

Markets+ Phase 1 Funding Parties to Publish “Issue Alerts” to Inform Public Dialogue on Day-Ahead Market Choices

In recent months, there has been considerable industry dialogue focused on the market seams that will exist between EDAM/EIM and Markets+, as well as the EDAM/EIM governance enhancements being pursued through the Pathways Initiative. While both topics are important, the Markets+ Phase 1 Funding Parties believe this dialogue is incomplete without also considering the numerous governance and market design differences between Markets+ and EDAM/EIM that are driving continued support for Markets+. To address this gap, some of the Markets+ Phase 1 Funding Parties¹ have worked together expeditiously to prepare timely information in this second “Issue Alert.” Markets+ Phase 1 Funding Parties will continue this collaboration to issue a series of Issue Alerts identifying and explaining the key governance and market design elements that differ between Markets+ and EDAM/EIM and why these differences have important consequences for customers in terms of reliability, economic value, and environmental objectives.

The Markets+ Phase 1 Funding Parties will share a new Issue Alert every few weeks covering the following topics:

1. Governance
2. Reliability
3. Fair and Accurate Market Pricing
4. Seams Issues
5. Support for Clean Resources
6. Market Operator Actions & Modeling
7. Durable Customer Benefits

¹ Arizona Public Service Co, Chelan County PUD, Grant County PUD, Powerex Corp., Public Service Company of Colorado, Salt River Project, Snohomish PUD, Tacoma Power, Tri-State Generation and Transmission Association Inc. and Tucson Electric Power Company prepared this Issue Alert 2.

Issue Alert 2: **Markets+ Applies Key Elements To Enhance Reliability**

This Issue Alert is part of an ongoing series highlighting the key governance and market design elements that differ between Markets+ and EDAM/EIM and why these differences have important consequences for customers in terms of reliability, economic value, and environmental objectives.

Market design elements that support electric system reliability² must be considered prior to joining a market as reliable service is not only expected by consumers, it is also essential to the safety and well-being of the general public. As evidenced by the impact of extreme weather events over the past several years, reliability risk is elevated. Markets+ will help address this risk as its robust, stakeholder-driven governance framework has led to a strong focus on reliability in the market design. Further, SPP has a long track record of providing reliable services as a Reliability Coordinator in both the Eastern and Western Interconnections and through operation of the SPP RTO and Western Energy Imbalance Services market.

Markets+ incorporates several critical elements to enhance reliability, including:

- Standard and transparent resource adequacy (RA) requirements for all participants using the Western Resource Adequacy Program (WRAP);
- A Must-Offer Obligation tied to identified, reliable capacity that is secured well in advance of the operating timeframe;
- A flow-based approach to dispatch to enhance deliverability;
- Extended access to resource adequacy supply through real-time operations;
- An independent Market Operator that acts impartially on behalf of a diverse footprint; and
- A stakeholder-driven committee dedicated to assessing and addressing impacts to reliability (Markets+ Operations and Reliability Working Group [MORWG]).

Markets+ Leverages WRAP as a Common Resource Adequacy Standard

WRAP participation is a requirement for entities with load in Markets+ because a common and rigorous resource adequacy structure is foundational to reliability and critical to achieving equitable outcomes within a market footprint.

WRAP applies a common approach for calculating resource capacity values and determining each participant's minimum obligation for resource adequacy, which, in the context of Markets+, will prevent market participants from being over-reliant on others' resources. WRAP also ensures that capacity obligations, and the benefits of regional diversity, are distributed equitably. For example, if a lower capacity requirement can be achieved for the aggregate footprint, all participants share in the associated benefits through a lowering of each entity's required planning reserve margin. WRAP also

² Reliability compliance obligations are designed to continue to reside with the BAs in both EDAM and Markets+, but the market they participate in will be important contributors to the reliability outcomes they are able to achieve.

requires that participants procure the defined minimum amount of supply well in advance of the operating timeframe, while there is still time to take corrective action if necessary.

WRAP also provides visibility into how resources perform to meet the region's needs during critical hours in a way that does not currently exist. In addition, WRAP applies resource deliverability requirements that create incentives for long-term transmission development, supporting reliable service to customers and the efficient integration of clean energy resources.

Capacity Must-Offer Obligation

Markets+ builds upon the WRAP forward resource procurement requirement and requires sufficient capacity to be made available to the market, ensuring the market has access to sufficient resources to meet energy and uncertainty needs through real-time. This is referred to as the Markets+ Must Offer Obligation. In Markets+, the Must Offer Obligation can only be met with WRAP supply or other specified resources; it cannot be met with uncommitted energy purchases without an identified source. This approach improves reliability in the West by addressing those instances where historically some energy commitments have not been backed by reliable physical supply (and ultimately did not deliver to load). Similar to WRAP, the Markets+ Must Offer Obligation is centered on identified resources, driving greater reliability outcomes for all participants and their customers.

Enhanced Deliverability

Markets+ utilizes a flow-based approach to dispatch within the Markets+ footprint. This approach allows for real-time transmission conditions to be reflected in the market model, which is expected to often achieve greater utilization of existing transmission infrastructure compared to a contract-path method of transmission modeling. As a result, this flow-based approach enhances the benefits of regional diversity by expanding access to resources across the market footprint, enhancing resource deliverability that contributes to market efficiency and greater resource availability during critical conditions.

Increased Reliability Through Real-Time

Markets+ extends the timeframe through which resources procured to meet WRAP requirements remain available through real-time, instead of solely relying on holdback decisions made in the Day-ahead pre-schedule timeframe. This means each participants' access to a Resource Adequacy quality of resource remains available to respond to changing conditions that materialize in real-time, such as a sudden fall-off of renewable output or higher-than-expected demand. Markets+ achieves the additional access through a reliability backstop mechanism allowing the market operator to work with participating Balancing Authority Areas (BAAs) to commit additional supply not offered, if it is needed to maintain adequate supplies during critical conditions.

Markets+ Avoids the Challenges of a Standalone Resource Sufficiency Framework

Importantly, Markets+ applies a common resource adequacy requirement, which requires participants to procure sufficient supply to ensure reliability well in advance, paired with a Must Offer Obligation that ensures that committed supply is made available to the market on the operational timeframe. In

contrast, a market such as EDAM without a common resource adequacy requirement is solely reliant on a resource sufficiency test that is applied each day in the operating timeframe to ensure reliability.

Resource sufficiency tests applied in the operating timeframe without the underpinning of a common resource adequacy program are inherently challenging for several reasons. These reasons include challenges in accurately applying such a test, insufficient failure consequences to prevent deliberate leaning, and insufficient notice of a deficiency due to the late timing of the test.

- *Flawed sufficiency tests.* There are numerous examples of inaccurate outcomes associated with the resource sufficiency evaluation in the Western Energy Imbalance Market (WEIM), particularly as it relates to the similar but different standards applied to the CAISO BAA. This experience has reduced some stakeholders' confidence that an accurate resource sufficiency test will be applied in the day-ahead timeframe for the Extended Day-Ahead Market (EDAM).
- *Inadequate consequences.* In addition, and regardless of whether a resource sufficiency test is applied accurately, a standalone resource sufficiency test does not provide adequate time to resolve supply deficiencies that may be identified. As a consequence, such a test necessarily relies on failure consequences that are known ahead of time to create incentives for participants to procure sufficient supply in advance to avoid failing. Unfortunately, this incentive-based approach has proven challenging to balance the need for failure consequences that are sufficiently strict with the objective of providing assistance to entities in need, in support of reliability. As a result, deficient entities are permitted to lean, with a short-term financial penalty used to discourage such leaning. However, the application of a penalty to only the hours of deficiency creates the risk that some participants may choose not to be positioned to be resource sufficient in all hours, and instead periodically pay the financial penalty and lean on the resources made available by others. This approach thus makes it less likely that the market footprint will have adequate physical supply to support reliability compared to the Markets+ approach of driving each participating entity to procure sufficient committed supply well in advance to meet a common resource adequacy program (WRAP).
- *Reduced market liquidity.* Furthermore, markets that lack a common resource adequacy program, may reduce supply confidence in the market footprint which can make market participants less willing to make additional supply available to the day-ahead market (beyond their resource sufficiency requirements), in order to manage unforeseen risks in their individual areas through real-time operations. Such voluntary holdback actions for local reliability further diminish available resources in the market, diminishing the market's overall reliability and efficiency.
- *Increased costs.* Lastly, a standalone resource sufficiency framework increases costs in some circumstances as utilities that are participants in both WRAP and EDAM/EIM would need to meet the requirements of two different and un-linked requirements (both WRAP forward showing obligations and the daily resource sufficiency test). More specifically, WRAP participants that have already met their forward showing requirements may incur additional costs to secure more supply to pass the resource sufficiency test on some critical days, particularly when their load is higher, or resource availability is lower. This is an added cost in the EDAM/EIM resource sufficiency approach that is avoided in the Markets+ design with a common resource adequacy requirement. In contrast, a Markets+ participant who has satisfied

its WRAP forward showing requirement maintains linkage to the WRAP program standard of resource adequacy through the Markets+ Must Offer Obligation.

Markets+ Operations and Reliability Working Group (MORWG)

In an addition to the independent Market Operator that acts impartially on behalf of a diverse footprint, Markets+ maintains a specific committee with oversight responsibility for reliability—the MORWG. The MORWG’s mandate is focused on reviewing market design for its impact on reliability. This critical working group is available to address the unique and diverse reliability challenges faced by many BAAs in the Western Interconnection that evolve over time, and it has been specifically created to be responsive to potential threats to, or opportunities to enhance, reliability.

Closing

Ensuring reliability is an essential priority that Markets+ and EDAM seek to address in fundamentally different ways, resulting in material differences in the reliability risk that will prevail in each market. Markets+ incorporates multiple critical market design elements that enhance reliability across the market footprint. These elements will also enhance the day-ahead market liquidity, support Markets+ transparent and rational price formation, which will further aid market performance by creating signals for long-term resource and transmission investment, while enhancing the ability of the market to reliably serve customers amid an increasingly dynamic and volatile electric grid.