



**WESTERN**  
POWERPOOL

# Western Resource Adequacy Program

204 Holdback Requirement

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## Table of Contents

Revision History .....	1
204 Holdback Requirement.....	3
1. Introduction.....	3
1.1. Intended Audience.....	3
1.2. What Will You Find in This Manual? .....	3
1.3. Purpose .....	3
1.4. Definitions.....	3
2. Background .....	4
3. Sharing Calculation Run.....	4
4. Confirmation of Need for Holdback Capacity .....	4
5. Voluntary Offers.....	5
6. Optimization Allocation .....	6
6.1. Subregion with Central Hub.....	6
6.1.1. Allocation of Voluntary Holdback .....	6
6.1.2. Allocation of Capacity as Calculated by the Sharing Calculation .....	7
6.2. Subregion without Central Hub.....	8
6.2.1. Ensuring Whole MW Holdback Capacity .....	8
7. Bilateral Transfer of Holdback.....	9
8. Release of Capacity .....	9
8.1. Program Early Release of Surplus .....	9
8.2. Participant Petition for Early Release of Surplus .....	9
9. Surplus not claimed on the Preschedule Day.....	10
Appendix A – Process for Early Release of Surplus Capacity.....	11



## 204 Holdback Requirement

### 1. Introduction

The Holdback Requirement Business Practice Manual (BPM 204) outlines the key processes associated with the Participant Holdback Requirements in the Western Power Pool (WPP) Western Resource Adequacy Program (WRAP) Operations Program. The Holdback Requirement is a MW quantity, determined on the Preschedule Day, that a Participant is required to be capable of converting into an Energy Deployment on a given hour of the Operating Day.

#### 1.1. Intended Audience

BPM 204 is intended for WRAP Participants and other interested individuals or entities. BPM 204 is particularly useful for those responsible for their Participant organization's implementation and decision-making with respect to responding to and managing a Holdback Requirement, bilateral exchange of Holdback Requirements, and voluntary offers of capacity.

#### 1.2. What Will You Find in This Manual?

BPM 204 consists of sections detailing the allocation of a Holdback Requirement to Participants for Subregions with a Central Hub and for Subregions without a Central Hub, the process for opting in to Holdback Capacity and the release of capacity not claimed on the Preschedule Day, bilateral exchange of holdback, voluntary offers of capacity, and early release of holdback. Related provisions are addressed in other BPMs. BPM 204 will be paired with [BPM 205 Energy Deployment](#), [BPM 206 Settlement Pricing](#), and [BPM 207 Settlement Process](#).

#### 1.3. Purpose

The purpose of BPM 204 is to provide implementing details of the [Tariff](#) rules for determining the surplus Participant, the deficient Participant, and the transaction quantity for Holdback Requirements.

#### 1.4. Definitions

All capitalized terms that are not otherwise defined in BPM 204 have the meaning set forth in the [Tariff](#). Any capitalized terms not found in the [Tariff](#) are defined here.

**Forced Outage:** As defined in [BPM 202 Participant Sharing Calculation Inputs](#).

**Optimization Allocation:** The calculation in the Operations Program that assigns Holdback Requirement to Participants.



**Point to Point Limits (PTPL) file:** Described in the Input Date File Specification document which is located on the WPP website.

**Point Limits (PL) file:** Described in the Input Date File Specification document which is located on the WPP website.

**Program Interface Tool or PIT:** As defined in [BPM 201 Operations Program Timeline](#).

## 2. Background

The Operations Program of the WRAP allows a Participant with a calculated capacity deficiency (or negative Sharing Calculation result) to require Participants with a calculated capacity surplus (or positive Sharing Calculation result) to make surplus capacity available and be prepared to deploy energy on the Operating Day at prices and quantities determined by the Program Administrator and Program Operator as prescribed by the WRAP [Tariff](#), [BPM 205 Energy Deployment](#), [BPM 206 Settlement Pricing](#), and [BPM 207 Settlement Process](#). The Holdback Requirement is a MW quantity, as determined on the Preschedule Day, that a surplus Participant is required to have availability for delivery as an Energy Deployment on a given hour of the Operating Day.

## 3. Sharing Calculation Run

On the Preschedule Day, each Participant is required to submit to the Program Operator an hourly forecast of i) expected load, ii) output of Variable Energy Resources (VER), iii) output of Run-of-River Qualifying Resource (ROR), iv) expected Contingency Reserve requirement and v) Forced Outage. These inputs are further described in [BPM 202 Participant Sharing Calculation Inputs](#). These files are submitted by Participants, as detailed in [BPM 201 Operations Program Timeline](#), and inform the Multi-Day-Ahead Assessment. After submission and following the timeline in [BPM 201 Operations Program Timeline](#), the Program Operator will post the Sharing Calculation results to the Program Interface Tool (PIT).

## 4. Confirmation of Need for Holdback Capacity

After the Sharing Calculation results are posted to the PIT on the Preschedule Day, each Participant sees whether it is surplus, deficient, or neither. A Participant that has been calculated to have a capacity deficiency has the opportunity to confirm whether it would like to receive Holdback Capacity and the MW quantity it would like to claim, capped at the negative Sharing Calculation result of that Participant. A deficient Participant must confirm its need for and amount of requested Holdback Capacity (i.e., Opt-in per Figure 3 of [BPM 201 Operation Program Timeline](#)). If a deficient Participant does not proactively confirm their need for Holdback Capacity per the timeline in [BPM](#)



[201 Operation Program Timeline](#), the WRAP considers that Participant as not needing any assistance, that Participant will not be eligible for any Energy Deployment on the Operating Day, and any capacity they may have been assigned as a Holdback Requirement to assist that deficient Participant is released from its obligation to the program per Section 9.

## 5. Voluntary Offers

Participants with excess supply that is not obligated to the WRAP through their positive Sharing Calculation results may voluntarily offer such supply to the WRAP as Voluntary Holdback. If the offering Participant has a positive Sharing Calculation result for such hour, this voluntarily offered capacity is in addition to the Participant's surplus capacity as calculated by the Sharing Calculation in Section 3. If the offering Participant has a negative Sharing Calculation result, the offered capacity will only be included in the allocation of Holdback Requirement so long as the offering Participant did not confirm a need for Holdback Capacity for such hour. Once capacity that is voluntarily offered into the Operations Program is allocated, it is deemed to be a binding obligation, meaning that non-delivery fees may be assessed for any Voluntary Holdback not delivered as part of a required Energy Deployment.

Participants use the Voluntary Holdback file to submit Voluntary Holdback to the Program Operator. Voluntary Holdback must be in line with the timeline in [BPM 201 Operation Program Timeline](#) on the Preschedule Day for any day being scheduled during which the Participant would like to provide Voluntary Holdback. Voluntary Holdback must be in whole MW values for each hour for the given Operating Day being scheduled. Voluntary Holdback file parameters are described in the Input Data File Specification on the WPP website.

Voluntary Holdback can be offered as early as seven days ahead of the Operating Day. This just offers increased visibility for the Program Operator into the overall state of the Operations Program; deficient Participants cannot opt-in to receive Holdback Capacity from Voluntary Holdback prior to the opt-in window on the Preschedule day. If a Participant offered Voluntary Holdback ahead of the Preschedule Day and then on a later day (either Preschedule or an earlier day) submitted a different offer of Voluntary Holdback, the PIT would use the most recent offer in the Optimization Allocation. Additionally, if a Participant offered Voluntary Holdback ahead of the Preschedule Day and then was determined to be deficient on the Preschedule Day by the Sharing Calculation results, the Voluntary Holdback that was previously submitted would not be utilized in the Operations Program.

## 6. Optimization Allocation

### 6.1. Subregion with Central Hub

Per the timeline in [BPM 201 Operation Program Timeline](#), the Ops Program runs the Optimization Allocation. This allocation is done in two steps: the first is the allocation of voluntarily offered capacity and the second is the allocation of capacity as calculated by the Sharing Calculation.

The results of the Optimization Allocation are posted per the timeline in [BPM 201 Operation Program Timeline](#). Any amount of Voluntary Holdback or surplus as calculated by the Sharing Calculation for a Participant that is in excess of the Optimization Allocation result for that Participant is released from any WRAP obligations.

#### 6.1.1. Allocation of Voluntary Holdback

There are three cases for the allocation of Voluntary Holdback.

- If the sum of all Voluntary Holdback offered is exactly enough to meet all deficient Participant requests for holdback, then each Participant who offered Voluntary Holdback is assigned its offered amount as its Holdback Requirement.
- If the sum of all Voluntary Holdback offered is not enough to meet all assistance requested by deficient Participants, then the amount of Voluntary Holdback offered by each Participant is included as a term in its Holdback Requirement (see more below in Definition 3).
- If the sum of all Voluntary Holdback offered is more than the sum of all deficient Participant requests for assistance, then each Participant who offered Voluntary Holdback is assigned a Holdback Requirement via this calculation:

#### *Definition 1: Holdback Requirement with only Voluntary Holdback*

$$\text{Holdback Requirement}_{VH} = \text{Sharing Ratio}_{VH} * \sum \text{Requested Holdback Capacity}_{part}$$

where

$$\text{Sharing Ratio}_{VH} = \frac{VH_{part}}{\sum VH_{part}}$$

and

$$VH_{part} = \text{Voluntary Holdback of a Participant}$$

### 6.1.2. Allocation of Capacity as Calculated by the Sharing Calculation

In addition to any Voluntary Holdback, there may be more capacity required to be held back to meet all the requested need. This additional holdback is capped at the sum of the positive Sharing Calculation results in Section 3 for each surplus Participant in the Subregion. If there is not enough Voluntary Holdback to meet all assistance requested by deficient Participants, then the remaining portion of the Holdback Requirement for surplus Participants is calculated using the following methodology.

For a Subregion containing a Central Hub permitting energy deliveries to that Central Hub from any point within such Subregion, a Participant with a positive Sharing Calculation result will be allocated a percentage of the sum of all Voluntary Holdback offered in that Subregion subtracted from the sum of all Holdback Capacity requested by deficient Participants in that Subregion that is equal to their pro rata share of the surplus as determined by the Sharing Calculation. This will be done by first determining a Participant Sharing Ratio, which is found by dividing a Participant's surplus (Positive Sharing Calculation Result<sub>part</sub>) by the Subregion's total surplus, where the surplus is determined by the Sharing Calculation in Section 3 (i.e., prior to accounting for Voluntary Holdback). This ratio is then multiplied by the sum of the Subregion's Voluntary Holdback subtracted from the sum of the requested Holdback Capacity, and that result is the Participant's Sharing Calculation holdback term of the Participant's Holdback Requirement.

***Definition 2: Allocation of Participant Holdback Capacity as calculated by the Sharing Calculation***

$$\text{Holdback Requirement}_{SC} = \text{Participant Sharing Ratio} * \text{Total Holdback Capacity}_{VH}$$

where

$$\text{Participant Sharing Ratio} = \frac{\text{Positive Sharing Calculation Result}_{part}}{\sum \text{Positive Sharing Calculation Results}_{part}}$$

$$\text{Total Holdback Capacity}_{VH} = \sum \text{Requested Holdback Capacity}_{part} - \sum VH_{part}$$

The Holdback Requirement for a surplus Participant in a Subregion with a Central Hub when the sum of all Voluntary Holdback offered is not enough to meet all assistance requested by deficient Participants is the Voluntary Holdback offered plus the Participant's allocation of the Holdback Capacity as calculated by the Sharing Calculation, noting that the Voluntary Holdback term may be zero.

The Holdback Requirement in a Subregion with a Central Hub is defined below.

*Definition 3: Holdback Requirement in a Subregion with a Central Hub*

<b>Holdback Requirement</b>	
=	$\left\{ \begin{array}{l} \text{Holdback Requirement}_{VH} \\ \text{VH}_{part} \\ \text{VH}_{part} + \text{Holdback Requirement}_{SC} \end{array} \right. \begin{array}{l} \sum \text{VH}_{part} > \sum \text{Requested Holdback Capacity}_{part} \\ \sum \text{VH}_{part} = \sum \text{Requested Holdback Capacity}_{part} \\ \sum \text{VH}_{part} < \sum \text{Requested Holdback Capacity}_{part} \end{array}$

### 6.2. Subregion without Central Hub

For any hour, for any Subregion not containing a Central Hub, the Program Operator will conduct an optimization-based allocation to pair surplus and deficient Participants. The allocation methodology will utilize the points at which surplus Participants can deliver their Holdback Requirement, the points at which deficient Participants can take receipt of their allocation of the total Holdback Capacity, the transfer capability that exists to the points at which surplus Participants can deliver and the points at which deficient Participants can take receipt, and voluntarily supplied capacity.

The optimization will generally attempt to prioritize (i) Voluntary Holdback; (ii) Holdback Capacity matched pursuant to the information provided on a nearest neighbor and cluster basis, allocated pro rata among Participants within such cluster; (iii) Holdback Capacity matched pursuant to the information provided and allocated among Participants within the same Subregion to the extent not matched and allocated under category (ii); and finally (iv) Holdback Capacity from Participants in another Subregion, paired with any transmission service offered t per Section 14.3.2 of the [Tariff](#).

#### 6.2.1. Ensuring Whole MW Holdback Capacity

In any Subregion, for both the Voluntary Holdback and allocation of capacity as calculated by the Sharing Calculation, Participants will only be asked to hold back and deliver energy in 1 MW increments (meaning no fractional MWs). Allocation of the total Holdback Capacity to deficient Participants may result in non-integer values. To address this issue the following general methodology will be utilized:

- The surplus Participant’s Holdback Requirement is allocated to each deficient Participant on a pro rata basis.

- If the amount of Holdback Capacity allocated to a deficient Participant is a non-integer value, the result is rounded to the nearest integer.
- The total unallocated MWs accumulated as a result of rounding are then distributed to each of the deficient Participants using a per-Participant, round-robin-based algorithm that attempts to minimize the biasing of allocation to any particular Participant.

## 7. Bilateral Transfer of Holdback

Any surplus Participant (A) may agree with any other surplus Participant (B) for Participant (A) to transfer to the second Participant (B) some or all of the Holdback Requirement established for Participant (A) for any hour on any Operating Day. Any such Holdback Requirement transfer shall be a bilateral arrangement settled outside the WRAP, provided, however, that both Participants of such Holdback Requirement transfer must notify the Program Administrator and the Program Operator in a timely manner using the PIT per [BPM 201 Operations Program Timeline](#). Any necessary transmission arrangements and any transaction settlements shall be the sole responsibility of the Participants that are parties to such bilateral arrangement. The transferred Holdback Requirement that Participant (B) is responsible for making available to the WRAP will be settled with the deficient Participant for which it is holding the capacity back and may deploy as energy via the WRAP settlement pricing as detailed in [BPM 206 WRAP Settlement Pricing](#) and Participant (B) will be responsible for any Energy Delivery Failure Charges for Energy Deployment resulting from the Holdback Requirement that was exchanged.

## 8. Release of Capacity

### 8.1. Program Early Release of Surplus

If the Multi-Day-Ahead Assessment indicates low risk of a potential Sharing Event, the Program Operator may consider early release of a portion or all of the surplus capacity (or indicative positive Sharing Calculation result) for Participants with a positive Sharing Calculation result prior to the Preschedule Day. Evaluation for early release of indicative positive Sharing Calculation result may include but is not limited to weather conditions, Participants' forecasts, date and time of the interval, application of a Safety Margin, and historical data. A process for determining early release of indicative positive Sharing Calculation result is included in Appendix A.

### 8.2. Participant Petition for Early Release of Surplus

Prior to the Preschedule Day, Participants may request release of indicative positive Sharing Calculation result based on a showing of extenuating circumstances. The decision to grant a request for the early release of a Participant's indicative positive

Sharing Calculation result is to be made by the Program Administrator with support as requested from the Program Operator. A process for determining early release of indicative positive Sharing Calculation result is included in Appendix A.

#### 9. Surplus not claimed on the Preschedule Day

On the Preschedule Day, any surplus capacity as calculated by the Sharing Calculation or offered as Voluntary Holdback is released in whole or in part to the extent one or more deficient Participants fail to confirm, per Section 4, their need for capacity for the subject hour. Once the surplus capacity is released on the Preschedule Day, that capacity is no longer obligated to the Program in any way and can be used by the Participant who was calculated surplus or offered it to the Program.

## Appendix A – Process for Early Release of Surplus Capacity

A Participant may submit a request to the Program Administrator and Program Operator for the early release of indicative positive Sharing Calculation result for either the requesting Participant or that Participant's Subregion. To do this, the requesting Participant must notify the Program Administrator via e-mail of the early release request including the affected hour(s) and the affected day(s), the MW quantity of release being requested, and a description of the extenuating circumstance (if a Participant-specific request). The Participant must also notify the Program Operator via phone call to the Program Operator WRAP coordinator desk of the early release request including the affected hour(s), the MW quantity of release being requested, and a description of the extenuating circumstance (if a Participant-specific request). The notification to the Program Operator and the Program Administrator must occur after the results are posted in the PIT for the first Multi-Day Ahead Assessment that includes all the affected day(s) and no later than two Business Days prior to the Preschedule Day for any of the affected day(s). The Program Operator and Program Administrator will work together to determine if the following criteria have been met.

### A.1 Program Early Release of Indicative Positive Sharing Calculation Result

The Program Administrator and Program Operator may consider early release of a portion or all of the indicative positive Sharing Calculation result for all Participants in a Subregion with a positive Sharing Calculation result prior to the Preschedule Day under the following conditions:

1. A request was made by a Participant in the Subregion for which it is requesting the early release of capacity; and
2. The Sharing Calculation run during the Multi-Day Ahead Assessment determines that no Participant has a negative indicative Sharing Calculation result for such hour; and
3. No Safety Margin was applied; and
4. WPP determines there is a low probability of a Sharing Event for the hour, meaning that:
  - a. The sum of the positive Sharing Calculation results for such hour is greater than or equal to the sum of the P50 Peak Load Forecast for all Participants in the Subregion multiplied by the PRM plus sum of the Load Forecast for all Participants in the Subregion multiplied by the Uncertainty Factor; and
  - b. On the first Preschedule Day that is no earlier than two Days prior to the Operating Day of such hour, all Participants in the Subregion must have a positive Sharing Calculation result for all hours being scheduled.

When all conditions are met, the Program Operator and Program Administrator may release up to:

$$\text{Maximum} \left( \sum \text{P50 Peak Load Forecast for all Participants in Subregion} * \text{PRM}, \sum \text{Load Forecast} * \text{Uncertainty Factor} \right)$$

This amount will be distributed pro rata based on Sharing Calculation results to all or a portion of the Participants in the Subregion.

## A.2 Participant Petition for Early Release of Indicative Positive Sharing Calculation Result

The Program Administrator and Program Operator may consider early release of a portion or all of the indicative positive Sharing Calculation result for a Participant with a positive Sharing Calculation result prior to the Preschedule Day under the following conditions:

1. The Program Administrator and Program Operator finds that an extenuating circumstance(s) exist(s). Extenuating circumstances justifying release of a Participant's indicative positive Sharing Calculation result may include, but are not limited to, such circumstances as extreme weather conditions, earthquakes, wildfires, geomagnetic disturbance events, tsunamis, government-declared states of emergency, civil unrest, and cyber security events; and
2. The Sharing Calculation run during the Multi-Day Ahead Assessment determines that the requesting Participant has a positive indicative Sharing Calculation result for such hour; and
3. No Safety Margin was applied; and
4. WPP determines there is a low probability of a Sharing Event for the hour, meaning that:
  - a. The positive Sharing Calculation result for such hour is greater than or equal to the P50 Peak Load Forecast multiplied by the PRM plus Load Forecast multiplied by the Uncertainty Factor; and
  - b. On the first Preschedule Day that is no earlier than two Days prior to the Operating Day of such hour, the requesting Participant must have a positive Sharing Calculation result for all hours being scheduled.

When all conditions are met, the Program Operator and Program Administrator may release up to:

$$\text{Minimum}(\text{Maximum}(\text{P50 Peak Load Forecast} * \text{PRM}, \text{Load Forecast} * \text{Uncertainty Factor}), \text{MW quantity of release requested})$$



In the event that a request is granted, the requesting Participant and all affected Participants will receive email notification from the Program Operator or Program Administrator alerting them of the early release of indicative positive Sharing Calculation result. This email notification will occur as soon as practicable and prior to one Business Day prior to the Preschedule Day for any of the affected day(s). The amount of indicative positive Sharing Calculation result that is released is treated as a negative adjustment to all future Sharing Calculation runs for such hour.