AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

WEM Relaxed Constraints

July 2026

Q2 2026

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 clause 7.2.7 of the ESM 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.

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

AEMO acknowledges the Traditional Owners of country throughout Australia and recognises their continuing connection to land, waters and culture. We pay respect to Elders past and present.

Relaxed Constraints

1.1 Introduction

Under clause 7.2.6 of the Electricity System and Market (ESM) Rules, AEMO may "relax" Constraints used in the Central Dispatch Process to resolve infeasible dispatch solutions. If the WEM Dispatch Engine (WEMDE) is not able find a feasible solution, it determines which Constraints to relax[1] and by how much using the concept of Constraint Violation Penalty (CVP[2]), whereby the cost of relaxing a Constraint depends on its associated CVP value.

Under clause 7.2.7(b) of the ESM 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.

Table 1 – Breakdown of category and Trading Month of relaxed Constraints for Q2 of 2026

Constraint Type	Description	April	May	June	Total
Tranche Quantity Upper Bound Constraint (Dispatch Algorithm Formulation 2.4.2)	Constraint that implements the upper bound on the Tranche Quantity variable.	538	1854	1264	3656
Tranche Quantity Lower Bound Constraint (Dispatch Algorithm Formulation 2.4.3)	Constraint that implements the lower bound on the Tranche Quantity variable.	4595	2629	4930	12154
Defined Supply Contingency Constraint (Dispatch Algorithm Formulation 2.4.8)	Constraint that ensures each calculated Defined Contingency is greater than or equal to the sum of Energy, Regulation Raise, and Contingency Reserve Raise that would otherwise have been provided by the Registered Facilities constituting the Defined Contingency.	1	0	0	1
Contingency Reserve Raise Requirement Constraint (Dispatch Algorithm Formulation 2.4.12)	Constraint that ensures the quantity of procured Contingency Reserve Raise is greater than or equal to the requirement.	0	3	0	3
Ramp Up Constraint (Dispatch Algorithm Formulation 2.4.13)	Constraint that ensures that a Registered Facility's Dispatch Target for energy is within its Ramp Rate Limit based on the Registered Facility's Initial MW quantity.	90	2894	53	3037
Ramp Down Constraint (Dispatch Algorithm Formulation 2.4.15)	Constraint that ensures that a Registered Facility's Dispatch Target for energy is within its Ramp Rate Limit based on the Registered Facility's Initial MW quantity.	18	39	160	217

[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

Constraint Type	Description	April	May	June	Total
Essential System Service Enablement Minimum Constraint (Dispatch Algorithm Formulation 2.4.18)	Constraint that ensures Registered Facilities are not dispatched for less than their Enablement Minimum for the relevant Essential System Service.	975	1144	454	2573
Essential System Service Enablement Maximum Constraint (Dispatch Algorithm Formulation 2.4.19)	Constraint that ensures Registered Facilities are not dispatched for more than the Enablement Maximum for the relevant Essential System Service.	68	139	319	526
Essential System Service Joint Ramping Up Constraint (Dispatch Algorithm Formulation 2.4.20)	Constraint that ensures the combination of the dispatched quantities for Registered Facilities that are providing both energy and Regulation Raise cannot be greater than the Maximum Upwards Ramp Rate of those Facilities.	0	0	1	1
Essential System Service Joint Ramping Down Constraint (Dispatch Algorithm Formulation 2.4.21)	Constraint that ensures the combination of the dispatched quantities for Registered Facilities that are providing both energy and Regulation Raise cannot be greater than the Maximum Downwards Ramp Rate of those Facilities.	0	0	39	39
Essential System Service Joint Capacity Constraint 1 (Dispatch Algorithm Formulation 2.4.22)	Constraint that ensures a Registered Facility that is providing Regulation Raise, and one or both of Contingency Reserve Raise and/or Contingency Reserve Lower, is dispatched such that it can provide all Essential System Services concurrently.	68	136	298	502
Essential System Service Joint Capacity Constraint 2 (Dispatch Algorithm Formulation 2.4.23)	Constraint that ensures a Registered Facility that is providing two or more of the following services: energy, Regulation Lower, Contingency Reserve Raise, and Contingency Reserve Lower, is dispatched such that it can provide all Essential System Services concurrently.	650	900	350	1900
Essential System Service Energy and Regulation Constraint 2 (Dispatch Algorithm Formulation 2.4.25)	Constraint that ensures the dispatch of a Registered Facility that provides Regulation Lower together with energy occurs within bounds specified by the Essential System Service Trapezium.	0	0	1	1
Generic 'Network' Constraint (Dispatch Algorithm Formulation 2.4.27, ESM Rule 7.2.4(e))	Generic Constraint with a Constraint Type of 'Network'. These Constraints are invoked and revoked by AEMO to represent various Network conditions.	2	55	50	107
Generic 'Other' Constraint (Dispatch Algorithm Formulation 2.4.27, ESM Rule 7.2.4(f))	Generic Constraint with a Constraint Type of 'Other'. These Constraints are invoked and revoked by AEMO to represent various non-Network conditions.	1	4	0	5
Fast Start Inflexibility Profile Mode 2 Constraint (Dispatch Algorithm Formulation 2.4.29)	Constraint that ensures the time, T2, provided in Real-Time Market Submissions for Dispatch Inflexibility Profiles for Fast Start Facilities are respected.	6	18	16	40
Inflexibility Constraint (Dispatch Algorithm Formulation 2.4.32)	Constraint that ensures a Registered Facility cannot move from the total energy quantity provided in its effective Real Time Market Submission.	1	8	0	9
RoCoF Control Service Requirement Constraint (Dispatch Algorithm Formulation 2.4.38)	Constraint that ensures the total quantity of procured RoCoF Control Service is greater than the RoCoF Control Requirement.	45	19	0	64

Constraint Type	Description	April	May	June	Total
Unconstrained Injection Forecast Constraint (Dispatch Algorithm Formulation 2.4.41)	Constraint that ensures the energy dispatch of a Semi-Scheduled Facility does not exceed its Unconstrained Injection Forecast.	0	1	15	16
Pure Storage Charge Constraint (Dispatch Algorithm Formulation 2.4.44)	Constraint that ensures Registered Facilities with Electric Storage Resources limit their energy and Essential System Service provision, subject to their charge level.	1	4	0	5
Total		7059	9847	7950	24856

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 Q2 of 2026

N	0	1	2	3	4	5	6	7	8	9	10	>10
Number of Primary Dispatch Intervals with N relaxed Constraints	8604	14285	1589	582	447	518	115	16	11	32	8	1
Percentage of Dispatch Intervals with N relaxed Constraints	33%	55%	6%	2%	2%	2%	0%	0%	0%	0%	0%	0%