

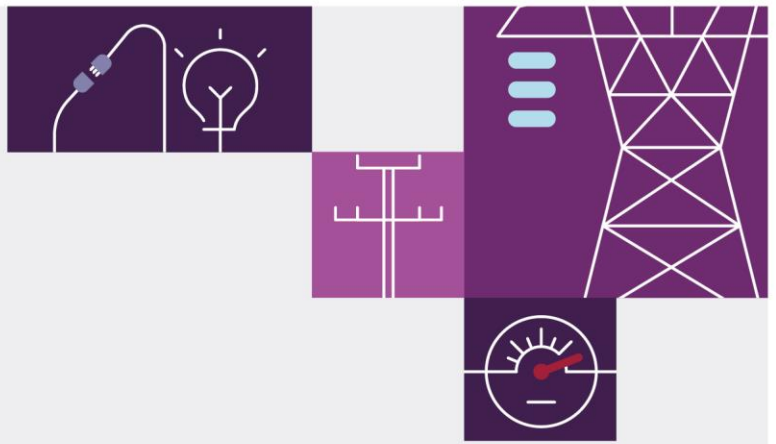
WEM Relaxed Constraints

January 2024

Q4 2023

A summary of the total number, frequency and type of Constraints that were relaxed in order to resolve infeasible dispatch solutions





Important notice

Purpose

Under WEM Rule 7.2.7, AEMO must as soon as practicable after the end of each quarter, publish on the WEM Website a report summarising the total number, frequency and type of Constraints that were relaxed under clause 7.2.6 during that quarter.

Disclaimer

This document or the information in it may be subsequently updated or amended. This document does not constitute legal or business advice and should not be relied on as a substitute for obtaining detailed advice about the Wholesale Electricity Rules. AEMO has made reasonable efforts to ensure the quality of the information in this document but cannot guarantee its accuracy or completeness.

Copyright

© 2024 Australian Energy Market Operator Limited. The material in this publication may be used in accordance with the [copyright permissions on AEMO's website](#).

Relaxed Constraints

1.1 Introduction

Under clause 7.2.6 of the Wholesale Electricity Market (WEM) Rules, AEMO may “relax” Constraints used in the Central Dispatch Process in order to resolve infeasible dispatch solutions. If the WEM Dispatch Engine (WEMDE) is not able find a feasible solution, it determines which Constraints to relax¹ and by how much using the concept of Constraint Violation Penalty (CVP²), whereby the cost of relaxing a Constraint depends on its associated CVP value.

Under clause 7.2.7(b) of the WEM Rules AEMO must as soon as practicable after the end of each quarter, publish on the WEM Website a report summarising the total number, frequency and type of Constraints that were relaxed under clause 7.2.6 during that quarter.

1.2 Summary of relaxed Constraints

Table 1 shows the breakdown of relaxed constraints by category and trading month. Note that a constraint that was relaxed in multiple intervals has been counted multiple times for Q4 of 2023.

Table 1 – Breakdown of category and trading month of relaxed Constraints for Q4 of 2023

Constraints (#)	October	November	December	Total
Ramp Up	19,414	630	256	20,300
Generic Network	24	89	97	210
Other Generic	74	265	21	360
Minimum Enablement for ESS	160	35	6	201
Defined Contingency	6	4	4	14
Total	19,678	1,022	385	21,085

Table 2 contains a summary of the number of Primary Dispatch Intervals in which Constraints were relaxed.

Table 2 – Amount of Primary Dispatch Intervals with various numbers of relaxed Constraints for Q4 of 2023

N	0	1	2	3	4	5	6	7	8	9	10	>10
Number of Primary Dispatch Intervals with N relaxed Constraints	17,099	2,424	4,028	1,546	1,199	104	61	1	31	0	3	0
Percentage of Dispatch Intervals with N relaxed Constraints	65%*	9%	15%	6%	5%	0%	0%	0%	0%	0%	0%	0%

*The majority (65%) of intervals had no relaxed Constraints (N = 0) meaning that the Dispatch Algorithm found a feasible solution without violating any Constraints.

¹ In the context of the WEM Dispatch Engine, relaxed Constraints are also called violating Constraints.

² For more information about Constraint Violation Penalties see [WEM Procedure: Dispatch Algorithm Formulation](#)