



# Market Impacts on Sub-Regional Connectivity – Core Elements

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Western Resource Adequacy Program (WRAP)

November 9, 2023

*This document was approved by the RAPC on November 9<sup>th</sup>, 2023. It has been made available to serve as a reference for stakeholders considering and designing markets and for potential future changes to the WRAP Tariff.*

## 1 Introduction

The WRAP deliverability framework was built with the OATT contract path framework as the foundation. Within this framework, Participants in collaboration with the WRAP Program Administrator (PA) and WRAP Program Operator (PO), have recognized that there is a significant transmission constraint between the Northwest and Southwest subregions in both directions and in both binding seasons. At the same time, it has also been discussed that some limited amount of residual transmission capability likely exists between these subregions during critical hours (beyond the transmission demonstrated for delivery of FS resources) if available transmission were considered using a flow-based methodology. However, to date, there has not been sufficient comfort to reduce WRAP FS metrics (e.g., resulting in a lower PRM) based solely on a presumption of the existence of some amount of residual transmission capacity between the sub-regions, absent a framework to access that capacity, during the most critical hours for diversity sharing.

One of the potential benefits that may arise from the evolution of the western region to one or more organized market constructs is the more efficient use of the existing transmission system. More specifically, excess available transmission capability may be identified when the Market Operator and participating TSPs and BAAs have agreed to a flow-based methodology approach to operating within the market construct, and the market operator and applicable Transmission System Providers (TSPs) have a tariff framework that makes this excess transmission available within the market footprint due to this flow-based approach<sup>1</sup>. In this paper such excess transmission is referred to as “Market-Enabled Subregion Connectivity”.

This document is intended to provide some guidance to stakeholders in the western region on the high-level requirements that must be achieved in an organized market to create Market-Enabled Subregion Connectivity that can be used to lower the WRAP PRM. This document is not intended to inform the organized markets on how they should be designed or operated.

## 2 Concepts

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<sup>1</sup> This concept is not expected to apply on external interfaces of the market footprint, as the existing approach (using TSPs existing contractual arrangements) is expected to continue to apply the contract path methodology until such time as there are broader changes in the WECC to a flow-based methodology.



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It is recognized that interoperability between WRAP and organized markets is a priority for WRAP Participants. In addition, the proper reflection of additional transmission connectivity made available through investments in OATT transmission rights and through Market-Enabled Subregion Connectivity to lower WRAP PRM's may be necessary for WRAP to be viable for some Participants.

As WRAP Participants contemplate participation in organized markets, such organized markets – depending on their specific design - could determine how best to utilize the full capability of the transmission system in a flow-based environment after TSPs meet their existing service obligations under their respective OATTs. For example, a Market Operator may be able to optimize the remaining transmission availability to best meet the market demand within the market footprint, and the delivery of WRAP holdback energy (i.e., more efficient delivery of energy associated with WRAP diversity). If the Market Operator has a framework in place that is able to utilize such excess transmission to unlock additional deliveries associated with WRAP Participants' diversity, WRAP could enable WRAP Participants within the applicable market footprint to reduce their PRM obligations (assuming it is determined such lowering of the PRM is consistent with the WRAP reliability metric).

Under such a framework, the organized market would establish the allocation and processes to achieve delivery to WRAP load using Market-Enabled Subregion Connectivity. It is the expectation of the WRAP Participants, WRAP Program Administrator, and WRAP Program Operator that the use of Market-Enabled Subregion Connectivity should be:

- i. Supplemental to investments in priority 6 or 7 OATT service to establish connectivity that lower the respective WRAP participants' PRM;
- ii. Set at a level that maintains a sufficiently high level of confidence to mitigate the risk of the Market Operator experiencing challenges in serving demand within the footprint during critical conditions, when congestion may arise and market redispatch is limited.

### 3 Suggested Approach

In preparation for a market-go-live (and once a market footprint is known) the applicable Market Operator(s), together with the relevant Transmission Service Providers/Operators and the WRAP Program Operator, will work together to determine whether any additional transmission freed up by a flow-based market construct could be quantified to determine the expected Market-Enabled Subregion Connectivity for go-live. After markets are live, this historical information from actual market operations, can be utilized by the WRAP Program Operator and the participating TSPs to perform further analyses and to determine what additional transmission may be available going



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forward. WRAP Program Operator will use this information for further analysis to replace prospective assessments.

In order for WRAP to utilize any demonstrated available sub-region connectivity to achieve PRM reductions, the Market Operator would set forth the process for making this excess transmission available to the market, while also demonstrating that the WRAP participant's load (participating in the applicable organized market) will be reliably served using this excess transmission under critical conditions. Once this framework and the quantity of excess transmission are known, WRAP would be able to determine how to incorporate this excess transmission into its processes to enable PRM reductions for the applicable WRAP participants.

## 4 Core Elements

To unlock and access additional diversity benefits and subsequently decrease subregional PRMs via an organized market construct, the following core elements must be demonstrated to WRAP:

- 1) WRAP Participants would like to see the applicable Market, in collaboration with the relevant Transmission Service Providers, adopt necessary tariff language and business practices that support Market-Enabled Subregion Connectivity that allows access to unused transmission for serving WRAP participants load.
- 2) WRAP Participants would like to see the applicable Market demonstrate a reasonable expectation that there would be sufficient supply, such as surplus energy or holdback energy, available in order to utilize the Market-Enabled Subregion Connectivity during the expected capacity critical hours.
- 3) The WRAP Participants requests the applicable Market (and its Participants) propose a methodology for assessing if (and how much) the Market-Enabled Subregion Connectivity (provided by the applicable TSPs) will be accessible specifically to WRAP Participants to serve demand in the applicable subregion(s), as well as how to make available the unused transmission identified for Market-Enabled Subregion Connectivity to individual WRAP Participants (as well as other OATT users as determined by the applicable TSP tariff). This methodology will be evaluated by WRAP PA/PO to ascertain that the amount of Market-Enabled Subregion Connectivity allocated to the WRAP Participants participating in the applicable market and the resulting PRM reduction provided to those WRAP Participants.