

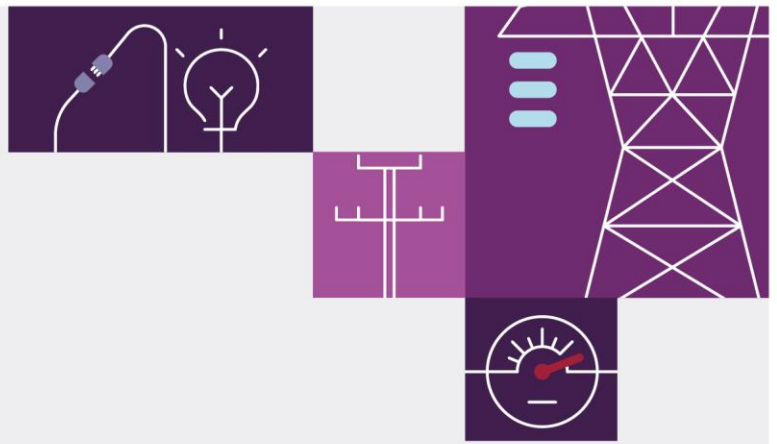
WEM Relaxed Constraints

March 2026

Q4 2025

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

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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 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 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 Q4 of 2025

| Constraint Type | Description | October | November | December | Total |
|--|---|---------|----------|----------|-------|
| Energy Balance Constraint (Dispatch Algorithm Formulation 2.4.1) | Constraint that ensures the total sum of Tranche Quantities equals the demand for energy. | 1 | 0 | 0 | 1 |
| Tranche Quantity Upper Bound Constraint (Dispatch Algorithm Formulation 2.4.2) | Constraint that implements the upper bound on the Tranche Quantity variable. | 2996 | 607 | 1710 | 5313 |
| Tranche Quantity Lower Bound Constraint (Dispatch Algorithm Formulation 2.4.3) | Constraint that implements the lower bound on the Tranche Quantity variable. | 525 | 533 | 1806 | 2864 |
| 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. | 5 | 1 | 0 | 6 |
| Essential System Service Maximum Provision Percentage Constraint (Dispatch Algorithm Formulation 2.4.9) | Constraint that ensures the provision of an Essential System Service by a Registered Facility is no more than a given percentage of the total Essential System Service requirement. | 3 | 0 | 0 | 3 |
| Regulation Raise Requirement Constraint (Dispatch Algorithm Formulation 2.4.10) | Constraint that ensures the total procured Regulation Raise Service is equal to or greater than the Regulation Raise requirement. | 0 | 0 | 1 | 1 |

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 | October | November | December | Total |
|--|---|---------|----------|----------|-------|
| Regulation Lower Requirement Constraint (Dispatch Algorithm Formulation 2.4.10) | Constraint that ensures the total procured Regulation Lower Service is equal to or greater than the Regulation Lower requirement. | 0 | 0 | 1 | 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. | 2 | 5 | 43 | 50 |
| 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. | 183 | 251 | 89 | 523 |
| 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. | 150 | 18 | 19 | 187 |
| Essential System Service Enablement Constraint (Dispatch Algorithm Formulation 2.4.17) | Constraint that ensures Essential System Services are only procured from Registered Facilities that are between their Enablement Minimum and Enablement Maximum for the given service. | 0 | 2 | 0 | 2 |
| 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. | 162 | 272 | 273 | 707 |
| 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. | 104 | 12 | 49 | 165 |
| 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 | 16 | 16 |
| 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. | 82 | 8 | 31 | 121 |
| 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. | 147 | 173 | 206 | 526 |
| Essential System Service Energy and Regulation Constraint 1 (Dispatch Algorithm Formulation 2.4.24) | Constraint that ensures the dispatch of a Registered Facility that provides Regulation Raise together with energy occurs within bounds specified by the Essential System Service Trapezium. | 0 | 0 | 2 | 2 |
| Essential System Service Energy and Regulation Constraint 2 (Dispatch Algorithm Formulation 2.4.24) | 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 | 2 | 54 | 56 |

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| Constraint Type | Description | October | November | December | Total |
|--|---|---------|----------|----------|-------|
| 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. | 0 | 2 | 54 | 56 |
| 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. | 0 | 1 | 0 | 1 |
| Fast Start Inflexibility Profile Mode 1 Constraint (Dispatch Algorithm Formulation 2.4.28) | Constraint that ensures the time, T1, provided in Real-Time Market Submissions for Dispatch Inflexibility Profiles for Fast Start Facilities are respected. | 0 | 1 | 0 | 1 |
| 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. | 9 | 9 | 9 | 27 |
| 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. | 3 | 46 | 34 | 83 |
| Contingency Raise Maximum Provision Percentage Constraint (Dispatch Algorithm Formulation 2.4.37) | Constraint that ensures the provision of Contingency Reserve Raise Service by a Facility is no more than a given percentage of the total Contingency Reserve Raise requirement. | 4 | 0 | 35 | 39 |
| 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. | 529 | 1255 | 82 | 1866 |
| 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. | 0 | 0 | 1 | 1 |
| Contingency Reserve Lower Service Requirement Constraint (Dispatch Algorithm Formulation 2.4.53) | Constraint that ensures the total quantity of procured Contingency Reserve Lower service is greater than the Contingency Lower Requirement Variable. | 7 | 0 | 0 | 7 |
| Total | | 4912 | 3198 | 4515 | 12625 |

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 2025

| N | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | >10 |
|--|--------|-------|-------|-----|-----|----|----|----|----|----|----|-----|
| Number of Primary Dispatch Intervals with N relaxed Constraints | 17,341 | 6,927 | 1,642 | 244 | 200 | 72 | 21 | 10 | 30 | 6 | 2 | 1 |
| Percentage of Dispatch Intervals with N relaxed Constraints | 65% | 26% | 6% | 1% | 1% | 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.

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