Economic Regulation Authority

Material constrained portfolio determination

Quarter 2 - 2025

28 August 2025

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We acknowledge their continuing connection to culture and community, their traditions and stories. We commit to listening, continuously improving our performance and building a brighter future together.

Economic Regulation Authority

Level 4, Albert Facey House

469 Wellington Street, Perth WA 6000

Telephone 08 6557 7900

Email info@erawa.com.au

Website www.erawa.com.au

This document can also be made available in alternative formats on request.

National Relay Service TTY: 13 36 77

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Executive summary

This is the ERA's determination of material constrained portfolios for the Wholesale Electricity Market (WEM), over the three-month rolling test window from 8:00am 1 April 2025 to 7:59am 1 July 2025.[1] These material constrained portfolios replace the ERA's previously published material constrained portfolios on 29 May 2025.[2] The ERA's determination was made following the WEM Procedure for portfolio determinations.[3]

Material constrained portfolios contain those facilities that have the potential to exert localised market power due to network constraints.[4] Market participants whose facilities received energy uplift payments in 10 per cent or more of the relevant intervals over the associated three-month rolling test window, or fixed assessment period, are part of a material constrained portfolio.[5] All facilities identified in the material constrained portfolios must comply with the requirements under the Electricity System and Market (ESM) Rules which includes record keeping obligations on offer price construction.[6]

This determination is part of the ESM Rules' market power mitigation framework which aims to focus regulatory monitoring and surveillance effort on those entities with the greatest potential to exercise localised market power. The ERA monitors market participants' price offers in the Real-Time Market to ensure they comply with the offer construction guidelines and general trading obligations, as required by the ESM Rules.

The ERA has identified 17 material constrained portfolios in Quarter 2 of 2025. These portfolios are comprised of facilities registered to the following 11 market participants:

- Alinta Sales Pty Ltd
- Goldfields Power Pty Ltd
- Merredin Energy
- Collie Battery Pty Ltd ATF Collie Battery Trust Southern Cross Energy
- Southern Cross Energy
- Synergy
- Telsa Corporation Management Pty Ltd
- Tesla Geraldton Pty Ltd
- Tesla Kemerton Pty Ltd

1 The ERA must make its material constrained portfolios determination within 20 business days after the settlement date as required by the Electricity System and Market Rules (WA), (formerly the Wholesale Electricity Market Rules (WA)), 4 June 2025, Rule 2.16C.2, (online).

2 Economic Regulation Authority, 25 February 2025, *Material constrained portfolio determination Q4 2024*, (online), and Electricity System and Market Rules (WA), 4 June 2025, Rule 2.16C.2A, (online).

3 Economic Regulation Authority, 27 November 2024, *WEM Procedure: Portfolio Determination*, (online).

4 Energy Policy Western Australia, *Market Power Mitigation Strategy: Information Paper*, 10 November 2022, p. 21, (online).

5 Electricity System and Market Rules (WA), 4 June 2025, Rule 2.16C.2, (online). A 'relevant interval' is an interval in which the network constraint equation, for which the constrained portfolio was assigned, bound.

6 Further information is available in Economic Regulation Authority, January 2025, *Offer Construction Guideline*, Chapter 8, (online). The record keeping requirement is in the Electricity System and Market Rules (WA), 4 June 2025, Rule 2.16C.3, (online).

- Tesla Northam Pty Ltd
- Tronox Management Pty Ltd.

Our detailed processes for identifying material constrained portfolios is explained in our method paper which is published on our website.[7]

[7] Economic Regulation Authority, *Portfolio Assessment*, (online).

1. Introduction

Under the ESM Rules' market power mitigation framework, the ERA is required to identify those facilities with the greatest potential to exercise localised market power in the Real-Time Market via two processes. These processes are:

1. Identify portfolios or facilities and those that are material portfolios.[8] The ERA published its latest portfolio and material portfolio determination on 10 October 2024 with an update on 28 April 2025.[9] Changes to the ESM Rules in November 2024 now require the ERA to make this determination annually.[10]

2. Identify material constrained portfolios that comprise facilities with the potential to exercise localised market power.[11] This determination is done quarterly.[12]

Material constrained portfolios contain those facilities that have the potential to exert localised market power due to network constraints.[13] Portfolios whose facilities received energy uplift payments in more than 10 per cent of relevant intervals over the associated rolling test window, or fixed assessment period, are part of a material constrained portfolio.[14,15] All market participants with facilities that are determined to be in a material constrained portfolio must keep adequate records, as per the ESM Rules, to substantiate and justify their offers into the WEM.[16]

Market participants whose facilities that are not included in these material constrained portfolios are still monitored. The ERA monitors all market participant bidding in all intervals, as required by the ESM Rules. The ERA expects all market participants to comply with the offer construction guidelines as required by the ESM Rules.[17]

8 Electricity System and Market Rules (WA), 4 June 2025, Rules 2.16B.1 and 2.16C.1, (online).

9 Economic Regulation Authority, 10 October 2024, *Portfolio identification and material portfolio – Determination*, (online);

Economic Regulation Authority, 28 April 2025, *Update to published list of Portfolios WEM Rule 2.16B.5*, (online).

10 Electricity System and Market Rules (WA), 4 June 2025, Rule 2.16B.1, (online).

11 Energy Policy Western Australia, *Market Power Mitigation Strategy: Information Paper*, 10 November 2022, p. 11, (online).

12 Electricity System and Market Rules (WA), 4 June 2025, Rule 2.16C.2, (online).

13 Energy Policy Western Australia, *Market Power Mitigation Strategy: Information Paper*, 10 November 2022, p. 21, (online).

14 Electricity System and Market Rules (WA), 4 June 2025, Rule 2.16C.2, (online).

15 A 'relevant interval' is an interval in which the network constraint equation, for which the constrained portfolio was assigned, bound.

A fixed assessment period is a period of at least seven consecutive trading days in which a relevant constraint equation has bound continuously within a rolling test window. This is defined in the Electricity System and Market Rules (WA), 4 June 2025, Chapter 11, (online).

16 Electricity System and Market Rules (WA), 4 June 2025, Rule 2.16C.3, (online).

17 Ibid, Section 2.16D, (online).

1.1 ERA's determination process

To make this determination, the ERA:[18]

1. Identified the constrained portfolios of facilities by 28 August 2025.[19] To identify the constrained portfolios, the ERA:

    a. Identified each constraint equation that bound for at least one interval in the current rolling test window.

    b. Identified each constrained portfolio of facilities for each identified constraint equation.

2. Identified each material constrained portfolio, published this determination and notified the affected market participants on 28 August 2025 of their registered facilities being classified under a material constrained portfolio.[20] To identify each material constrained portfolio, the ERA:

    a. Calculated the constrained uplift payment ratio for each constrained portfolio, for both the current rolling test window and any relevant fixed assessment period.[21]

    b. Classified those constrained portfolios with constrained uplift payments in 10 per cent or more of all relevant intervals for which the relevant network constraint bound within the current rolling test window as material constrained portfolios.

The outcome of these processes is contained within this report, with the identified material constrained portfolios replacing the previous quarter's determination.

1.2 Record keeping obligations for facilities that are part of a material constrained portfolio

All market participants with facilities that are part of a material constrained portfolio must ensure that adequate records are kept that can be independently verified to support a market participant's price offers for those facilities made in the Real-Time Market, within three months of receiving the notice from the ERA.[22]

An example of the types of records that are required include:

- Internal governance arrangements
- Methods, assumptions, and cost inputs.

This includes those documents that market participants use to develop their prices, quantities, and ramp rates for each identified facility.

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18 Electricity System and Market Rules (WA), 4 June 2025, Rules 2.16B.2 and 2.16C.2(b), (online).

19 Ibid, Rule 2.16B.2, (online).

20 Ibid, Rule 2.16C.2, (online).

21 This includes any Fixed Assessment Periods during the rolling test window which is a period of at least seven consecutive trading days in which a relevant constraint equation has bound continuously within a rolling test window. This is defined in the Electricity System and Market Rules (WA), 4 June 2025, Chapter 11, (online).

22 Electricity System and Market Rules (WA), 4 June 2025, Rule 2.16C.3, (online).

Additional guidance regarding the record keeping obligations is available in the WEM Procedure detailing portfolio determinations and in the offer construction guideline.[23,24]

[23] Economic Regulation Authority, 27 November 2024, *WEM Procedure: Portfolio Determination*, p.9-10, (online).

[24] Economic Regulation Authority, 20 January 2025, *Offer Construction Guideline*, p. 6, (online).

2. Assessment of constrained portfolios

The ERA has completed its assessment of constrained portfolios and identified each constraint equation for network constraints that bound within the rolling test window of 8:00am 1 April 2025 to 7:59am 1 July 2025.

Constraint equations are a mathematical representation of a constraint or limitation on how electricity can be transferred over parts of the network.[25] A constraint equation is considered binding when the Australian Energy Market Operator (AEMO) applies the constraint to limit the risk to power system security or reliability. When a constraint equation is applied, those registered facilities that are located behind that constraint are assigned to a constrained portfolio. The constrained portfolio includes all registered facilities behind the constraint equation that are in the same portfolio.

The ERA identified 78 unique binding network constraint equations in the three-month rolling test window. This resulted in identification of 245 constrained portfolios. A full list of constraint equations and constrained portfolios is included in the accompanying spreadsheet on the ERA's website.[26]

The ERA used the portfolios identified in October 2024 for this constrained portfolio identification process.[27]

2.1 Constraint equation identification

The ERA identified 78 unique binding network constraint equations over the current rolling test window. The ERA used AEMO's constraint data from the Market Surveillance Data Catalogue to identify all network constraints that bound during the rolling test window.

2.2 Constrained portfolio identification

The ERA identified 245 unique constrained portfolios over this rolling test window. The constrained portfolios consist of those registered facilities assigned to portfolios in the ERA's portfolio determination and where the facility is located behind a binding network constraint.[28] Registered facilities can be assigned to multiple constrained portfolios.[29]

Seven facilities appear in the constraint equation formulation but have not yet been considered in a portfolio determination process.[30,31] From 20 November 2024, any new facility or change to ownership or registration of a facility requires participants to provide a declaration to the

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25 Electricity System and Market Rules (WA), 4 June 2025, Chapter 11, (online).

26 See Economic Regulation Authority, *ESM Rule 2.16C.2(a) Calculation results – Material Constrained* Portfolio spreadsheet on Economic Regulation Authority website, Portfolio Assessment, (online).

27 Economic Regulation Authority, 10 October 2024, *Portfolio Identification and Material Portfolio Determination*, p. 3, (online).

Since the April 2025 update listed new entrants as 'to be determined at the next portfolio determination', the last complete list of portfolios – from the ERA's October 2024 portfolio determination – was used.

28 Economic Regulation Authority, 10 October 2024, *Portfolio Identification and Material Portfolio Determination*, p. 3, (online).

29 Electricity System and Market Rules (WA), Rule 2.16B.3, (online).

30 These facilities are: ALINTA_WGP_ESR1, COLLIE_BESS2, ERRRF_WTE_G1, KWINANA_ESR2, PHOENIX_KWINANA_WTE_G1, PRDSO_WALPOLE_HG1, and SBSOLAR1_CUNDERDIN_PV1.

31 Economic Regulation Authority, 10 October 2024, *Portfolio Identification and Material Portfolio Determination*, p. 3, (online).

ERA to facilitate updates of identified portfolios.[32] In this instance, the excluded facilities either joined the WEM after the last portfolio determination, but before changes to declaration requirements, or are completely new entrants and will need to provide a declaration to the ERA.

The ERA uses a combination of constraint, energy uplift payments and facility registration data from our Market Surveillance Data Catalogue to identify the constrained portfolios.[33]

[32] Electricity System and Market Rules (WA), 4 June 2025, Rule 2.16B.4 (online).

[33] Australian Energy Market Operator, 'Operational Constraints Library', (online).

3. Material constrained portfolio determination

After identifying the constrained portfolios over a rolling test window, the ERA must determine the material constrained portfolios by calculating and applying the materiality threshold specified in the ESM Rules to the constrained uplift payment ratio (see section 3.1). The ratio is a percentage of the number of dispatch intervals where a network constraint bound where any registered facilities within the relevant constrained portfolio received energy uplift payments.

A material constrained portfolio is a constrained portfolio that meets or exceeds the 10 per cent threshold in its constrained uplift payment ratio. The ERA has notified market participants that have registered facilities allocated to a material constrained portfolio. The ERA monitors any prices offered by the market participant in the real time market in line with the market power test.[34,35]

3.1 Constrained uplift payment ratio

The ERA has identified those constrained portfolios that have received energy uplift payments in 10 per cent or more relevant dispatch intervals within the rolling test window.[36] Where this occurs, the constrained portfolio is deemed to be a material constrained portfolio and the facilities within each material constrained portfolio are considered to have the potential to exercise market power when located behind a network constraint.

The calculation of the constrained uplift payment ratio is:[37]

$$Constrained\ Uplift\ Payment\ Ratio = \frac{CP\_UP}{NC} \times 100$$

where:

CP_UP is the number of dispatch intervals in the rolling test window or fixed assessment period (as applicable) in which:

1. the constraint equation relevant to the identification of the constrained portfolio identified under ESM Rule 2.16B.2(a) bound; and

2. a registered facility in the constrained portfolio received an energy uplift Payment; and

NC is the total number of dispatch intervals in the rolling test window or fixed assessment period (as applicable) in which the constraint equation relevant to the identification of the constrained portfolio bound.

34 Electricity System and Market Rules (WA), 4 June 2025, Rule 2.16C.2(d), (online).

35 Ibid, Rule 2.16C.4, (online).

36 This includes any Fixed Assessment Periods during the rolling test window which is a period of at least seven consecutive trading days in which a relevant constraint equation has bound continuously within a rolling test window. This is defined in Electricity System and Market Rules (WA), (formerly the Wholesale Electricity Market Rules (WA)), 4 June 2025, Chapter 11, (online).

37 Electricity System and Market Rules (WA), 4 June, Rule 2.16C.2(a), (online).

3.2 Constrained uplift payment ratio calculation results

The constrained uplift payment ratio calculation is applied to the rolling test window and in any relevant fixed assessment periods.[38] The calculation returned 25 of 245 identified constrained portfolios with a non-zero result which means that these portfolios have received constrained uplift payments during the time period.

Full results of the calculation are provided in the spreadsheet accompanying this report on the ERA's website.[39]

3.3 Material constrained portfolios

The constrained uplift payment ratio calculation resulted in 17 material constrained portfolios, capturing a total of 12 different facilities belonging to 11 different market participants.

3.4 Market participants and facilities in a material constrained portfolio

Table 1 is a list of market participants with facilities that are part of a material constrained portfolio. For a detailed list of all material constrained portfolios identified as part of this report, refer to the accompanying spreadsheet published on the ERA's website.[40]

The ERA notifies market participants with facilities that are part of a material constrained portfolio via email about our findings.

Table 1: Market participants and those facilities that are part of a material constrained portfolio

Market participant	ERA's code reference for market participant	Facility
Alinta Sales Pty Ltd	ALINTA	ALINTA_WGP_GT
Goldfields Power Pty Ltd	GLDFLDPW	PRK_AG
Merredin Energy	MERREDIN	NAMKKN_MERR_SG1
Collie Battery Pty Ltd ATF Collie Battery Trust	COL_BESS	COLLIE_ESR1
Southern Cross Energy	STHERNCRS	STHRNCRS_EG
Synergy	WPGENER	PINJAR_GT9 PINJAR_GT11
Tesla Corporation Management Pty Ltd	TSLA_MGT	TESLA_PICTON_G1

[38] Economic Regulation Authority, *WEM Procedure: Portfolio Determination*, 27 November 2024, 4.2.1, (online).

[39] Economic Regulation Authority, Portfolio Assessment, (online).

[40] Economic Regulation Authority, Portfolio Assessment, (online).

Market participant	ERA's code reference for market participant	Facility
Tesla Geraldton Pty Ltd	TSLA_GER	TESLA_GERALDTON_G1
Tesla Kemerton Pty Ltd	TSLA_Kem	TESLA_KEMERTON_G1
Tesla Northam Pty Ltd	TSLA_NOR	TESLA_NORTHAM_G1
Tronox Management Pty Ltd	TIWEST	TIWEST_COG1

Source: ERA assessment of WEM data.

3.5 Comparison to previous determination

The differences between the most recent and previous rolling test windows are detailed below:

- Table 2 is the number of constraint equations identified to have bound.
- Table 3 is the number of unique constrained portfolios identified.
- Table 4 is the number of unique facilities that were part of a material constrained portfolio.
- Table 5 is the number of unique market participants that have facilities that are part of a material constrained portfolio.

Table 2: Number of constraint equations identified

Rolling test window	Number of constraint equations identified
Q2 2025	78
Q1 2025	140

Source: ERA analysis of WEM data.

Table 3: Number of unique constrained portfolios identified

Rolling test window	Number of unique constrained portfolios
Q2 2025	245
Q1 2025	791

Source: ERA analysis of WEM data.

Table 4: Number of unique facilities within material constrained portfolios

Rolling test window	Number of unique facilities
Q2 2025	12
Q1 2025	30

Source: ERA analysis of WEM data.

Table 5: Number of unique market participants that have facilities in a material constrained portfolio

Rolling test window	Number of unique market participants
Q2 2025	11
Q1 2025	14

Source: ERA analysis of WEM data.