

TSOs Definition and Principles of Rebalancing

Addendum to SEM-13-010(ii)

20/10/2025



1 Purpose of Document

This document sets out the TSOs' definition and principles for the application of Rebalancing, a new operational concept designed to enhance the equitable distribution of dispatch down instructions among non-synchronous renewable generation units. It is intended to serve as an addendum to SEM-13-010(ii), specifically complementing the "Principles of Application" section. This arrangement is proposed as an interim measure, pending the SEM Committee's decision on SEM-24-044, at which point a consolidated definitions document is expected to supersede this and SEM-13-010(ii).

2 Definition of Rebalancing

Rebalancing is the adjustment of constraint or curtailment setpoints within a group of renewable generation units to reflect each unit's current availability and ability to contribute to the group's overall constraint or curtailment target.

3 Principles of Rebalancing of Curtailment or Constraint Setpoints

Over time the availability used to determine the initial application of a Constraint or Curtailment may change. Rebalancing allows for an update to Constraint or Curtailment setpoints to reflect the ability of each relevant unit to contribute to the Constraint or Curtailment target at that time.

Constraint and Curtailment rebalancing setpoints are calculated pro-rata based on the minimum of unit Availability and unit setpoints of a different type. This may result in higher setpoints for some units and lower setpoints for others. The maximum active power output allowable from all relevant units remains the same before and after rebalancing.

The nature of layered constraints and curtailment introduces complexity for rebalancing under these conditions. This approach aims to mitigate this by only including binding setpoints (either constraint or curtailment)

4 For Rebalancing of Curtailment

X_A = Reference Quantity = Min [Available Active Power, Constraint setpoint] for non-synchronous renewable unit A

Y = Maximum active power output allowable from all relevant non-synchronous renewable units after Curtailment is rebalanced

Z = Sum of Reference Quantities of all non-synchronous renewable units to be rebalanced

Active Power Control setpoint for unit A = $X_A * [Y/Z]$

Note: Only units where the current Curtailment Setpoint is below any active Constraint Setpoint may be included in rebalancing of Curtailment.

5 For Rebalancing of Constraint

X_A = Reference Quantity = Min [Available Active Power, Curtailment setpoint] for non-synchronous renewable unit A

Y = Maximum active power output allowable from all relevant non-synchronous renewable units after Constraint is rebalanced

Z = Sum of Reference Quantities of all non-synchronous renewable units to be rebalanced

Active Power Control setpoint for unit A = $X_A * [Y/Z]$

Note: Only units where the current Constraint Setpoint is below any active Curtailment Setpoint may be included in rebalancing of Constraint.