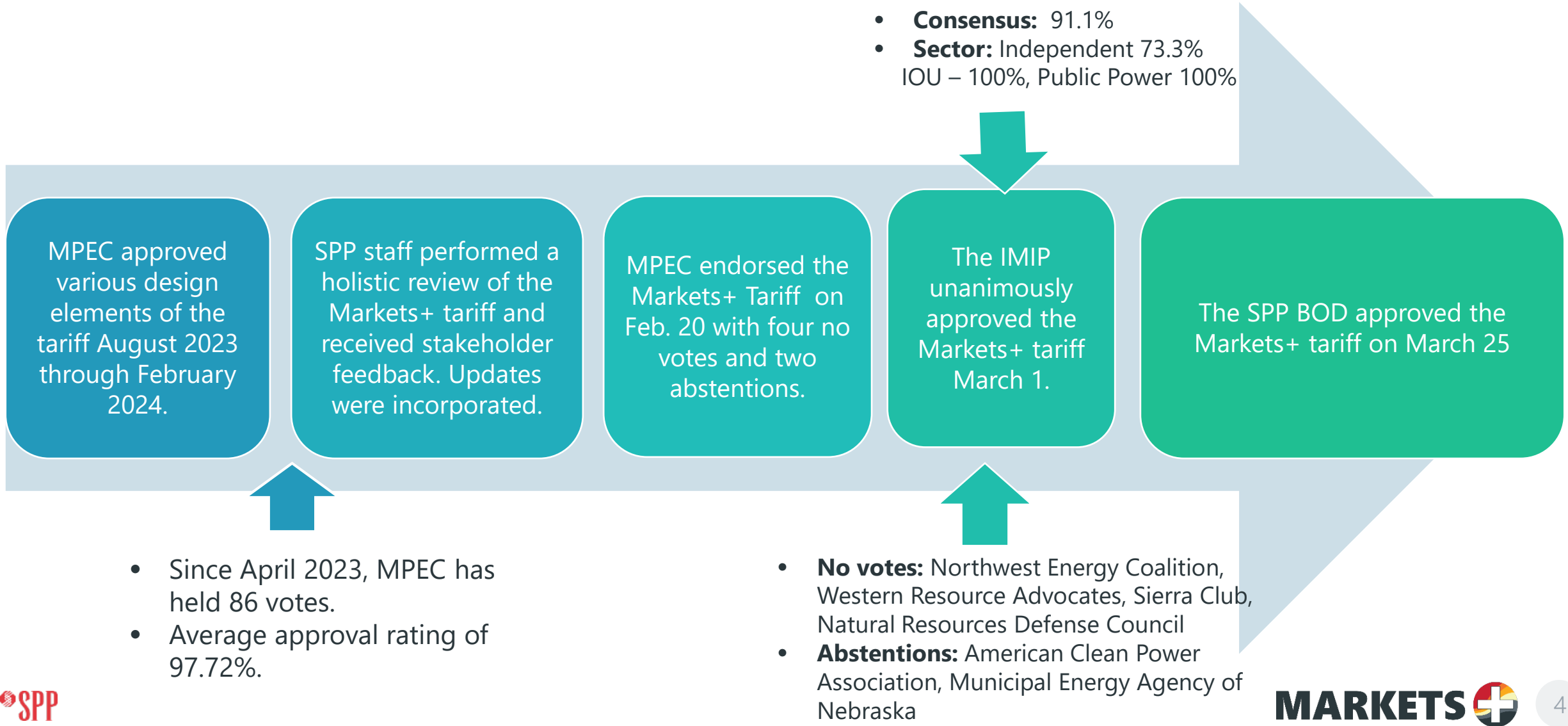
- **Day-Ahead and Real-Time Market Services**

MPEC Approval	February 20, 2024
IMIP Approval	March 1, 2024
SPP Board Approval	March 25, 2024
Filing At FERC	March 29, 2024
Requested FERC Order	July 31, 2024



MARKETS+ TARIFF ENDORSEMENT

PATH TO TARIFF APPROVAL



REVIEW OF MARKETS+ TARIFF

MSC GUIDING PRINCIPLES AND EVALUATION CRITERIA

MSC Guiding Principle	Markets+ Tariff	Voting Results
1. The tariff must provide meaningful and measurable benefits to customers, in the form of lower costs, enhanced system reliability and resilience, and a more efficient grid.	ATTACHMENT A – Markets+	99.07% approval* <i>*Average taken of all Attachment A votes</i>
2. The tariff must enable the timely and effective addition of new technologies, such as battery storage, expanded demand response and other resources critical to grid stability in this time of transition.	ATTACHMENT A – Markets+ Section 4. - Resource Participation	96.83% approval
3. The tariff must provide transparent market pricing including appropriate market power mitigation, fair compensation for resources' attributes and minimal curtailment of least cost resources.	ATTACHMENT A – Markets+ Section 3. Locational Marginal Prices and Market Clearing Prices	100% approval
	ATTACHMENT B – Market Power Mitigation Plan	100% approval

MSC Guiding Principle	Markets+ Tariff	Voting Results
<p>4. Subject to conventional data security concerns, the tariff must give states visibility into pricing determinations as well as unfettered access to the Independent Market Monitor.</p>	<p>ATTACHMENT A – Markets+ Section 7.8 - Markets+ Pricing</p> <p>ATTACHMENT C Section 1.3.2, Section 3.2 & Section 7.2</p>	<p>93% approval</p>
<p>5. The management and implementation of the tariff must reflect broad input from stakeholders engaged in the West’s bilateral and organized electricity markets.</p>	<p>ATTACHMENT O – Markets+ Governance</p>	<p>73.33% approval, with 13 independents voting no.</p> <p>IMIP sent back to MPEC.</p> <p>Then, 95.6% approval of change to independent sector voting.</p>
<p>6. The tariff must be respectful of state authority, responsibility, and policies and support diverse state policy mandates in the Western electricity grid. Any additional costs related to such policies and mandates should remain within that state.</p>	<p>ATTACHMENT O – Markets+ Governance</p> <p>ATTACHMENT K – Greenhouse Gas Programs</p>	<p>Attachment K – 91% approval</p>

MSC Guiding Principle	Markets+ Tariff	Voting Results
7. The tariff must provide fair and equitable treatment of IOU, public power and nonjurisdictional participants, whether transmission owners or transmission customers, load serving entities or generation providers.	ATTACHMENT O – Markets+ Governance	73.33% approval, with 13 independents voting no. IMIP sent back to MPEC. Then, 95.6% approval of change to independent sector voting.
8. The tariff must be flexible enough to accommodate changes and emergencies effectively, while protecting the grid from the most significant risks.	2. Regulatory Filings	N/A
9. The tariff must support the meaningful participation of consumer representatives and other key stakeholders.	ATTACHMENT O – Markets+ Governance	73.33% approval, with 13 independents voting no. IMIP sent back to MPEC. Then, 95.6% approval of change to independent sector voting.
10. The tariff must facilitate a day-ahead market that optimizes economic dispatch through maximized and predictable use of available transmission and generation capacity	ATTACHMENT D - Transmission	100% approval

GUIDING PRINCIPLE #1

1. THE TARIFF MUST PROVIDE MEANINGFUL AND MEASURABLE BENEFITS TO CUSTOMERS, IN THE FORM OF LOWER COSTS, ENHANCED SYSTEM RELIABILITY AND RESILIENCE, AND A MORE EFFICIENT GRID.

ATTACHMENT A – MARKETS+, APPENDIX 3 – LOAD RESPONSIBLE ENTITY ATTESTATION

ATTACHMENT L – BALANCING AUTHORITY AGREEMENT

ATTACHMENT M – TRANSMISSION SERVICE PROVIDER AGREEMENT

GUIDING PRINCIPLE #1

- Ability to coordinate resources across the broader region to minimize grid disruptions from natural disasters or severe weather.
- Provides a framework to advance the efficient use of the existing infrastructure by merging use of the transmission system and resource mix.
 - Incorporates centralized unit commitment and dispatch across many separate transmission service providers and balancing authority areas
- Optimization of available generation and transmission resources helps reduce overall electricity prices within the Markets+ footprint.

GUIDING PRINCIPLE #2

2. THE TARIFF MUST ENABLE THE TIMELY AND EFFECTIVE ADDITION OF NEW TECHNOLOGIES, SUCH AS BATTERY STORAGE, EXPANDED DEMAND RESPONSE AND OTHER RESOURCES CRITICAL TO GRID STABILITY IN THIS TIME OF TRANSITION.

ATTACHMENT A – MARKETS+

ATTACHMENT O – MARKETS+ GOVERNANCE

GUIDING PRINCIPLE #2

- Markets+ facilitates the participation of demand response resources and electric storage resources.
- The stakeholder driven governance structure will allow Markets+ to continue to evolve as industry, environmental, regulatory, and market conditions change.

GUIDING PRINCIPLE #3

3. THE TARIFF MUST PROVIDE TRANSPARENT MARKET PRICING INCLUDING APPROPRIATE MARKET POWER MITIGATION, FAIR COMPENSATION FOR RESOURCES' ATTRIBUTES AND MINIMAL CURTAILMENT OF LEAST COST RESOURCES.

ATTACHMENT A – MARKETS+

ATTACHMENT B – MARKET POWER MITIGATION PLAN

GUIDING PRINCIPLE #3

- SPP will use a Simultaneous Co-optimization Methodology (Day-Ahead) and Security Constrained Economic Dispatch (RTBM) to select the most cost-effective mix of Resources to meet energy needs.
- The market power mitigation plan provides for mitigation of horizontal and vertical market power while considering particular resource attributes, such as the SHOC methodology.
- When load exceeds generation, the Markets+ priority process will respect committed export supply over uncommitted.

GUIDING PRINCIPLE #4

4. SUBJECT TO CONVENTIONAL DATA SECURITY CONCERNS, THE TARIFF MUST GIVE STATES VISIBILITY INTO PRICING DETERMINATIONS AS WELL AS UNFETTERED ACCESS TO THE INDEPENDENT MARKET MONITOR.

ATTACHMENT A – MARKETS+

ATTACHMENT B – MARKET POWER MITIGATION PLAN

ATTACHMENT C – MARKET MONITORING PLAN

GUIDING PRINCIPLE #4

- The market produces Locational Marginal Prices for use in settlement of Energy and Market Clearing Prices for use in settlement of Flexibility Reserve Products.
 - Pricing results are posted for Day-Ahead and RTBM
- The Market Monitor is responsible for monitoring and reviewing markets for the exercise of market power.
- The Market Monitor publishes reports assessing the market's performance on an annual and quarterly basis, which are published on the SPP website.
- The Market Monitor Plan contemplates extensive state involvement.

GUIDING PRINCIPLE #5

5. THE MANAGEMENT AND IMPLEMENTATION OF THE TARIFF MUST REFLECT BROAD INPUT FROM STAKEHOLDERS ENGAGED IN THE WEST'S BILATERAL AND ORGANIZED ELECTRICITY MARKETS.

ATTACHMENT O – MARKETS+ GOVERNANCE

GUIDING PRINCIPLE #5

- The Markets+ governance design includes several key stakeholder groups, with oversight by the independent SPP BOD.
- The Markets+ Independent Panel (“MIP”) consists of one independent SPP director and other individuals that are independent of all Markets+ Market Participants, whose role is to provide highest-level decision-making and generally provide independent oversight of Markets+.
- The MPEC is the highest-level stakeholder-representative group, whose role is to review the Markets+ Tariff, system, or process enhancement proposals recommended by others and provide non-binding recommendations to the MIP.
- The Markets+ State Committee (“MSC”) consists of one representative from a utility regulatory commission in each state in which a Markets+ Market Participant has generation or load participating in Markets+.

GUIDING PRINCIPLE #6

6. THE TARIFF MUST BE RESPECTFUL OF STATE AUTHORITY, RESPONSIBILITY, AND POLICIES AND SUPPORT DIVERSE STATE POLICY MANDATES IN THE WESTERN ELECTRICITY GRID. ANY ADDITIONAL COSTS RELATED TO SUCH POLICIES AND MANDATES SHOULD REMAIN WITHIN THAT STATE.

ATTACHMENT O – MARKETS+ GOVERNANCE

ATTACHMENT K – GREENHOUSE GAS PROGRAMS

GUIDING PRINCIPLE #6

Attachment O, Section 4.3.2 – Markets+ State Committee (in part)

- The MSC will provide advice to the MIP, the MPEC, and any working group or task force on all matters pertinent to Markets+ Market Participants under the Markets+ Tariff. Such matters include, but are not limited to, initiative prioritization and policy issues. As the Markets+ market design evolves, the MIP will evaluate expanding the authorities designated to the MSC.
- Members of the MSC and other state officials (state energy offices, state environmental offices, state consumer advocates, etc.) are eligible for appointment to Markets+ task forces.
- One representative from each state in which a Markets+ Market Participant has generation or load participating in the Markets+ market in that state may participate as a member of the MSC. Each state representative will be appointed by the utility regulatory commission of that state.
- Greenhouse gas program is designed to allocate costs to states with GHG Pricing Programs

GUIDING PRINCIPLE #7

7. THE TARIFF MUST PROVIDE FAIR AND EQUITABLE TREATMENT OF IOU, PUBLIC POWER AND NON-JURISDICTIONAL PARTICIPANTS, WHETHER TRANSMISSION OWNERS OR TRANSMISSION CUSTOMERS, LOAD SERVING ENTITIES OR GENERATION PROVIDERS

ATTACHMENT O – MARKETS+ GOVERNANCE

GUIDING PRINCIPLE #7

Attachment O, Section 4.3.1 – Markets+ Participant Executive Committee

- The MPEC will provide a forum for Markets+ Market Participants, Markets+ Market Stakeholders, the MSC, and Markets+ Non-Voting Stakeholders to discuss issues related to the ongoing administration and advancement of market development in the Western Interconnection.
- Each Markets+ Market Participant and Markets+ Market Stakeholder will appoint one representative to the MPEC.
- Upon execution of the Markets+ Market Participant Agreement or execution of the Markets+ Stakeholder Agreement and payment of the annual fee or fee waiver, an entity will be assigned to one of three membership sectors: Investor-Owned Utilities, Public Power, or Independent.
- Each sector's vote will be calculated separately with the result for that sector being a percent of approving vote to the total number of participants in the sector voting. Each of the three sectors represents 33 1/3% of the vote. An action is approved by the MPEC if the average of these percentages is at least 67%.

GUIDING PRINCIPLE #8

8. THE TARIFF MUST BE FLEXIBLE ENOUGH TO ACCOMMODATE CHANGES AND EMERGENCIES EFFECTIVELY, WHILE PROTECTING THE GRID FROM THE MOST SIGNIFICANT RISKS.

GUIDING PRINCIPLE #8

- Key Rates, Terms, and Conditions may be changed via stakeholder processes subject to FERC approval.
- Implementation details may be adjusted more quickly.
- Market Protocols do not require FERC approval and can be adjusted more quickly based on lessons learned.
- Modeling changes may be adjusted even more quickly.

GUIDING PRINCIPLE #8

- Primary responsibility for reliability remains with Reliability Coordinator(s), Balancing Authorities, and Transmission Operators.
- Markets+ accepts out-of-market reliability instructions and settles actions that follow the response without financial detriment.
- Virtual transactions, once allowed, may be suspended if they are not a cost-effective tool aiding price convergence.

GUIDING PRINCIPLE #9

9. THE TARIFF MUST SUPPORT THE MEANINGFUL PARTICIPATION OF CONSUMER REPRESENTATIVES AND OTHER KEY STAKEHOLDERS.

ATTACHMENT N – MARKETS+ STAKEHOLDER AGREEMENT

ATTACHMENT O – MARKETS+ GOVERNANCE

GUIDING PRINCIPLE #9

- Consumer advocates that execute the Markets+ Stakeholder Agreement have voting rights at the Markets+ Participants Executive Committee, and are eligible for a voting seat, if appointed, on the Markets+ Nominating and Governance Committee, working groups and task forces. (Attachment O, Sections 2, 4.3.2.1, 4.5.1, and 4.6.1).
- Eligible for waiver of \$5,000 annual fee (Attachment N, Markets+ Stakeholder Agreement).
- Consumer advocates may serve on Markets+ Task Forces without executing the Markets+ Stakeholder Agreement (Attachment O, Section 4.6.1).

GUIDING PRINCIPLE #10

10. THE TARIFF MUST FACILITATE A DAY-AHEAD MARKET THAT OPTIMIZES ECONOMIC DISPATCH THROUGH MAXIMIZED AND PREDICTABLE USE OF AVAILABLE TRANSMISSION AND GENERATION CAPACITY.

ATTACHMENT A – MARKETS+

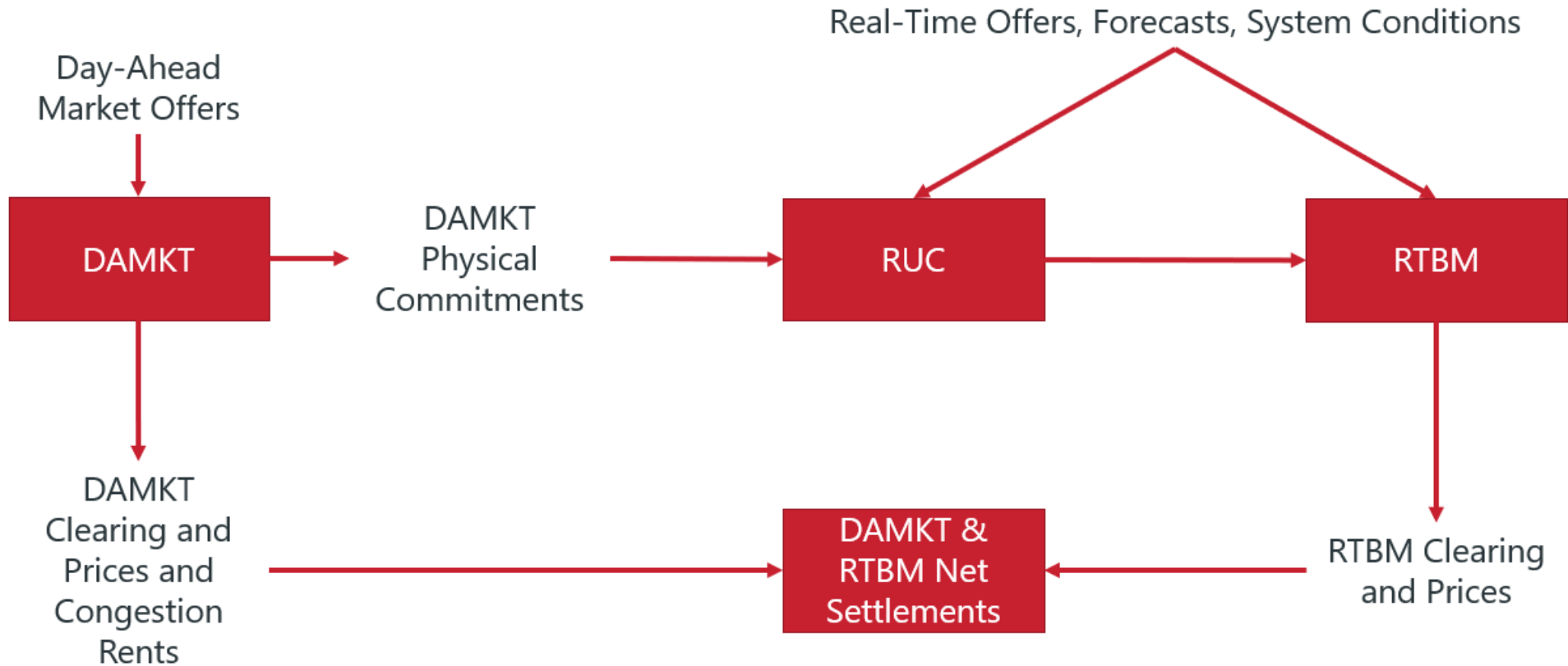
ATTACHMENT D – MARKETS+ TRANSMISSION

GUIDING PRINCIPLE #10

- Markets+ Day-Ahead Market maximizes economic dispatch through a Simultaneous Co-optimization Methodology that minimizes overall costs, including those costs associated with GHG Pricing Programs, while enforcing multiple security constraints.
- Generation capacity is made available through a Must-Offer obligation. All available generation capacity is considered.
- All available transmission capacity is considered, and Markets+ incentivizes transmission availability.

OVERVIEW OF MARKETS+

MARKETS+ DESIGN BASED ON SPP MARKETPLACE



MARKETS+ DESIGN FOR WEST SPECIFIC NEEDS



Governance



Transmission
Capability



Congestion Rent
Allocation



Resource Adequacy
and Must Offer
Obligation



Incorporation of
GHG programs



Aggregate Resource
Model



Market Transmission
Use Charge



Market Monitoring

TRANSMISSION

- Markets+ will rely on voluntarily contributed transmission rights
- Markets+ Transmission Service Providers and Market Participants will identify what transmission capability or capacity is available for use in Markets+
- Markets+ will optimize this flow-based transmission capability
- Respects the transmission rights of non-participating transmission service providers and non-participating customers



MARKET TRANSMISSION USE CHARGE



- A charge calculated by SPP and assessed to all purchases from and sales to the market
- Distributed to M+ Transmission Service Providers
- Mitigates anticipated revenues lost by TSPs resulting from adoption of M+

CONGESTION RENT

- No ARR or TCR market
- Market Participants contribute transmission capability
- Congestion rents distributed to the firm transmission service holders
- Only long-term service more than a month



RESOURCE ADEQUACY AND MUST OFFER OBLIGATION

- Uniform, regional resource adequacy program
 - Western Resource Adequacy Program ("WRAP")
 - Long term and near term framework
- Must offer obligation
 - Minimum obligation for Market Participants to offer resources for Markets+ commitment processes that is consistent with the Market Participants' obligations under the WRAP framework
- BAs remain responsible for balancing and ancillary services



INCORPORATION OF GHG PROGRAMS



- Incorporation of price-based GHG compliance program that will exist at M+ go live
- Transparent tracking and reporting that will be used for price-based GHG programs and reduction programs

AGGREGATE RESOURCE MODEL

- Multiple physical resources participating in Markets+ as a single registered Resource
- Balances market's need for modeling accuracy and operator's need to manage operational interdependencies
- Resources must be electrically similar, located or pseudo-tied into a singular BAA, and share common operational control



MARKET MONITORING PLAN

- Monitors and reviews market for exercise of market power
- Establishes offer floors and ceilings
- Implements mitigation measures
- Publishes reports assessing market performance or addressing market impacts or changes



MARKETS+ PARTICIPATION PHASES

Phase 0: Exploration 2022

SPP facilitated webinars and face-to-face meetings on possible Markets+ design elements

Published Markets+ Service Offering in November 2022

Requested parties sign Phase 1 agreements to participate in Tariff and Protocol development by April 2023

Phase 1: Tariff and Protocols 2023-2024

Establish Markets+ governance proposed in Service Offering as much as practical

Facilitate development of Markets+ Tariff and Protocols with voting participants and stakeholders

Leverage "boilerplate" day-ahead and real-time features and focus on completing unique Markets+ items

Phase 2: Implementation 2025+

Upon FERC approval, SPP acquires/modifies necessary software, hardware and related processes

Participating entities commit to fund implementation efforts

Entities integrated into the system

QUESTIONS