Economic Regulation Authority

# 2026 Benchmark Reserve Capacity Prices for the 2028/29 capacity year

## Final determination

13 March 2026

D307789

## Acknowledgement of Country

At the ERA we value our cultural diversity and respect the traditional custodians of the land and waters on which we live and work.

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.

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# Executive summary

The Economic Regulation Authority has determined the 2026 Peak and Flexible Benchmark Reserve Capacity Prices (BRCP) to be $488,500 per Megawatt (MW) per year, to apply for the 2028/29 Reserve Capacity Year.[1,2,3] The ERA determines the BRCPs each year, two years ahead of the capacity year in which they will apply.[4]

To meet consumer demand for electricity, adequate capacity must be installed and be available within the electricity system. The Reserve Capacity Mechanism (RCM) helps to ensure that there is sufficient capacity installed within the South-West Interconnected System (SWIS).

The BRCP is an input of the Reserve Capacity Price within the RCM, which is intended to provide adequate price signals and deliver sufficient revenue to encourage capacity investments to ensure system reliability for electricity consumers. Consumers ultimately fund the RCM through their electricity bills.

The BRCP is based on the lowest annualised capital cost and fixed operating and maintenance cost of the Benchmark Technology, which is a 200 MW, 6-hour Battery Energy Storage System (BESS) located along the Clean Energy Link – North.

The scope of the ERA's determination is defined by the Electricity System and Market (ESM) Rules and the BRCPs Wholesale Electricity Market (WEM) Procedure and is consistent with the Coordinator of Energy's recent changes to the Benchmark Technology used to calculate the BRCP.[5]

This final determination sets out the various BRCP components including the capital costs and the fixed operating and maintenance (O&M) costs. We also explain the material changes in these cost components and the drivers behind those changes, as well as how we have considered stakeholder feedback on our draft determination.

### Increase in BRCPs

The ERA's final BRCP determination of $488,500 per MW per year is 35 per cent higher than the 2025 BRCP of $360,700 per MW per year.[6] There are three main reasons:

1. Consistent with the Coordinator of Energy's determination, the Benchmark Technology for the BRCPs is now a larger BESS with six hours of storage duration (200 MW / 1,200

1 The Peak Reserve Capacity Price is paid to capacity providers for each MW of capacity that they make available to the Wholesale Electricity Market. All Capacity Credit holders receive capacity payments. The Flexible Reserve Capacity Price is the price paid to those capacity providers with available capacity that is able to respond to large and sudden changes in demand.

2 A capacity year starts at 8 am on 1 October of the relevant year and ends at 8 am on 1 October in the subsequent year.

3 The Peak Reserve Capacity Price paid will not apply to those Facilities that are subject to the Transitional Arrangements or qualified as fixed price Facilities (Australian Energy Market Operator, 'Reserve Capacity Price', [online] [accessed 10 February 2026]).

4 The reserve capacity timeline is defined in the Electricity System and Market Rules (WA), 26 February 2026, Rule 4.1, (online).

5 Energy Policy WA, 30 September 2025, 2025 Review of the Benchmark Capacity Providers: Coordinator of Energy Determination, (online).

6 Economic Regulation Authority, 2025, *Benchmark Reserve Capacity Price for the 2027/28 capacity year – Final determination*, p. 5, (online).

MWh). The previous determination was based on a Benchmark Technology that was a four-hour duration (200 MW / 800 MWh) BESS.

2. Material increases in labour, materials and freight costs, which have in turn increased the various cost components of the BRCP, thus contributing to the significant increase in the BRCP.

3. A new Fixed Capital Charge (FCC) of $100,000 per MW to cover costs for shared network transmission assets for new and upgraded generation and load connections that are over 10 MW in size. The FCC is expected to be in place by 1 July 2026.[7] We have included this cost as part of the BRCP because this charge is expected to be in place for the 2028/29 Capacity Year.[8] The FCC equates to an additional $20 million in the transmission connection capital costs component of the BRCP.[9]

The ERA has taken into account data and analysis from GHD Advisory, Western Power and Landgate in making this determination, with their reports available on our website.[10] We have tested GHD's advice and undertaken our own analysis for this determination.

### Changes from previous determinations

The ERA acknowledges that the 2026 BRCP determination is significantly higher than the previous determination, with costs indirectly and ultimately paid for by consumers. To balance rising costs with the need to sufficiently incentivise investment in capacity whilst being consistent with the Benchmark Technology's specifications, we have made two key changes from our 2025 determination.

We have excluded contingency costs from the capital costs component of the BRCP and used grid-following inverters' costs for the power conversion system. Following feedback on our draft determination, we have also excluded costs related to original equipment manufacturer (OEM) extended warranties and firmware upgrade costs from the fixed O&M cost component of the BRCP which were not part of the 2025 BRCP determination.

While other cost components of the BRCP have increased from previous determinations, the ERA's exclusion of these two cost items has resulted in nearly $91 million of cost reduction. Land costs have also almost halved, largely due to the change in location to sites across the Clean Energy Link – North.

### Stakeholder feedback

Following publication of our draft determination, we received submissions from Synergy, the Department of Energy and Economic Diversification (DEED), the WA Expert Consumer Panel (ECP) and the Chamber of Minerals and Energy WA (CME). These submissions have been published alongside this determination on our website.[11]

Several submissions referred to the CSIRO's GenCost report, which is an annual report that estimates the cost of building new electricity generation, storage, and hydrogen projects in

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7 Economic Regulation Authority, 2026, *2026 Benchmark Reserve Capacity Prices for the 2028-29 capacity year – Draft determination*, pp. 12-13, (online); and

Department of Energy and Economic Diversification, 4 December 2025, *Fixed Capital Charge – Consultation Paper*, pp. 5-6 and p. 11, (online).

8 Economic Regulation Authority, 2026, *2026 Benchmark Reserve Capacity Prices for the 2028-29 capacity year – Draft determination*, pp. 12-13, (online).

9 Ibid. The FCC is not indexed for inflation and is assumed to be a flat charge of $100,000 per MW.

10 Economic Regulation Authority, 'Benchmark Reserve Capacity Prices', (online).

11 Ibid.

Australia.[12] The GenCost 2025/26 report includes cost estimates for batteries that are lower than the estimates that the ERA has obtained for our BRCP determination.

The GenCost report, while instructive, is not of direct use as an input to the ERA's process to determine the BRCP. The ERA's BRCP determination pursuant to the ESM Rules and the WEM Procedure, requires the estimation of the costs of building a BESS in Western Australia to the specifications required by the Benchmark Technology with operations commencing in 2028/29. Closer examination of the GenCost report and the underlying data, does not reveal an itemised cost break down or details on specific cost components or how these costs were derived. Rather, the GenCost report provides a general top-down assessment of BESS technology costs. Conversely, the BRCP WEM Procedure requires the ERA to conduct a rigorous analysis of the BRCP cost components.[13]

Overall, the GenCost report's estimates are around 26 per cent lower than actual costs for battery projects in Western Australia, based on data that the ERA could verify.[14] General cost differences in project delivery between Western Australia and the Eastern States requires derivation of the BRCP to be based on sourcing specific costs to Western Australia to develop a BESS in the SWIS. Available and verifiable data shows that the cost of the BESS in our BRCP determination (at $521/kWh) is in line with similar projects in this State.[15] For example, the Baldivis battery with 250 MW of capacity is expected to cost $500/kWh, and the Collie battery (also with 250 MW of capacity) is expected to cost significantly more at $800/kWh.[16]

The CME's submission suggested that OEM extended warranties and firmware upgrade costs should be removed from the fixed O&M costs of the BRCP and noted that this cost component was not part of the 2025 BRCP determination.[17] After considering CME's feedback, the ERA has excluded the OEM extended warranties and firmware upgrade costs from the BRCP determination. This is in line with our approach to determine the BRCP based on the minimum level of specification required to connect a BESS Facility in the SWIS.[18]

Other issues raised by stakeholders include:

- The use of ***average*** **estimates of annual capital costs** (compared to using the *lowest* annual estimate): The ERA uses the average cost estimate for each cost category rather than taking the lowest cost estimate for each category. Choosing only the lowest cost for each individual category provides an unrealistic overall project cost. Using an average approach for each cost category gives an overall cost estimate that better approximates what a battery project developer would incur when building a battery in the SWIS.

- **Contractor overheads and margins**: The DEED and the ECP questioned the inclusion of contractor overheads (25 per cent) and margins (12 per cent) as separate allowances,

12 CSIRO, 2025, *GenCost 2025-26: Consultation draft*, (online).

13 AEMO, 2025, *2025 Energy Technology Cost and Technical Parameter Review: Draft Report (Rev C),* Report prepared by GHD, (online).

14 Modo Energy, 20 Feb. 2026, '2026 Capex: How much does it cost to build a battery in Australia?', (online) [accessed 24 Feb. 2026].

15 See Appendix 9 for battery project cost comparisons.

16 McKenzie M., 17 Feb. 2026, 'Baldivis in running for $500m big battery', The West Australian, p.18.

Renewables Now, 9 Feb. 2026, 'Synergy brings live 500-MW Collie battery in Western Australia', (online) [accessed 24 Feb. 2026].

17 Economic Regulation Authority, '2026 Benchmark Reserve Capacity Prices to apply to the 2028-29 capacity year', (online).

18 Economic Regulation Authority, 2026, *WEM Procedure: Benchmark Reserve Capacity Prices* (online).

noting that BESS developers may not contract out their construction work.[19] We have retained these costs based on the very high likelihood of contractor use as the cheapest cost to obtain these services, as verified by GHD. The development and construction of BESS Facilities is a highly specialised field, reliant on expert contractors.

- **The FCC**: Synergy and the ECP raised concerns over the additional cost on consumers caused by the FCC.[20,21] However, the ERA is required, through the BRCP WEM Procedure, to include the FCC as a cost input for the BRCP determination as it is a fixed cost that new Facilities will incur.[22] EPWA has advised that the application of the FCC from 2026 onwards is State Government policy.

- **Market risk premiums**: The ECP questioned whether the market risk premium of 5.8 per cent as part of the weighted average cost of capital (WACC) should be lower.[23] In estimating the BRCP WACC, we have considered the returns and risk from available Australian BESS projects. Most of these BESS projects have long-term offtake contracts to manage project risk. While the BRCP provides a price signal, the BRCP does not guarantee revenues over time. Significant risk still exists in the RCM through the certification of Capacity Credits, and the determination of the Reserve Capacity Price for a Capacity Year. In the WEM, capacity revenues for a BESS project can change during the life of the Facility due to changes in the BRCP and the Reserve Capacity Price, the adjustment factor for excess capacity, and the quantity of Capacity Credits allocated. Therefore, we consider that the risk premium has been determined appropriately.

- **Class estimate**: The ECP and DEED raised concerns regarding the AACE Class 5 accuracy range (+100% to -50%) for the cost component estimates in our BRCP draft determination.[24,25] The accuracy class estimate is a range of estimates, and not an additional margin to the cost estimate. The actual prices, costs and other variables may be different and could change relative to the numbers and variables used to prepare the cost estimate. The ERA has sought advice from GHD in developing its determination and considers that this class estimate is appropriate for the purpose of the determination. Vendors do not provide quotes as the final and definitive quotes for the project, but as initial gauges of project costs at the early stage of the project lifecycle. The accuracy class estimate has a wide band of uncertainty because of the difficulty associated with forecasting prices at the beginning of the project lifecycle relative to the actual prices that are incurred once the project has been completed. Using this accuracy class is appropriate at this early stage of project cost estimation.

- **Learning rates**: DEED and the CME raised concerns that we have not applied learning rates, which relates to decreasing BESS costs expected over time as the technology

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19 Economic Regulation Authority, 2026, *2026 Benchmark Reserve Capacity Prices to apply to the 2028-29 capacity year*, (online).

20 Economic Regulation Authority, '2026 Benchmark Reserve Capacity Prices to apply to the 2028-29 capacity year', (online).

21 The FCC is best understood in terms of fixed and variable charges for the network. The development and maintenance of the network is not intended to be profit-making, and Western Power should be able to recover their costs for network development and maintenance. As a point of clarification, following the implementation of the FCC, the overall network costs will not change in the SWIS, although the impact on ongoing charges for specific Facilities is unclear.

22 Economic Regulation Authority, 2026, *WEM Procedure: Benchmark Reserve Capacity Prices*, clause 3.4.10, (online).

23 Economic Regulation Authority, 2026, *WEM Procedure: Benchmark Reserve Capacity Prices*, clause 3.4.10, (online).

24 Economic Regulation Authority, '2026 Benchmark Reserve Capacity Prices to apply to the 2028-29 capacity year', (online).

25 Ibid.

improves.[26] To clarify, in accordance with the BRCP WEM Procedure, the new BESS Facility must be able to provide Reserve Capacity at the commencement of the 2028/29 capacity year (specifically 1 October 2028).[27] Therefore, the BRCP determination is based on costs associated with procuring the BESS components at the time those costs are expected to be incurred so that the Facility is ready by the Capacity Year. Contracting of major capital components, the BESS battery modules and power conversion system is based on recent quotes as contracts are entered into today for delivery of the equipment to be installed and connected by the start of the capacity year. Since these prices are locked in by a BESS manufacturer, the learning rates do not impact the price that the 2028 Capacity Year BESS project proponent pays. Therefore, learning rates are not used for the BRCP determination, which is consistent with the method the ERA used to determine the previous BESS BRCP determination.

- **Significant increase in capital costs**: The CME raised concerns about the significant increase in construction costs in the draft BRCP determination and suggested that the ERA use construction cost indices as part of its cost assessment.[28] The ERA's approach, is to use costs that are based on actual, market-based evidence which are procured by our consultant.[29] Construction cost indices are an aggregate measure that reflects broader market trends and cannot be relied upon to solely calculate the costs of the Benchmark Technology. The specific requirements of the Benchmark Technology do not fit under a single index classification, which is why the ERA's approach is to engage a consultant, GHD, to obtain vendor quotes which are used to derive the relevant costs expected to be incurred in constructing a BESS in Western Australia.

- Changes expected to the **storage duration requirements**: Synergy flagged that recent policy reforms via the Tranche 8 ESM Rules have extended storage duration requirement (ESRDR) protection for Electric Storage Resources (ESRs) from five to ten years and introduced an ESRDR Uplift in the Reserve Capacity Target. Synergy expressed concern that shorter duration BESS may be overcompensated, receiving the same price as a longer duration BESS. The ERA acknowledges Synergy's view but notes that these reforms do not directly impact the BRCP determination.

Other comments from stakeholders are discussed in more detail in sections 2.8 to 2.12 of this determination.

### Final determination comparison

A comparison of the key cost components of this BRCP determination and the 2025 determination is shown in Table 1.

There has been a significant increase to the costs of the power conversion system, balance of plant and construction costs. This is driven by to changes in market conditions and some components that scale with the increase in the BESS's energy storage size.

[26] Economic Regulation Authority, '2026 Benchmark Reserve Capacity Prices to apply to the 2028-29 capacity year', (online).

[27] Economic Regulation Authority, 2026, *WEM Procedure: Benchmark Reserve Capacity Prices*, clause 2.1.6, (online).

[28] Chamber of Minerals and Energy, 2026, Submission to *2026 Benchmark Reserve Capacity Prices for the 2028/29 capacity year: Draft Determination,* p.2.

[29] Economic Regulation Authority, 2026, *WEM Procedure: Benchmark Reserve Capacity Prices*, clause 2.1.6 and 2.1.7, (online).

**Table 1: Key cost components of the BRCP and their change from the 2025 determination**

| Component | 2026 Amount ($) | 2025 Amount ($) | Change between 2025 and 2026 |
|---|---|---|---|
| **Capital cost sub-total** | **625,639,574** | **474,395,074** | **32%** |
| Lithium-ion battery modules | 246,671,109 | 177,600,000 | 39% |
| Power conversion system | 51,241,685 | 27,800,000 | 84% |
| Balance of plant | 50,134,897 | 30,725,852 | 63% |
| Total construction costs | 140,628,621 | 77,237,106 | 82% |
| Transmission connection capital costs, includes Fixed Capital Charge | 53,975,600 | 39,082,200 | 38% |
| All other costs[30] | 82,987,662 | 121,949,916 | (32%) |
| **Fixed O&M cost sub-total ($/Year)** | **11,404,864** | **8,121,329** | **40%** |
| **Capacity credits (MW)** | **200 MW** | **200 MW** | **N/A** |
| **Peak BRCP and Flexible BRCP ($/MW/Year)** | **488,500** | **360,700** | **35%** |

*Source: ERA analysis.*

*Note: numbers may not add due to rounding.*

[30] All other costs refer to land costs, the Weighted Average Cost of Capital, contingency and indirect costs. These costs are detailed in chapters 5 and 7 of this determination.

# 1. Introduction

This chapter outlines the principles underlying the BRCP and the regulatory framework for the ERA's determination.

## 1.1 The Reserve Capacity Mechanism

To ensure a reliable supply of electricity for consumers, there needs to be adequate generation available within the SWIS, and financial security for those providing that capacity. The RCM allows generators to recoup their fixed costs for investing in a Facility and subsequently provides investment signals to install capacity in the SWIS when there is a forecast capacity deficit and to retire capacity when there is a significant capacity surplus.

Capacity providers that participate in the RCM are paid to make their capacity available through the allocation of Capacity Credits. The price of these Capacity Credits is based on the Reserve Capacity Price.[31] The BRCP is an input into the Reserve Capacity Price.

The BRCPs are derived from the fixed costs incurred in developing and operating a hypothetical Benchmark Technology (BT), which is to reflect the most efficient, least cost new entry technology expected to enter the WEM to provide capacity. The ESM Rules specify a Peak Reserve Capacity Price curve and Flexible Reserve Capacity Price curve to calculate the price of their respective Capacity Credits, expressed in dollars per MW, per Capacity Year ($/MW/Year).[32] The Capacity Credit prices are a function of the BRCPs and the level of excess capacity in the WEM to meet Reserve Capacity Targets required by the Planning Criterion; i.e. whether there is an under or over supply of generation capacity in the SWIS to maintain reliability of supply.[33]

## 1.2 Regulatory framework for the BRCP determination

The ERA determines the BRCPs annually following the method outlined in the BRCP WEM Procedure.[34]

The ERA must publish a Peak BRCP and a Flexible BRCP.[35] As the Coordinator has determined that both the Flexible BT and Peak BT are identical, the Peak BRCP and Flexible BRCP will also be identical.

The BRCP reflects the expected capital and fixed O&M costs of the BT and these costs are annualised over the economic life of the Facility.[36] The ERA must publish a draft report outlining its proposed BRCP for stakeholder consultation.[37] The ERA must publish its final determination report and consider the submissions received on its draft determination.[38]

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31 The Reserve Capacity Price is determined by AEMO for a particular capacity year.

32 Electricity System and Market Rules (WA), 26 February 2026, Rule 4.29.1, (online).

33 The calculation of the BRCP, together with its application in the determination of capacity price, seeks to balance the cost to consumers of procuring Capacity Credits against the benefits to consumers of improving the reliability of electricity supply.

34 Electricity System and Market Rules (WA), 26 February 2026, Rule 4.16.9, (online).

35 Ibid, Rule 4.16.1.

36 Ibid, Rules 4.16.2(b) and 4.16.2A(b).

37 Ibid, Rule 4.16.6.

38 Ibid, Rule 4.16.7.

### 1.2.1 *Changes to the WEM Procedure: BRCP*

On 30 September 2025, the Coordinator determined that both Flexible and Peak Benchmark Technology must be a lithium BESS with 200 MW injection and 1,200 MWh (6-hour) energy storage, with a 330 kV connection.[39] On 9 October 2025, the Coordinator published an addendum to its determination and specified the location of the BT to be along the Clean Energy Link – North.[40,41] The Coordinator also determined that the BRCPs will be calculated on a gross Cost Of New Entry (CONE) basis, consistent with the previous approach.[42]

Following the Coordinator's determination, the ERA commenced a procedure change process to update the WEM Procedure: BRCP.[43] On 19 January 2026, the updated WEM Procedure: BRCP took effect.[44] We have used this WEM Procedure to determine the 2026 BRCPs.

The BRCP is determined annually based on a hypothetical new entrant building and connecting a notional new Facility in the SWIS at the lowest annual capital cost and annual fixed operating and maintenance costs.[45]

The BRCP is calculated using the following formula:

$$BRCP = \frac{Annualised\ Capital\ Cost + Annual\ Fixed\ O\&M\ Cost}{Capacity\ Credits}$$

Where:

a. $Annualised\ Capital\ Cost$ is the BESS's annualised capital cost in Australian Dollars per year ($/Year) detailed in chapter 4, that is:

   i. Calculated using the formula in the WEM Procedure (see Appendix 6).

   ii. Annualised over a 15-year period using a nominal Weighted Average Cost of Capital (WACC) (see chapter 6 and Appendix 8).

b. $Annual\ Fixed\ O\&M\ Cost$ is a BESS's annual fixed operating and maintenance cost in Australian Dollars per year ($/Year) as detailed in chapter 5; and

c. $CAPACITY\ CREDITS$ are the BESS's Capacity Credits expected to be assigned by AEMO for Year 3 of the Reserve Capacity Cycle (in MWs) (see section 2.14).

In detail, the BRCP's major cost components consist of

- The annualised total capital cost of building and connecting the BESS, including:[46]

[39] Energy Policy WA, 30 September 2025, 2025 Review of the Benchmark Capacity Providers: Coordinator of Energy Determination, (online).

[40] Energy Policy WA, 9 October 2025, 2025 Review of Benchmark Capacity Providers: Coordinator of Energy Determination, Addendum, p. 1 (online).

[41] Western Power, 'Clean Energy Program, Clean Energy Link – North', (online) [accessed 6 March, 2026].

[42] A gross CONE approach does not consider a participant's expected revenues from participation in other markets.

[43] All papers relating to the ERA's procedure change process are available on the ERA website (online).

[44] Economic Regulation Authority, 'WEM Procedure: Benchmark Reserve Capacity Prices', (online).

[45] Ibid, clauses 2.1.1 and 2.1.2.

[46] Economic Regulation Authority, 'WEM Procedure: Benchmark Reserve Capacity Prices', section 3 (online).

  - Total BESS supply and installation costs
  - Construction costs
  - Transmission connection capital costs (including the Fixed Capital Charge)
  - Land costs
  - Other indirect costs including:
    - Owner's design and project management costs
    - Legal, financing and insurance costs
    - Environmental and development approval costs
    - Connection, registration and licencing costs.
- An annualised fixed O&M component, which includes:[47]
  - The fixed maintenance costs of the BESS including service, inspection and preventive maintenance
  - Corporate overheads
  - Transmission network service charges
  - Transmission O&M costs
  - Any other reasonable fixed operating and maintenance costs such as local government rates and site security.

To account for financing, the BRCP is determined using a WACC approach across a 15-year expected economic life. The 15-year expected economic life of the BESS is specified in the WEM Procedure and was arrived at based on the typical financing terms for large-scale battery projects and the expected life of cycling lithium-ion battery cells given typical battery cycling degradation profiles.[48]

## 1.3 References throughout this determination

Throughout this determination:

- References to the WEM Procedure refers to the BRCP WEM Procedure, unless otherwise specified.[49]
- Cost and price estimates are in Australian dollars and exclude the Goods and Services Tax, unless otherwise specified.

[47] Economic Regulation Authority, 2026, *WEM Procedure: Benchmark Reserve Capacity Prices*, section 5, (online).

[48] Economic Regulation Authority, 2026, *WEM Procedure: Benchmark Reserve Capacity Prices*, clause 2.2.3(a)(ii) (online).

[49] Economic Regulation Authority, 2026, *WEM Procedure: Benchmark Reserve Capacity Prices*, clause 2.2.3(a)(ii) (online).

- All references to the 2026 BRCP refer to the ERA's BRCP determination for the 2028/29 capacity year, unless otherwise specified.
- All references to the BRCP or BRCPs refers to both the Peak BRCP and Flexible BRCP, unless otherwise specified.

# 2. Scope of this determination

The scope of the ERA's determination is defined by the ESM Rules and the WEM Procedure and is consistent with the Coordinator of Energy's recent changes to the BT used to calculate the BRCP. This chapter discusses the significant issues including the purpose of the BRCP and our responses to the key issues raised in stakeholder submissions on the BRCP draft determination.

To determine the 2026 BRCP, the ERA used public information and advice from consultants GHD Advisory, Western Power, and Landgate.[50] GHD engaged with vendors to research and quote the various capital and fixed O&M cost components of the BRCP, which GHD then quality assured against its internal database. GHD has provided us with quotes of various cost components as of January 2026 (detailed in GHD's report).[51] We then escalated the relevant cost components to 2028, which is when the BT is expected to be in operation based on indices such as the Consumer Price Index (CPI) and the Western Australian Wage Price Index (WPI). Specific details on the cost components and escalated costs can be found in our BRCP calculation model, which is published on our website.[52] Western Power provided us with the estimate of the transmission connection capital costs.[53] Landgate provide us with land valuations for the eight areas on the Clean Energy Link – North.[54] Both of these reports are also available on our website.

Our method provides careful consideration of the cost components which are backed up by data using information obtained by consultants, vendors, public and proprietary databases, and has delivered the determination within the codified deadline.

## 2.1 Summary of final determination

The ERA's final BRCP determination of $488,500 per MW per year is 35 per cent higher than the 2025 BRCP of $360,700 per MW per year.[55] There are two changes in our cost construction between this determination and the 2025 determination (published in December 2024).

For this determination, we have removed contingency costs from the capital costs component of the BRCP and used grid-following inverters for the power conversion system. Also, we have removed from our 2026 BRCP draft determination the Original Equipment Manufacturer (OEM) extended warranty and firmware upgrade costs from the fixed O&M cost component of

50 Economic Regulation Authority, 2026, *Benchmark Reserve Capacity Price costs 2028/29 Capacity Year*, Report prepared by GHD Advisory, p. 24, (online); and,

Economic Regulation Authority, 2026, *Land Values for the 2026 Benchmark Reserve Capacity Price*, Report prepared by Landgate, (online); and,

Economic Regulation Authority, 2026, *Total Transmission Cost Estimate for the Benchmark Reserve Capacity Price for 2028/29*, Report prepared by Western Power, (online).

51 Economic Regulation Authority, '2026 Benchmark Reserve Capacity Prices to apply to the 2028-29 capacity year', (online).

52 Ibid.

53 Economic Regulation Authority, 2026, *Total Transmission Cost Estimate for the Benchmark Reserve Capacity Price for 2028/29*, Report prepared by Western Power, (online).

54 Economic Regulation Authority, 2026, *Land Values for the 2026 Benchmark Reserve Capacity Price*, Report prepared by Landgate, (online).

55 Economic Regulation Authority, 2025, *Benchmark Reserve Capacity Price for the 2027/28 capacity year: Final determination*, p. 5, (online).

the BRCP. This is following further examination of the issues from stakeholder feedback on our draft determination.

## 2.2 Summary of stakeholder feedback

Stakeholders raised a range of issues in their submissions on the draft determination, with the main issue being the perceived high value of the BRCP's costs and differences to the CSIRO GenCost report. Stakeholders also raised alternative approaches for the ERA to determine various BRCP cost components. The ERA received four submissions on our draft determination from Synergy, the DEED, the ECP and the CME. These submissions have been published alongside this determination.

The submitters' key issues are:

- the perceived high value of the BRCP and differences in cost with the CSIRO GenCost report
- the use of average annual capital cost estimates (compared to the lowest capital costs quotes)
- inclusion of contractor overheads and margins in the BESS capital costs
- the FCC given the perceived policy intent is that it will be revenue neutral
- the inclusion of OEM extended warranties and firmware upgrade costs which were not included in the 2025 determination.

Additional issues from the submissions are about:

- the sharp cost increase in the power conversion system
- the market risk premium for the WACC
- removing contingency costs (supported by submissions)
- the accuracy class estimate used to estimate BRCP cost components
- the incorporation of learning rates in the BRCP determination
- the increase in construction costs
- the recent WEM reforms about extended electric storage duration requirements.

The ERA has considered all this feedback in the appropriate sections of this determination. A detailed summary of stakeholders' feedback and the ERA's response is presented in Appendix 3.

## 2.3 Additional context

The Coordinator of Energy's Benchmark Technology determination set the Benchmark Technology as a 6-hour duration (200 MW / 1,200 MWh) BESS with lithium-ion composition.[56]

[56] Energy Policy WA, 2025, *2025 Review of Benchmark Capacity Providers: Coordinator of Energy Determination,* p. 1, (online).

Therefore, the ERA is required to set the BRCP based on the 6-hour duration BESS Benchmark Technology (also known as the reference technology). The Coordinator of Energy's determination has also set the unconstrained land location where a hypothetical BESS could be built as the Clean Energy Link – North.[57] Following the Coordinator of Energy's determination, we updated the BRCP WEM Procedure and published the final version of the Procedure in January 2026.[58] As part of this Procedure, the ERA identified eight specific areas on the Clean Energy Link – North for purposes of our valuation of the land cost component of the BRCP determination.[59]

## 2.4 Purpose of the BRCP

The BRCP is the assessment of the fixed costs that are expected to be incurred by the BT Facility when connecting to the SWIS.[60] The BRCP is a component of the RCM that provides pricing signals to encourage capacity to be installed in the SWIS. The Reserve Capacity Mechanism provides a mechanism for capacity providers to recover their fixed costs for investing in a Facility.

## 2.5 Our approach for determining the BRCP

The ERA's approach, as set out in the BRCP WEM Procedure, is to engage expertise to assist us in assessing all the reasonable costs expected to be incurred in the development of the BT.[61] We commissioned GHD Advisory to provide market advice for the 2026 BRCP determination. GHD engaged with vendors to research the various capital and fixed O&M cost components of the BRCP which GHD quality assured against its internal database. GHD provided us with quotes of various cost components as of January 2026 (detailed in GHD's report).[62]

This approach uses an Enterprise Contract Management method where the risk of non-delivery is minimised by securing battery manufacturing through contracts today, to allow for supply, installation, connection, delivery and construction by the start of the relevant capacity year. This accounts for the time required for the battery project to be fully operational at the specifications required of the BT. This approach is consistent with the aims of the RCM as it incentivises capacity to be available for the capacity year.

Western Power provided us with the estimate of the transmission connection capital costs.[63] Landgate provide us with land valuations of the eight areas on the Clean Energy Link – North.[64] Both of these reports are also available on our website. We then escalated the relevant cost components to 2028 which is when the Benchmark Technology is expected to be in operation

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57 Energy Policy WA, 2025, *2025 Review of Benchmark Capacity Providers: Coordinator of Energy Determination: Addendum*, p. 1, (online).

58 Economic Regulation Authority, 2026, *WEM Procedure: Benchmark Reserve Capacity Prices*, (online).

59 The specific areas on the Clean Energy Link – North were determined to be Three Springs, Eneabba, Badgingarra, Cataby, Gingin, Muchea, Pinjar, and Neerabup.

60 The BRCP is set on a Gross Cost of New Entry (CONE) basis.

61 Economic Regulation Authority, 2026, *WEM Procedure: Benchmark Reserve Capacity Prices*, clause 2.2.1, (online).

62 Economic Regulation Authority, 2026, *Benchmark Reserve Capacity Price costs 2028/29 Capacity Year*, Report prepared by GHD Advisory, (online).

63 Economic Regulation Authority, 2026, *Total Transmission Cost Estimate for the Benchmark Reserve Capacity Price for 2028/29*, Report prepared by Western Power, (online).

64 Economic Regulation Authority, 2026, *Land Values for the 2026 Benchmark Reserve Capacity Price*, Report prepared by Landgate, (online).

based on indices such as the CPI and WPI. Specific details on the cost components and escalated costs can be found in our BRCP calculation model, which is published on our website as a spreadsheet.[65] Our cost estimates are intended to align as closely as possible with the costs quoted for actual projects in undertaken Western Australia.

## 2.6 CSIRO GenCost report

Submissions have referenced the CSIRO's generator cost (GenCost) report, which is an annual, national report that estimates the cost of building new electricity generation, storage, and hydrogen projects in Australia. The GenCost 2025/26 draft report includes cost estimates for batteries that differ from the figures that the ERA has obtained through its BRCP method.

### 2.6.1 *CSIRO report in context*

CSIRO's GenCost report is intended to provide "capital cost data for the electricity modelling and planning community."[66] The latest GenCost report is a draft for consultation. At the time of this determination, the final GenCost report has not been published. CSIRO engaged GHD to provide data for their GenCost report.

The GenCost report is for planning and modelling purposes centred in the National Electricity Market (NEM). CSIRO engaged GHD to provide data and an accompanying report for its GenCost report which provides an update of the current cost of electricity generation across various technology, including storage. The report only includes capital costs for a location not greater than 200 kilometres from the Victorian metropolitan area, with GHD providing data to adjust for different locations in the NEM.[67] CSIRO then makes capital cost projections and project management estimates using GHD's data as the basis of its GenCost report.[68]

Given the material differences between the GenCost report's estimates for battery storage and those derived by the ERA's consultant GHD, the ERA has closely examined the GenCost report and other sources as part of this final determination. Specifically, the GenCost report's costs do not provide an itemised break down or details on specific cost components on how these costs were derived. The GenCost report provides a general top-down assessment of approximate technology costs for many different types of electricity providers, which aligns with that document's purpose.[69] The ERA's charter differs to that of the CSIRO's report in that our approach is necessarily a bottom-up cost estimate required to meet the Benchmark Technology's specifications and reflect the specific costs incurred to build the battery in the SWIS. Our BRCP determination derives the estimates for the various individual capital cost components and these are shown in chapter 5 and Appendix 7.

### 2.6.2 *Comparing ERA draft determination with GenCost and other sources*

Appendix 9 contains the assessment that the ERA took of other large-scale battery project costs to see how they compare against the GenCost estimates for battery projects. We researched large scale battery projects which included the nine proposed or under

65 Economic Regulation Authority, '2026 Benchmark Reserve Capacity Prices to apply to the 2028-29 capacity year', (online).

66 CSIRO, 2025, *GenCost 2025-26: Consultation draft*, p. vii, (online).

67 CSIRO, 2025, *GenCost 2025-26: Consultation draft*, Appendix B Data tables, p. 64, (online).

68 CSIRO, 2025, *GenCost 2025-26: Consultation draft*, section 1.1.1, pp. 12-13, (online).

69 AEMO, 2025, *2025 Energy Technology Cost and Technical Parameter Review: Draft Report (Rev C),* Report prepared by GHD, (online).

construction projects across Australia (shown in Appendix 9). These findings are summarised in Table 2.

**Table 2: Comparison of battery project costs and GenCost amounts**

| | Average project cost ($/kWh) | Average GenCost amount ($/kWh) | Average difference project vs GenCost (%) |
|---|---|---|---|
| NEM locations | 481 | 517 | (8) |
| WEM locations | 716 | 527 | 26 |

*Source: GenCost reports and individual battery project references are in Appendix 9.*

*Note: The GenCost figures used were for 4-hour batteries.*

*The average difference is derived from the individual project cost differences against the specific GenCost figure for that particular year which is detailed in Appendix 9. The average difference figure cannot be computed from the high-level average project cost and average GenCost amounts shown here but have been calculated on a project-by-project level.*

When comparing the GenCost report against other 4-hour grid-scale battery projects, on average the GenCost report was around 8 per cent higher than the cost of NEM projects. However, when compared to Western Australia, the GenCost report was around 26 per cent lower than BESS project costs in the WEM.

The ERA notes that the purpose of the CSIRO GenCost report is for planning and modelling purposes in the NEM. The cost differences with Western Australia reinforces the need for sourcing specific costs to Western Australia to develop a BESS in the SWIS to derive the BRCP.

When comparing the cost of the BESS in our BRCP determination (at $521/kWh) against comparable batteries in Western Australia, our costs are in line with similar projects in this State. For example, the Baldivis battery with 250 MW of capacity is expected to cost $500/kWh, and the Collie battery (also with 250 MW of capacity) is expected to cost significantly more at $800/kWh.

## 2.7 Learning rates

DEED stated in its submission that the ERA has not adjusted the cost estimates for the BESS modules and the Power Conversion System (PCS) components to reflect the learning rate (that is, that the costs associated with a BESS are expected to decrease as the new technology improves over time).[70]

The ERA has not included any cost reductions from the expected learning rate in our determination. In accordance with the BRCP WEM Procedure, the new BESS Facility must be able to provide Capacity at the commencement of the 2028/29 capacity year (specifically 1 October 2028).[71] Therefore, the BRCP determination is about procuring the BESS components at the time of making the determination for delivery in two years. We use prices at the time of making the BRCP determination and escalate the prices by two years ahead to calculate the BRCP. This approach is consistent with prior BRCP determinations. The

[70] Economic Regulation Authority, '2026 Benchmark Reserve Capacity Prices to apply to the 2028-29 capacity year', (online).

[71] Economic Regulation Authority, 2026, *WEM Procedure: Benchmark Reserve Capacity Prices*, clause 2.1.6, (online).

escalation reflects the expected rates of inflation. A BESS is a major infrastructure project that is unlikely to be procured and delivered within a single year. We cannot use the forecast prices for the BESS components two years ahead of time because if investors attempt to procure the BESS in the year of delivery, they may not have the battery in time. Our BRCP determination details the various cost components of the capital costs, and these are shown in chapter 5 and Appendix 7. Specific cost details on the BESS modules and PCS can be found in section 5.1 of this determination.

## 2.8 Lowest versus average annual capital costs

The BRCP is intended to provide an accurate indication of the costs to build a new hypothetical BESS in the SWIS that is connected and ready to provide capacity for the 2028/29 capacity year. The ERA uses the average cost for each capital cost category when undertaking our evaluations, to derive an appropriate lowest likely incurred cost. We do not take the lowest possible cost for each component. The issue with taking the lowest cost per component is that it may not reflect the reality of procuring a grid-scale BESS because of the risk of cost overruns as the project progresses. Using the lowest cost per category does not reflect the expected overall project cost. For example, in discussions with GHD, a supplier was able to provide the lowest cost battery units, however, their power conversion system for that package was significantly higher than other vendors' prices.

Additionally, a BT costing that adopted the lowest overall quote for the BESS project would be imprudent because of the risk of cost overruns as the project progresses. Further, using the lowest overall project cost means that the individual cost components cannot be sufficiently scrutinised due to opaque linkages and interdependencies across the quote's project build assumptions.

Instead, an average approach for each cost category gives a better overall cost estimate of what a battery project developer would incur when building a battery in the SWIS. This reduces the risk of needing contingency (see section 5.5.2) because it is not based on a specific set of supplier-based assumptions but rather on the average cost across a number of suppliers to meet the BT's specifications.

Quality assurance has been undertaken in examining the average capital costs obtained by GHD for this determination. GHD has quality assured these average costs against their Australian and international datasets. The ERA has also examined these quality assured costs in our analysis.

The various capital and fixed O&M cost components are detailed in chapters 5 and 6.

## 2.9 Contractor overheads and margins

DEED and the ECP stated in their submissions that GHD has quoted contractor overheads (25 per cent) and margins (12 per cent) as separate allowances.[72] Their feedback suggested that contractor overheads and margins should not be included in the BRCP determination because it is possible that BESS developers may decide not to contract out the construction of BESS Facilities.[73]

[72] Economic Regulation Authority, '2026 Benchmark Reserve Capacity Prices to apply to the 2028-29 capacity year', (online).

[73] Ibid.

Following consideration of these submissions, the ERA has decided to keep the contractor overheads and margins as a cost component of the BRCP for the final determination. Despite an overhead or margin, contracting provides the lowest cost option for a new entrant to the SWIS, especially for those without experience or personnel who specialise in BESS construction. GHD advised us that owners of BESS Facilities do not undertake the building of these Facilities themselves and such Facilities are almost always built with input from contractors. The development and construction of BESS Facilities is highly specialised and using contractors delivers efficiency gain and value to the project in excess of the cost of contracting. Therefore, it is appropriate to include these overheads and margins as they are the least cost method.

GHD has advised that if contractor overheads and margin costs were removed, then the other cost components of procurement and development can be expected to increase by more than the gain from removing such margins and overheads.

## 2.10 Fixed Capital Charge

DEED has proposed an FCC of $100,000 per MW to cover costs for shared network transmission assets for new and upgraded generation and load connections that are over 10 MW in size, to come into effect from 1 July 2026.[74] We included this in our draft determination and in the BRCP WEM Procedure because the FCC is State Government policy.[75] The FCC equates to an additional $20 million in the transmission connection capital costs component of the BRCP.[76]

In its submission, Synergy supported the inclusion of the FCC in the BRCP, in principle.[77] However, both Synergy and the ECP raised concerns over the additional cost on consumers.[78]

We understand that the FCC is expected to be cost neutral at a system level in the SWIS however, this does not necessarily translate to cost neutrality for new Facilities. The BRCP is based on shallow connection costs with shared network costs not previously incorporated into the determination. Given that the FCC is a fixed cost that will be incurred by the BESS Facility, it has been included in this determination.

Further details on the FCC can be found in section 5.4.1 of this determination.

## 2.11 OEM extended warranties and firmware upgrade costs

The CME queried whether OEM extended warranties and firmware upgrade costs should be included, noting they were not included in the previous 2025 BRCP determination. The CME

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74 Economic Regulation Authority, 2026, *2026 Benchmark Reserve Capacity Prices for the 2028-29 capacity year: Draft determination*, pp. 12-13, (online); and
Department of Energy and Economic Diversification, 4 December 2025, *Fixed Capital Charge: Consultation Paper*, pp. 5-6 and p. 11, (online).

75 Economic Regulation Authority, 2026, *2026 Benchmark Reserve Capacity Prices for the 2028-29 capacity year – Draft determination*, pp. 12-13, (online).

76 Ibid.

77 Economic Regulation Authority, 2026, *2026 Benchmark Reserve Capacity Prices for the 2028-29 capacity year: Draft determination*, pp. 12-13, (online).

78 Economic Regulation Authority, '2026 Benchmark Reserve Capacity Prices to apply to the 2028-29 capacity year', (online).

stated that the inclusion of this cost component added $2.6 million to the fixed O&M component of the BRCP.[79]

Following further consideration, we have decided to remove OEM extended warranties and firmware upgrade costs from the final determination. The reason for our decision is that we are making a BRCP determination based on the minimum level of specification required to connect a BESS Facility in the SWIS as per the BRCP WEM Procedure.[80] The Procedure does not require the inclusion of extended warranty costs in the BRCP. If Facility owners wish to have extended warranties and firmware upgrades for their BESS, then this cost could be recovered as a variable cost which is allowed in their energy price offers under the ERA's Offer Construction Guidelines.[81]

Further detail about the removal of this item can be found in chapter 6 of this determination.

## 2.12 All other points from stakeholder submissions

Stakeholders also raised points in relation to the perceived sharp cost increase in the power conversion system, questioned the market risk premium for the WACC, supported our removal of contingency costs, raised concern about the accuracy class estimate and noted the significant increase in construction costs.

Our responses to these submissions are summarised below and set out in more detail in Appendix 3.

### 2.12.1 *Power conversion system*

In the BRCP WEM Procedure, the ERA specified that the BESS must be able to provide 200 MW injection capacity and 1,200 MWh energy storage on its first day of operation.[82]

As part of its submission on the draft determination, the ECP raised concerns about the 84 per cent increase in the cost of the PCS in comparison to last year's determination.[83] The ECP stated that this seems unreasonable given the injection capacity has not changed from the last determination, and questioned whether the cost increase scales with storage, rather than capacity.[84] The CME also raised the PCS cost.[85]

The ERA has not changed our cost estimate of the PCS in this final determination. We have engaged further with GHD to confirm that the cost increase of the PCS was due to market dynamics and the newer generation technology of PCS that is being developed. The cost of the PCS has not increased due to the increased storage duration requirements of the BT, but rather due to market and technical factors.

Further detail about the PCS costs can be found in section 5.1.2 of this determination.

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79 Economic Regulation Authority, '2026 Benchmark Reserve Capacity Prices to apply to the 2028-29 capacity year', (online).

80 Economic Regulation Authority, 2026, *WEM Procedure: Benchmark Reserve Capacity Prices* (online).

81 Economic Regulation Authority, 1 February 2025, *Offer Construction Guideline*, pp. 25-26, (online).

82 Economic Regulation Authority, 2026, *WEM Procedure: Benchmark Reserve Capacity Prices*, clause 2.1.6(b), (online).

83 Economic Regulation Authority, '2026 Benchmark Reserve Capacity Prices to apply to the 2028-29 capacity year', (online).

84 Ibid.

85 Ibid.

### 2.12.2 *Risk premium for the Weighted Average Cost of Capital*

In its submission, the ECP questioned whether the market risk premium of 5.8 per cent as part of the WACC should be lower.[86]

The ERA has not changed the market risk premium because the underlying financing requirements have remained the same. The WACC has increased because certain components (other than the market risk premium) have increased. A detailed discussion of the components of the WACC can be found in chapter 7 and Appendix 10.

In estimating the BRCP's WACC, we have considered the returns and risk from available Australian BESS projects. Most of these BESS projects have long-term offtake contracts to manage the risk of these projects. While the BRCP provides a current price signal, the BRCP does not guarantee revenues over time. Significant risk still exists in the RCM through the certification of Capacity, and the determination of the Reserve Capacity Price. In the WEM, capacity revenues for a BESS project can change due to changes in the BRCP, the adjustment factor for overcapacity and the quantity of Capacity Credits allocated.

Further detail about the market risk premium and the WACC can be found in chapter 7 and Appendix 10.

### 2.12.3 *Contingency costs*

We removed project contingency costs from the BRCP draft determination because the BRCP WEM Procedure requires the BRCP to "*include all reasonable costs expected to be incurred*."[87] In making our draft determination, we considered that contingency costs would only be incurred if an adverse event occurs. Ideally, contingency costs are not incurred, and the ERA had been concerned about whether this potentially overcompensates capacity credit holders.[88] We acknowledge that in previous BRCP determinations, we had included contingency costs in the calculation of the BRCP.[89]

Both the ECP and DEED supported our decision to remove contingency costs from the BRCP calculation.[90]

Further detail about contingency costs can be found in section 5.5.2 of this determination.

We have maintained our position to exclude contingency costs.

***Accuracy class estimate***

The cost values provided in the BRCP determination are estimates to the AACE Class 5 accuracy range (+100 per cent to -50 per cent).

86 Economic Regulation Authority, '2026 Benchmark Reserve Capacity Prices to apply to the 2028-29 capacity year', (online).

87 Economic Regulation Authority, 2026, *2026 Benchmark Reserve Capacity Prices for the 2028/29 capacity year: Draft Determination*, p.14, (online).

88 Ibid.

89 Ibid.

90 Economic Regulation Authority, '2026 Benchmark Reserve Capacity Prices to apply to the 2028-29 capacity year', (online).

The ECP raised concerns in its submission that this accuracy class could imply cost estimates up to 100 per cent above actual costs.[91] DEED also raised the "wide uncertainty band" of using a Class 5 assessment and suggested the ERA consider benchmarking the cost estimates from GHD against other sources, such as the GenCost report.[92]

To clarify, the accuracy class estimate is a range and not an additional margin of the cost. This class is appropriate to the quotes provided because vendors provide initial gauges of the project costs at the early stage of the project lifecycle. Vendors do not provide their quotes as final and definitive for the project. For context, a BESS development project has a low level of project definition, with a broad level of unknowns. Therefore, the accuracy class estimate has a wide band of uncertainty because it is difficult to forecast prices at the beginning of the project lifecycle relative to the actual prices that are incurred once the project has been fully scoped. We have confirmed with GHD that costs generally increase as the project progresses. Therefore, the Class 5 estimates are the best possible category of cost estimation at this point of project definition for the BRCP determination.

Our detailed discussion of the various capital and fixed O&M cost components can be found in chapters 5 and 6 of this determination.

### 2.12.4 *Construction cost calculation*

The CME raised concerns that construction costs assumed in the draft BRCP determination increased by 82 per cent relative to the 2025 BRCP determination.[93] The CME stated that this increase does not appear reasonable or efficient, noting that it significantly exceeds the Australian Bureau of Statistics' non-residential construction cost inflation of 3.9 per cent in Western Australia over the past year.[94]

The ERA's approach is to obtain construction costs from expert sources, and we cannot rely solely on construction cost indices to calculate costs. Construction cost indices show the change in the costs of construction and reflect broader market trends. Such indices are not suitable for determining the cost of a specific BT, connected to a particular part of the SWIS, at a defined point in time, especially when the BT is changing substantively from previous determinations. In developing construction cost assumptions, the ERA has applied the method in the BRCP WEM Procedure, which requires costs to be based on actual, market-tested evidence.[95] Consistent with this approach, GHD was engaged to obtain quotations for construction costs. GHD used its benchmarks based on recent project data, the previous BRCP and publicly available information. We welcome suggestions on alternative methods for obtaining credible quotes to build the BESS as required by the BRCP. In the absence of such methods, the ERA will continue with the current method reflected in the BRCP WEM Procedure.

Further detail on construction costs can be found in section 5.2 of this determination.

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91 Economic Regulation Authority, '2026 Benchmark Reserve Capacity Prices to apply to the 2028-29 capacity year', (online).

92 Ibid.

93 Chamber of Minerals and Energy, 2026, Submission to *2026 Benchmark Reserve Capacity Prices for the 2028/29 capacity year: Draft Determination,* p.2.

94 Australian Bureau of Statistics, December 2025, 'Producer Price Indexed, Australia', (online) [accessed 24 Feb. 2026].

95 Economic Regulation Authority, 2026, *WEM Procedure: Benchmark Reserve Capacity Prices*, clauses 2.1.6 and 2.1.7, (online).

### 2.12.5 *Impact of the recent WEM reform policies*

Synergy submitted that recent reforms to the ESM Rules have extended storage duration requirements (ESRDR) protection for Electric Storage Resources from five to 10 years and introduced an ESRDR Uplift in the Reserve Capacity Target. Synergy expressed concern that shorter duration BESS may be overcompensated, receiving the same price as a longer duration BESS.

The ERA has not changed our approach to the determination of the BRCP or the final BRCP. We acknowledge Synergy's point. However, these reforms do not affect this BRCP determination.

# Final determination

The ERA's determination of the 2026 BRCPs for both peak and flexible capacity is $488,500 per MW per year for the 2028/29 capacity year (see Table 3).[96]

**Table 3: BRCP determinations for the 2028/29 capacity year**

| BRCP type | $ per MW per year |
|---|---|
| Peak BRCP | 488,500 |
| Flexible BRCP | 488,500 |

*Source: ERA assessment of BRCP data, using the formula in the BRCP WEM Procedure*

Since the Coordinator of Energy determined that both the Peak and Flexible BRCPs are to be based on the same BT, the BRCPs are the same. The BRCPs will differ if the specifications, characteristics or underlying technology for each BRCP differs.

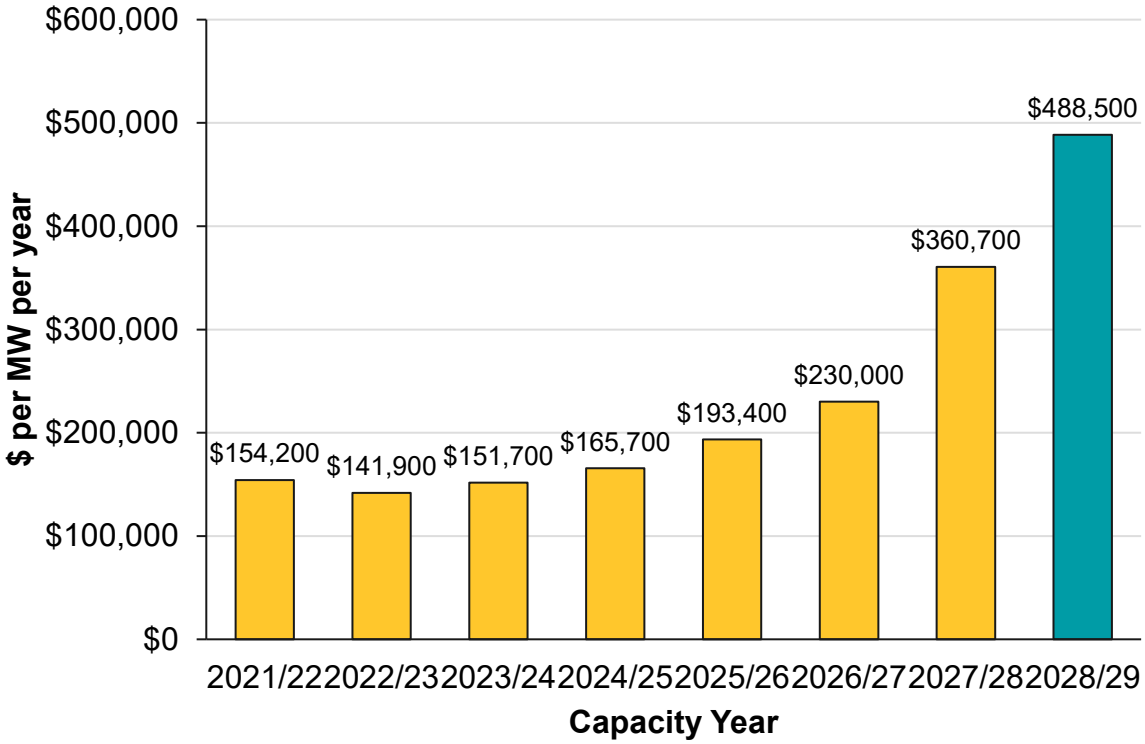
AEMO will use the BRCP to determine the Peak and Flexible Reserve Capacity Prices for 2028/29.

Figure 1 shows the Peak BRCPs since the 2021/22 capacity year.[97] The large increase in 2027/28 is primarily due to the more expensive battery BT relative to the previous open cycle gas turbine (OCGT) peaking generator technology. The increase in the 2028/29 capacity year is due to the change in the BT's storage duration from four hours to six hours and the higher associated costs.

96 Electricity System and Market Rules (WA), 26 February 2026, clause 4.16.1, (online).

97 The Flexible Benchmark Reserve Capacity Price was introduced for the 2025 Reserve Capacity Cycle and applies from the 2027/28 Capacity Year resulting from changes to the ESM Rules on 13 December 2023. The ERA must determine both Flexible and Peak BRCPs. Flexible Capacity is the price paid to those capacity providers with capacity that can respond to large and sudden changes in demand (Electricity System and Market Rules (WA), 26 February 2026, Rule 4.16.1, [online]).

**Figure 1: BRCPs from the 2021/22 capacity year to 2028/29**




*Source: Australian Energy Market Operator, 'Benchmark Reserve Capacity Price archive', (online) and Economic Regulation Authority, 'Benchmark Reserve Capacity Price', (online).*

*Note: For the 2021/22 to 2026/27 capacity years, the BRCP was based on a 160 MW open-cycle gas turbine.*

*Both of the Peak and Flexible BRCPs for 2027/28 were determined based on a 200 MW / 800 MWh BESS benchmark technology.*

*The 2028/29 BRCPs were determined based on a 200 MW / 1,200 MWh BESS for both Peak and Flexible capacity.*

## 2.13 The BRCP calculation

The BRCP is calculated using the following formula:

$$BRCP = \frac{Annualised\ Capital\ Cost + Annual\ Fixed\ O\&M\ Cost}{Capacity\ Credits}$$

Where:

a. $Annualised\ Capital\ Cost$ is the BESS's annualised capital cost in Australian Dollars per year ($/Year) detailed in chapter 4, that is:

   i. Calculated using the formula in the WEM Procedure (see Appendix 6).

   ii. Annualised over a 15-year period using a nominal Weighted Average Cost of Capital (WACC) (see chapter 6 and Appendix 8).

b. $Annual\ Fixed\ O\&M\ Cost$ is a BESS's annual fixed operating and maintenance cost in Australian Dollars per year ($/Year) as detailed in chapter 5; and

c. $CAPACITY\ CREDITS$ are the BESS's Capacity Credits expected to be assigned by AEMO for Year 3 of the Reserve Capacity Cycle (in MWs) (see section 2.14).

d. Table 4 contains a comparison of the 2026 BRCP determination against the final 2025 BRCP values, by component.

**Table 4: Changes between the 2026 and 2025 BRCPs by cost component**

| Component | 2026 determination | 2025 determination | Change from 2025 |
|---|---|---|---|
| **BRCP ($/MW/year)** | **488,500** | **360,700** | **127,800**<br>**35%** |
| Annualised capital costs ($/year) | 86,285,469 | 64,016,990 | 22,268,479<br>35% |
| Annual fixed O&M costs ($/year) | 11,404,864 | 8,121,329 | 3,283,535<br>40% |
| Expected Capacity Credits (MW) | 200 | 200 | 0<br>0% |

*Source: ERA analysis of BRCP data and Economic Regulation Authority, 2025, 2005 Benchmark Reserve Capacity Price for 2027/28 capacity year: Final determination, p. 6, (online).*

Chapter 5 provides details on the BESS's annualised capital costs and chapter 6 provides details on the fixed O&M costs for the 2026 BRCP. For completeness, comparisons between the 2026 BRCP and the 2025 BRCP by cost component are shown in Appendix 5, Appendix 7 and Appendix 8. Differences between the 2026 BRCP draft determination and final determination are in chapter 4 and Appendix 6. The ERA has published the BRCPs calculation spreadsheet on the ERA's website to provide transparency of the BRCP calculation.[98]

## 2.14 Expected capacity credits

The expected capacity credits for the 2026 BRCP BESS are 200 MW, based on the BRCP WEM Procedure that requires the BESS to be able to inject 200 MW on day 1 of the 2028/29 capacity year. The BESS build-size accounts for degradation between construction, commissioning and the start of the 2028/29 capacity year, which includes additional capacity to ensure that 200 MW of capacity credits are allocated. The level of this additional capacity is detailed in GHD's report.[99]

The Network Access Quantity framework, which accounts for network limitations when assigning capacity credits, does not affect the BRCPs' number of expected capacity credits as the Coordinator of Energy's determination requires the Benchmark Technology to be

[98] Economic Regulation Authority, '2026 Benchmark Reserve Capacity Prices to apply to the 2028-29 capacity year', (online).

[99] Economic Regulation Authority, 2025, *Benchmark Lithium BESS costs: WEM Procedure – BRCP update*, Report prepared by GHD, p. 6 (online).

installed in an unconstrained part of the network along the Clean Energy Link – North.[100] This was discussed in the ERA's BRCP Procedure review.[101]

[100] The Network Access Quantity (NAQ) is a feature of the RCM that provides a cap on the amount of capacity credits a Facility can receive based on the available network capacity at the relevant connection point. AEMO determines each facility's NAQ annually.

[101] Economic Regulation Authority, 2026, *Procedure Change Report: Benchmark Reserve Capacity Prices – [EEPC_2025_01]*, pp. 5-6, (online).

# 3. Changes from the 2025 BRCP determination

## 3.1 Main differences between 2026 and 2025 determinations

The main differences between the previous 2025 BRCP determination (for 2027/28 capacity year) and this 2026 BRCP determination (for the 2028/29 capacity year) are:

- A change in the reference technology from a 200 MW / 800 MWh (4-hour storage) BESS to a 200 MW / 1,200 MWh (6-hour storage) BESS in line with the Coordinator's determination.
- A change of location from the Pinjar or Kwinana regions to locations along the Clean Energy Link – North, which will link Western Power's terminals in Malaga and Pinjar, also as per the Coordinator (see section 5.3).
- An additional Fixed Capacity Charge of $100,000 per MW to account for shared transmission capital costs (see section 5.4.1).
- Removing the contingency amount (see section 5.5.2).

Other critical costing parameters, including transmission costs and the weighted average cost of capital, have not changed materially from how they were calculated and determined in previous BRCP determinations, other than being adjusted for the larger storage size and the location.

# 4. Changes between the draft and final determinations

This BRCP final determination reflects the latest information available to the ERA. The main changes to the cost components are shown in Table 5. The BRCP has decreased slightly between the draft and final determinations. This is because we have removed OEM extended warranty/firmware upgrade costs from the fixed O&M costs of the BRCP. Specifically, the annual fixed O&M costs have decreased by around $2.7 million or 19% between the draft and final determinations. However, the decrease in the BRCP was offset by a higher WACC and expected increases in forecast inflation over the next four years.

**Table 5: Differences between the 2026 final and draft determination components**

| Cost component | 2026 final determination | 2026 draft determination | Change |
|---|---|---|---|
| **BRCP ($/MW/year)** | **488,500** | **491,700** | **(3,200)**<br>**(0.7%)** |
| WACC (%) | 10.85 | 10.47 | Up 38 basis points |
| Annualised BESS capital costs ($/year) | 86,285,469 | 84,223,474 | 2,061,995 |
| Annual fixed O&M costs ($/year) | 11,404,864 | 14,110,037 | (2,705,174)<br>(19%) |
| Total development and capital costs ($) | 594,232,448 | 593,487,846 | 744,602 |
| Balance of plant ($) | 50,134,897 | 49,797,350 | 337,547 |
| Land cost ($) | 4,372,346 | 4,342,908 | 29,438 |
| Contingency costs ($) | 0 | 0 | N/A |
| BESS O&M ($) | 7,605,349 | 10,541,684 | (2,936,335)<br>(28%) |
| Transmission O&M ($) | 128,818 | 129,265 | (447) |
| Transmission network service charges ($) | 1,786,340 | 1,550,026 | 236,341 |
| Local government rates ($) | 245,718 | 244,064 | 1,654 |

*Source: ERA analysis of BRCP data and Economic Regulation Authority, 2026, 2026 Benchmark Reserve Capacity Prices for the 2028/29 capacity year: Draft determination, (online).*

# 5. Annualised BESS capital costs

The ERA has estimated the total BESS development and capital costs to be around $626 million (or an annualised cost of around $86 million). The BRCP WEM Procedure sets out how to calculate these costs (see Appendix 6).[102]

The largest capital cost contributor is the cost of supplying and installing the BESS, which is around 56 per cent of total capital costs (see Table 6). Construction costs are also a significant contributor at 22 per cent of total capital costs. Each component in Table 6 is discussed in the rest of this chapter. For completeness, a comparison of the 2026 BRCP against the 2025 BRCP is provided in Appendix 5.

**Table 6: BESS capital cost components**

| Cost component | 2026 determination | Contribution to total capital cost (%) | 2025 determination | Change between 2025 and 2026 |
|---|---|---|---|---|
| Supply and Installation costs | 348,047,691 | 56 | 236,125,852 | 111,921,839<br>47% |
| Construction cost | 140,628,621 | 22 | 77,237,106 | 63,391,514<br>82% |
| Transmission connection capital costs | 53,975,600 | 9 | 39,082,200 | 14,893,400<br>38% |
| Land costs | 4,372,346 | 1 | 9,905,563 | (5,533,217)<br>(56%) |
| Other indirect costs | 47,208,190 | 8 | 30,149,414 | 17,058,776<br>57% |
| Contingency costs | 0 | N/A | 58,875,020 | (58,875,020)<br>(100%) |
| Weighted Average Cost of Capital | 31,407,126 | 5 | 23,019,918 | 8,387,208<br>36% |
| **Total BESS capital costs** | **625,639,574** | **N/A** | **474,395,074** | **151,244,500<br>32%** |
| **Annualised capital cost ($/year)** | **86,285,469** | **N/A** | **64,016,990** | **22,268,479<br>35%** |

*Source: ERA analysis of BRCP data*

*Note: Other indirect costs and contingency costs make up the "M" margin – see section 5.5.*

[102] Economic Regulation Authority, 2026, *WEM Procedure: Benchmark Reserve Capacity Prices*, section 3, (online).

## 5.1 BESS supply and installation costs

The ERA has engaged GHD to provide estimates of the BESS supply and installation costs (around $348 million) which is the largest contributor to the BRCP. The BESS supply and installation cost components are in Table 7.

**Table 7: BESS supply and installation cost components and contribution to total BESS capital costs**

| Component | 2026 determination cost ($) | Contribution to total BESS capital costs for 2026 determination (%) | 2025 determination cost ($) | Change between 2025 and 2026 |
|---|---|---|---|---|
| Lithium-ion battery modules | 246,671,109 | 39 | 177,600,000 | 69,071,109<br>39% |
| Power conversion system | 51,241,685 | 8 | 27,800,000 | 23,441,685<br>84% |
| Balance of plant (materials and equipment) | 50,134,897 | 8 | 30,725,852 | 19,409,045<br>63% |
| **Total BESS supply and installation costs** | **348,047,691** | **56** | **236,125,852** | **111,921,839<br>47%** |

*Source: ERA analysis of BRCP data using Economic Regulation Authority, 2026, Benchmark Reserve Capacity Price costs 2028/29 Capacity Year, Report prepared by GHD Advisory, p. 13, (online) with cost escalation applied.*

*Note: We have chosen to use a grid-following power conversion system which costs around $51 million. GHD have provided a quote in the report for a grid-forming power conversion system at around $57 million.*

*Note: Figures may not add up exactly due to rounding.*

### *5.1.1 Lithium-ion battery modules*

The BRCP WEM Procedure requires the BESS to be estimated using a lithium-ion battery module with a lithium iron phosphate sub-chemistry.[103] GHD estimated this at around $247 million, based on original equipment manufacturer information. This cost includes additional capacity to ensure the BESS receives 200 MW of capacity credit allocation in 2028/29.[104]

The increase of $69 million from the 2025 BRCP determination cost is due to the increase in the amount of modules required, resulting from the increase in storage capacity from 800 MWh to 1,200 MWh (a 50 per cent increase) and higher input prices.[105] The higher input costs of

[103] Economic Regulation Authority, 2026, *WEM Procedure: Benchmark Reserve Capacity Prices*, clause 2.1.6(a), (online).

[104] Economic Regulation Authority, 2026, *Benchmark Reserve Capacity Price costs 2028/29 Capacity Year*, Report prepared by GHD Advisory, pp. 11-13, (online).

[105] Ibid, p.11.

battery modules have offset the market expectations in respect of decreasing prices of battery cells.[106]

### 5.1.2 Power conversion system

The power conversion system is estimated to cost around $51 million and comprises inverters that convert the direct current from the battery cells to alternating current for feeding into the Western Power network.[107] This estimate is based on information from original equipment manufacturers, obtained by GHD.

GHD's report provides a cost of grid-forming power conversion systems of $57 million, which is representative of grid-scale BESS offerings in Australia. The ERA has instead used the cost of a grid-following inverter, which is consistent with the BRCP WEM Procedure to include the minimum level of equipment required of the Benchmark Technology that is consistent with the ESM Rules.[108] Neither the ESM Rules, nor the Coordinator of Energy's Benchmark Technology determination, specify the type of inverters that must be used for estimating the BRCP. GHD has subsequently provided the ERA with an estimate of grid-following power conversion systems (approximately $51 million) which is the amount used in this determination. The cost differences are outlined in Table 8Table 8.

**Table 8: Difference in figures for power conversion system between GHD and ERA**

| | Unit cost ($/kW) | Total cost estimate ($) |
|---|---|---|
| **Grid-following power conversion system** | 256 | 51,241,685 |
| **Grid-forming power conversion system** | 283 | 56,575,409 |
| **Difference** | (27) | (5,333,724) |

*Source: Economic Regulation Authority, 2026, Benchmark Reserve Capacity Price costs 2028/29 Capacity Year, Report prepared by GHD, p.13 (online), and further information provided by GHD.*

### 5.1.3 Balance of plant (materials and equipment)

The balance of plant, estimated at around $50 million, covers the supply and delivery of cables, transformers and other materials relevant to a BESS facility.[109] The increase of $19 million relative to the 2025 BRCP determination is mostly due to labour and materials cost increases resulting from updated project cost information and some components that scale with increasing energy (MWh) storage requirements.

As required by the BRCP WEM Procedure, these balance of plant costs have been escalated to 1 April 2028, based on Consumer Price Index (CPI) forecasts.[110]

[106] Economic Regulation Authority, 2026, *Benchmark Reserve Capacity Price costs 2028/29 Capacity Year*, Report prepared by GHD Advisory, p. 11, (online).

[107] Ibid.

[108] Economic Regulation Authority, 2026, *WEM Procedure: Benchmark Reserve Capacity Prices*, clause 2.1.6(d), (online).

[109] Economic Regulation Authority, 2026, *Benchmark Reserve Capacity Price costs 2028/29 Capacity Year*, Report prepared by GHD Advisory, pp. 12-13, (online).

[110] Reserve Bank of Australia, 2026, *Statement on Monetary Policy: February 2026*, p. 59 (online).

## 5.2 BESS construction costs

Construction costs for a new BESS are a significant contributor to the total BESS capital cost at around $141 million and include site preparation and main works construction contracts. The increase in cost is due mostly to the larger storage capacity requiring more modules to be installed (see section 2.12.4) on the construction cost calculation. Further details are available in GHD's report.[111]

These costs are escalated based on expected labour cost increases until 1 April 2028 as required by the BRCP WEM Procedure. Material costs are escalated using the CPI, while labour costs are escalated using the Wage Price Index (WPI).

We have considered different ratios for the materials to labour costs split that might better represent the labour/capital mix in the construction cycle however, we have used GHD's recommended ratio for BESS construction costs. The rationale is that many of the material costs in the development of this project are covered in other cost components, such as 'Lithium-ion battery modules' and 'power conversion systems', thus reducing the material cost component within these construction costs. The ERA has not received further information that would change the use of this 40:60 split of capital to labour for construction respectively.

## 5.3 Land costs

The total land cost is around $4.3 million, 56 per cent lower than the nearly $10 million of land costs in the 2025 BRCP determination (see Table 9). The significant reduction in land costs is due to the more numerous and varying land prices along the Clean Energy Link – North, relative to the average land prices of the Pinjar and Kwinana regions for the 2025 BRCP. This decrease in cost is partially offset by the increase in the total land size required (up to 7.3 hectares from 6.5 hectares) for the additional containers to meet the battery's storage requirements.

The Coordinator of Energy's 2025 Benchmark Technology review determined the unconstrained land location for the BESS to be on the Clean Energy Link – North. The ERA's review of the BRCP WEM Procedure included this requirement and identified eight areas on the Clean Energy Link – North (Three Springs, Eneabba, Badgingarra, Cataby, Gingin, Muchea, Pinjar, and Neerabup) for valuation.[112] Previously, the Pinjar and Kwinana regions only were valued and these regions have a higher average land cost than the average land costs in the regions on the Clean Energy Link – North.

**Table 9: Comparison of land costs between the 2026 and 2025 BRCP determinations**

| BRCP land component | 2026 BRCP determination | 2025 BRCP determination | Difference |
|---|---|---|---|
| Average land cost per hectare ($) (from escalated land cost) | 598,952 | 1,523,933 | (924,981)<br>(61%) |
| Total hectares required | 7.3 | 6.5 | 0.8<br>12% |

[111] Economic Regulation Authority, 2026, *Benchmark Reserve Capacity Price costs 2027/28 Capacity Year*, Report prepared by GHD Advisory, p. 13, (online).

[112] Economic Regulation Authority, 2026, *WEM Procedure: Benchmark Reserve Capacity Prices*, clause 3.5.4, (online).

| BRCP land component | 2026 BRCP determination | 2025 BRCP determination | Difference |
|---|---|---|---|
| Total land cost (no escalation) | 3,913,750 | 9,181,250 | (5,267,500)<br>(57%) |
| Total land cost (with escalation) | 4,372,346 | 9,905,563 | (5,533,217)<br>(56%) |

*Source: Economic Regulation Authority, 2026, Land Values for the 2026 Benchmark Reserve Capacity Price, Report prepared by Landgate, p. 4, (online);*

*Economic Regulation Authority, 2024, Land Values for the 2025 Benchmark Reserve Capacity Price, Report prepared by Landgate, p. 6, (online); and*

*Economic Regulation Authority, 2026, WEM Procedure: Benchmark Reserve Capacity Prices, section 3.5, (online).*

*Note: The details about the escalation of land costs can be found in our 2026 BRCP determination calculation spreadsheet which has been published alongside this determination.*

Details on the land costs are available in Landgate's report.[113] Landgate does not provide cost escalated amounts in their land value assessments. Consequently, the ERA has escalated the total average land valuation by the CPI up to 1 April 2028, as required by the BRCP WEM Procedure.

## 5.4 Transmission connection capital costs

The transmission connection costs of around $54 million consists of the capital costs and the proposed FCC. Although transmission capital costs has decreased by more than $5 million, due to significantly lower land easement costs associated with lower land values on the Clean Energy Link – North (see section 5.3) and a lower escalation factor for network infrastructure, this is offset by the additional FCC, resulting in an overall 38 per cent increase in the total transmission connection capital costs (see Table 10).[114] The ERA has incorporated the FCC into the BRCP WEM Procedure and included these expected costs into this determination (see section 2.10) as they are a fixed cost that will be incurred by the new Facility. The FCC is expected to be implemented on 1 July 2026 well before the commencement of the 2028/29 capacity year on 1 October 2028.

**Table 10: Transmission connection costs comparison between the 2026 and 2025 BRCP determinations**

| BRCP transmission connection cost component | 2026 BRCP determination ($) | 2025 BRCP determination ($) | Difference ($) |
|---|---|---|---|
| Capital cost | 33,975,600 | 39,082,200 | (5,106,600) |
| Fixed Capital Charge | 20,000,000 | N/A | 20,000,000<br>100% |

[113] Economic Regulation Authority, 2026, *Land Values for the 2026 Benchmark Reserve Capacity Price*, Report prepared by Landgate, (online).

[114] Economic Regulation Authority, 2026, *Total Transmission Cost Estimate for the Benchmark Reserve Capacity Price for 2028/29,* Report prepared by Western Power, section 4.2, (online).

| BRCP transmission connection cost component | 2026 BRCP determination ($) | 2025 BRCP determination ($) | Difference ($) |
|---|---|---|---|
| **Total transmission connection capital costs** | **53,975,600** | **39,082,200** | **14,893,400**<br>**38%** |

*Source: Economic Regulation Authority, 2026, Total Transmission Cost Estimate for the Benchmark Reserve Capacity Price for 2028/29, Report prepared by Western Power, (online).*

*Economic Regulation Authority, 2024, Total Transmission Cost Estimate for the Benchmark Reserve Capacity Price for 2027/28, Report prepared by Western Power, (online).*

Western Power provided the ERA with cost estimates for connecting the BESS to the transmission network, which includes building the required substation and transmission lines.[115] The transmission connection costs are nearly $34 million and are detailed in Western Power's report.

### 5.4.1 Fixed Capital Charge

DEED has proposed a FCC of $100,000 per MW to cover shared network transmission assets for new and upgraded generation and load connections that are over 10 MW in size.[116] This charge is expected to start from 1 July 2026, and given this determination is for a battery expecting to be constructed by 1 October 2028, the ERA has included this cost into the BRCP model.

This charge is $20 million based on the 200 MW capacity of the BT at a cost of $100,000 per MW. Although this charge is yet to be finalised, the ERA, in its review of the BRCP Procedure explicitly included this in the BRCP determination because not accounting for this cost would inadequately account for the fixed costs required to build the BT. No escalation is included in this cost as it is expected to be incurred at the same time as the other BRCP capital costs on 1 April 2028.

Questions over the inclusion of the FCC was raised by submissions and are discussed in section 2.10.

## 5.5 "M" margin

The "M" margin accounts for other ancillary, indirect and contingency costs associated with constructing a BESS which also includes insurance. In previous BRCP determinations, when the reference technology was the OCGT, the "M" margin was calculated as a percentage of BRCP reference technology's total installation and construction costs. To allow comparisons with those previous BRCP determinations, when the same method is applied to the BESS's total installation and construction costs, the "M" margin was around 9.7 per cent.[117] The "M"

[115] Economic Regulation Authority, 2026, *Total Transmission Cost Estimate for the Benchmark Reserve Capacity Price for 2028/29,* Report prepared by Western Power, (online).

[116] Energy Policy WA, 9 Jan. 2026, 'Fixed Capital Contribution: Consultation', (online) [accessed 24 Feb. 2026].

[117] The 2026 BRCP "M" margin of 9.7 per cent was calculated by adding the other indirect costs ($47.2 million) and contingency ($0) and dividing that by the power station's costs, comprising of the lithium-ion battery modules ($246.7 million), the power conversion system ($51.2 million), the electrical and control balance of plant costs ($49.8 million) and the total construction costs ($140.3 million). This is consistent with how the "M" Margin was derived in previous BRCP determinations.

margin totalled around $47 million, with its components detailed below. It is significantly lower than in previous determinations due to the removal of contingency (see section 5.5.2).

### 5.5.1 Other indirect costs

GHD provided an estimate of other indirect costs for constructing and installing the BESS of around $47 million (escalated to 1 April 2028).[118]

These include:

- Connection agreements, dangerous goods licensing, and market registration
- Environmental and developmental approvals
- Legal costs, insurance, water supply, and commissioning costs
- Owner's engineering and construction management and support.

These costs were escalated using a forecast of Western Australia's WPI, as most of these costs are labour-related.[119]

### 5.5.2 Contingency costs

The ERA has removed contingency costs from our determination of the BRCP for the 2028/29 capacity year. We consider that contingency costs are incurred in the case that an adverse event occurs. In usual circumstances, contingency costs are not incurred, and the ERA is concerned about whether this potentially overcompensates capacity credit holders. The BRCP WEM Procedure requires the BRCP to "include all reasonable costs expected to be incurred…" and it can be reasonably argued that a contingency is not expected to be incurred.[120]

In previous BRCP determinations, we had included contingency costs and GHD's report contains a contingency of around 14 per cent of the total capital cost for large-scale wholesale BESS projects or around $83 million (without escalation).[121] However, given further consideration, the ERA views it as appropriate to remove this cost component from this determination as this is not an expected cost.

## 5.6 Weighted Average Cost of Capital

The WACC is an estimate of the BESS's financing cost and investor's associated long-term required rate of return for determining the BRCPs' annualised costs. The 2026 BRCP WACC is 10.85 per cent (up from the 10.46 per cent WACC for the 2025 BRCP) and is discussed in chapter 7 and detailed in Appendix 10.

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118 Economic Regulation Authority, 2026, *Benchmark Reserve Capacity Price costs 2028/29 Capacity Year*, Report prepared by GHD Advisory, pp. 22-23, (online).

119 Ibid, pp. 27-28, (online).

120 Economic Regulation Authority, 2026, *WEM Procedure: Benchmark Reserve Capacity Prices*, clause 2.2.1 (online).

121 Economic Regulation Authority, 2026, *Benchmark Reserve Capacity Price costs 2028/29 Capacity Year*, Report prepared by GHD Advisory, pp. 22-23, (online).

# 6. BESS fixed operating and maintenance costs

The BESS's fixed O&M costs accounts for around 14 per cent of the BRCP with an estimated annual cost of around $14 million. The ongoing fixed O&M costs includes:

- BESS O&M, BESS substation O&M, and balance of plant O&M
- Connection assets fixed O&M costs
- Transmission network service charges
- Corporate overheads
- Site security services
- Local government rates.

Table 11 shows the breakdown of total cost across the various fixed O&M cost categories. GHD provided information that the ERA has used to calculate the BRCPs' fixed O&M cost component.[122] A comparison of the BRCP's fixed O&M costs with the 2025 BRCP is detailed in Appendix 8.

**Table 11: Fixed O&M costs by component**

| Component | 2026 Determination ($/year) | 2025 Determination ($/year) | Change between 2025 and 2026 |
|---|---|---|---|
| **Annual fixed O&M costs** | **11,404,864** | **8,121,329** | **3,283,535**<br>**40%** |
| BESS, BESS substation and balance of plant O&M | 7,605,349 | 5,041,739 | 2,563,610<br>51% |
| Connection assets fixed O&M | 128,818 | 124,875 | 3,943<br>3% |
| Transmission network service charges | 1,786,340 | 1,362,173 | 424,167<br>31% |
| Corporate overheads | 1,452,270 | 1,214,511 | 237,759<br>20% |
| Site security | 186,368 | 180,773 | 5,596<br>3% |
| Local government rates | 245,718 | 197,258 | 48,460<br>25% |

Source: *ERA analysis of BRCP data using Economic Regulation Authority, 2026, Benchmark Reserve Capacity Price costs 2028/29 Capacity Year, Report prepared by GHD Advisory, p. 27, (online).*

[122] Economic Regulation Authority, 2026, *Benchmark Reserve Capacity Price costs 2028/29 Capacity Year*, Report prepared by GHD Advisory, pp. 23-27, (online).

## 6.1 BESS, BESS substation and balance of plant O&M

The BESS, BESS substation and Balance of Plant O&M costs include:

- Electrical testing of the BESS substation
- Inspections and servicing of the battery modules and inverter stations
- Preventative maintenance on breakers, cables and other equipment.

This amounts to around $7.6 million per year (with escalation), with details in GHD's report.[123] As noted in section 2.11 of this final determination, we have removed OEM extended warranties and firmware upgrade costs from the fixed O&M costs of this determination. The reasoning for our decision is explained in section 2.11.

## 6.2 Connection assets fixed O&M

The connection asset fixed O&M mostly consists of costs for the ongoing maintenance of the connection switchyard and the overhead transmission line.

These costs are mostly labour and associated overhead and equipment costs amounting to $0.1 million a year.[124]

## 6.3 Transmission network service charges

The BESS will incur Western Power's transmission network service charges for using the electricity network. These charges are estimated at nearly $1.8 million a year, based on the tariffs published by Western Power. This includes use of system charges and metering charges, with further information in GHD's report, available on the ERA's website.[125]

Although there is interaction between the transmission network service charges and the Fixed Capital Charge (see section 5.4.1), given the draft status of the FCC policy, Western Power does not yet have enough information to assess the impact of the policy on the network fees. The ERA is using the latest available data and has made no adjustments because there is not enough available information to assess the potential change to network fees and charges (see section 2.10).

## 6.4 Corporate overheads

Corporate overheads and other related consulting services required for ongoing running of the BESS amounts to around $1.5 million a year and comprises:[126]

- Corporate overheads to cover office costs, employee insurance, office leases
- Insurance costs not associated with BESS plant warranties

[123] Economic Regulation Authority, 2026, *Benchmark Reserve Capacity Price costs 2028/29 Capacity Year*, Report prepared by GHD Advisory, pp. 23-24, (online).

[124] Ibid, pp. 24-25.

[125] Ibid, p. 25.

[126] Ibid, pp. 25-26.

- Legal and regulatory costs
- Subcontractors for maintenance, testing, checks and inspections
- Engineering support for the general operation and troubleshooting issues within the BESS.

Corporate overheads have increased relative to the 2025 determination due to scaling of this component as these costs change relative to the higher cost of the BESS since a higher charge means higher liability and thus higher fees.

## 6.5 Site security

BESS site security costs, including emergency response and regular inspections is estimated at around $0.2 million a year and is detailed in GHD's report.[127]

## 6.6 Local government rates

The local government rates are based on the BESS's 7.3-hectare gross rental value averaged across the local council areas on the Clean Energy Link – North. The average rate amounts to around $0.2 million a year, with details in GHD's report.[128]

[127] Economic Regulation Authority, 2026, *Benchmark Reserve Capacity Price costs 2028/29 Capacity Year*, Report prepared by GHD Advisory, p. 26, (online).

[128] Ibid.

# 7. Weighted Average Cost of Capital

The WACC method is being applied to the BESS project costings, consistent with the BRCP WEM procedure. The WACC is used to estimate the financing costs of the BESS project and represents the long-term required rate of return when determining the annualised cost of the BRCP reference technology.

For the 2026 BRCP final determination, the nominal pre-tax WACC is 10.85 per cent (see Table 12). This is higher than the 10.46 per cent nominal pre-tax WACC for the 2025 BRCP.[129] The higher 2026 BRCP WACC reflects an increase in the nominal risk-free rate, which is partially offset by a lower debt risk premium.

**Table 12: WACC values for the 2026 BRCP compared to the 2025 BRCP WACC values**

| Classification | Parameter | 2026 BRCP value | 2025 BRCP value |
|---|---|---|---|
| **Cost of equity parameters** | Nominal risk-free rate (%) | 4.83 | 4.34 |
| | Equity beta | 1.20 | 1.20 |
| | Market risk premium (%) | 5.80 | 5.80 |
| | Pre-tax return on equity (%) | 13.87 | 13.29 |
| **Cost of debt parameters** | Nominal risk-free rate (%) | 4.83 | 4.34 |
| | Debt risk premium (%) | 1.316 | 1.710 |
| | Debt issuance costs (%) | 0.165 | 0.165 |
| | Pre-tax return on debt (%) | 6.31 | 6.22 |
| **Other parameters** | Debt proportion (gearing) (%) | 40 | 40 |
| | Franking credits (gamma) (%) | 50 | 50 |
| | Corporate tax rate (%) | 30 | 30 |
| **Weighted Average Cost of Capital** | **Nominal pre-tax WACC (%)** | **10.85** | **10.46** |

*Source: ERA analysis of BRCP data*

[129] Economic Regulation Authority, 2024, *2025 Benchmark Reserve Capacity Price for the 2027/28 capacity year: Final determination*, p.18, (online).

## 7.1 Changes to the WACC between the draft and final determinations

Table 13 shows the difference in the WACC values in the draft and final determinations. The WACC values for the 2026 draft determination were determined using a 20-day trading period up to 28 November 2025. For the 2026 final determination, updated figures were revised based on a 20-day trading period up to 6 February 2026.

**Table 13: Changes to the WACC and annual components between draft and final 2026 BRCP determinations**

| Parameter | 2026 final determination | 2026 draft determination | Change to draft |
|---|---|---|---|
| **Nominal pre-tax WACC (%)** | **10.85** | **10.47** | **Up 38 basis points** |
| Nominal risk-free rate (%) | 4.83 | 4.46 | Up 37 basis points |
| Debt risk premium (%) | 1.316 | 1.400 | Down 8 basis points |
| Corporate tax rate (%) | 30 | 30 | No change |

*Source: ERA analysis of BRCP data*

The WACC is discussed in more detail in Appendix 10.

# Appendix 1 List of Tables

# Appendix 2 List of Figures

# Appendix 3 Submissions received

The ERA received four submissions on the 2026 BRCP draft determined from the Department of Energy and Economic Diversification, Synergy, Chamber of Minerals and Energy WA and the WA Expert Consumer Panel.

These submissions are available on the ERA's website and have been summarised in Table 14, along with the ERA's response to the issues raised.[130] We have provided a detailed response to the key issues raised in the submissions in sections 2.6 to 2.12.

**Table 14: Submissions on the 2026 BRCP draft determination**

| Issue | Submitter | ERA's response |
|---|---|---|
| The submitter's own analysis shows that the ERA's cost estimate of the BESS supply, installation and construction is about 40% higher than the submitter's estimates (which used values from the CSIRO GenCost report, when using 2028 values) and more than 20% higher if using the 2025 values. | Department of Energy and Economic Diversification | Refer to sections 2.6 and 2.12.4 of this determination for the ERA's detailed response on this point. |
| Capital costs for BESS supply and installation appears to be too high. Some submissions have cited the GenCost report in which battery prices have declined over the past year by 11% to 16%. | Chamber of Minerals and Energy WA<br>WA Expert Consumer Panel<br>Synergy | We have used estimates from our consultants GHD for the BESS supply and installation costs. The high cost is reflective of the larger battery storage requirements and market conditions for batteries, including high costs for labour, materials and freight. We have also conducted further analysis of battery project costs, see section 2.6 and Appendix 9 of this determination.<br><br>The ERA is bound by the method in the BRCP WEM Procedure (see section 2.5) to determine the BRCP. |
| The Expert Consumer Panel members question whether the estimated costs from which the draft BRCP are based have been adequately sense-checked against other sources | WA Expert Consumer Panel | The 60% reduction in battery quotes is quoted from Brookfield Renewable Partners. This quote is an outlier when compared with more robust and data driven analysis. The ERA cautions comparisons particularly where the storage |

[130] Economic Regulation Authority, '2026 Benchmark Reserve Capacity Prices to apply to the 2028-29 capacity year', (online).

| Issue | Submitter | ERA's response |
|---|---|---|
| by the ERA, as they do not seem reasonable.<br><br>They note that overall battery costs have fallen rapidly, reportedly by as much as 60% in some instances. | | size of the BESS is different, whether the data is specific to Western Australia, and over what time period the prices are assessed.<br><br>The ERA has conducted due diligence against other reports on expected changes in battery costs. Our figure is at the middle of the range out of the quotes.<br><br>The ERA notes that the $/kWh cost of the battery has fallen from $222/kWh in the 2025 BRCP determination to $206/kWh in the 2026 BRCP determination.[131] |
| Submission raised that the cost of the lithium-ion battery modules at $247 million in the draft determination is potentially too high, when compared to recent independent market data.<br><br>The submission recommended ERA to review the assumptions against recent trends. | Synergy | We understand Synergy has made this comment however we are unable to verify this using our own data as we have not been provided with additional evidence from Synergy. The perceived high cost of the battery modules is due to market changes in the modules' support system costs which is increasing battery costs (see section 5.1).<br><br>Although Synergy's stated battery costs are cheaper, this does not necessarily mean the overall project costs are cheaper with the ERA requiring further evidence to amend its determination. |
| The capital costs of the lowest cost BESS – that provides good value in terms of capital and fixed O&M costs – should be the basis for the BRCPs determination, rather than an "averaging" of costs from multiple suppliers. | WA Expert Consumer Panel | The BRCP are required to be calculated based on the lowest annual capital costs and annual fixed O&M costs (glossary of the ESM Rules). The ERA must include all reasonable costs incurred in developing the Benchmark Technology (BRCP WEM Procedure, clause 2.2.1). |

[131] Economic Regulation Authority, 2026, *Benchmark Reserve Capacity Price costs 2028/29 Capacity Year*, Report prepared by GHD Advisory, p. 11, (online); and

Economic Regulation Authority, 2024, *Benchmark Reserve Capacity Price costs – 2027/28 Capacity Year,* Report prepared by GHD Advisor, p. 10, (online).

| Issue | Submitter | ERA's response |
|---|---|---|
| | | The ERA has engaged GHD advisory to procure quotes from prospective vendors. There is an inherent limitation to estimate costs given the limited level of project detail of the Benchmark Technology used to determine the BRCP.<br><br>As discussed in section 2.8, an average of vendor quotes or costs, as appropriate, was used for this determination. |
| Concern that the accuracy class (+100% to -50%) allows estimates to be up to 100% above actual costs. These margins are unreasonable and not necessary. | WA Expert Consumer Panel | See section 2.12.3 of this determination for the ERA's detailed response to this point. |
| Given the wide uncertainty band of the AACE Class 5 accuracy class (+100% to -50%), there could be significant cost impact on consumers from the BRCP. The ERA could consider benchmarking the cost estimates from GHD against other sources. | Department of Energy and Economic Diversification | The accuracy class margin relates to the level of uncertainty when estimating costs at the start of the project and the project risks.<br><br>This is discussed in detail in section 2.12.3 of this determination. |
| Have the estimated battery costs been sense checked by the ERA against other sources? | WA Expert Consumer Panel | The ERA has completed further comparative work against other publications and other battery costs. These are discussed in section 2.6.2 and Appendix 9 of this determination. |
| CSIRO's numbers (from the GenCost report) have been widely used as they are regarded as the most accurate assessment of energy costs in Australia. | Department of Energy and Economic Diversification | This is discussed in section 2.6 of this determination.<br><br>The BRCP is determined based on the costs and specific conditions of connecting the Benchmark Technology to specific locations on the SWIS at a certain point in time. |
| Construction costs appear to be too high and the growth in unit costs exceeds the 3.9 per cent inflation in non-residential construction costs. | Chamber of Minerals and Energy WA | Refer to section 2.12.4 of this determination regarding our construction costs. |

| Issue | Submitter | ERA's response |
|---|---|---|
| Question about the reasonableness of contractor overheads and margins given that most BESS systems are modular and battery projects are being delivered on time and under budget. An announcement from Tesla was cited about reduced construction costs. | WA Expert Consumer Panel | Contractor specialisation in building battery projects means that the value provided by contractors is often greater than the cost of using them. This is discussed in section 2.9 of this determination.<br><br>GHD have confirmed the reasoning behind including contractor overheads and margins and due to the many efficiencies from using contractors, it will generally be the lowest cost option. |
| Learning rates – the submission notes that the ERA's draft determination is based on escalated cost estimates from 2025, by applying the Consumer Price Index and Wage Price Index to 2028.<br><br>However, the ERA has not adjusted for learning rates (cost reductions as a new technology improves) for the BESS modules and power conversion system components.<br><br>If learning rates are applied, then this would effectively apply a negative CPI on those components. | Department of Energy and Economic Diversification<br>Chamber of Minerals and Energy WA | Refer to section 2.7 of this determination for our discussion of learning rates. |
| Contingency costs – support for the removal of contingency costs from the calculation of the BRCP. | Chamber of Minerals and Energy WA<br>Department of Energy and Economic Diversification | We acknowledge this support from these submissions. |
| Power conversion system – capacity of the inverters for the system has remained at 200 MW for the BESS compared to the 2025 BRCP determination.<br>Question about the justification behind the increased cost for the power conversion system. | WA Expert Consumer Panel | We have confirmed with consultants GHD that the increased cost of the power conversion system is due to market conditions and a newer generation of technology for the system. Details are in GHD's report and discussed in section 2.12.1. |
| Power conversion system – support for using grid following inverters. | Chamber of Minerals and Energy WA | We acknowledge this support from the submission. |

| Issue | Submitter | ERA's response |
|---|---|---|
| Submission was unsure whether the Fixed Capital Charge is consistent with the long-term interests of consumers. | WA Expert Consumer Panel<br>Synergy | The BRCP WEM Procedure requires the BRCP to reflect the costs that are expected to be incurred by a new entrant connecting to the SWIS. The FCC is a policy that is likely to be in place by the time of the 2028/29 capacity year, so the FCC has been included as a cost component of the BRCP.<br><br>The impact of the FCC on ongoing transmission network charges incurred by Facilities is unknown at this stage.<br><br>Refer to sections 5.4.1 and 6.3 of this determination for our discussion on this matter. |
| OEM extended warranty/firmware upgrade costs should not be part of the fixed O&M costs of the BRCP. | Chamber of Minerals and Energy WA | We have considered the submission and agree that this cost should not be part of the fixed O&M costs. The BRCP WEM Procedure does not require the incorporation of this component as part of the BRCP.<br><br>We note that if vendors do choose to have extended warranty/firmware upgrade costs, then this could be recovered as part of their variable costs which is allowed under the ERA's Offer Construction Guideline. |
| Whether the 5.8% market risk premium should be lowered because of guaranteed payment stream from the Reserve Capacity Mechanism. | Expert Consumer Panel | The ERA is making no change to the market risk premium because this component has been determined appropriately.<br><br>For context, the BRCP is determined using a WACC approach over a 15-year expected economic life for a BESS, as specified in the BRCP WEM Procedure.<br><br>In estimating the WACC, we have considered the returns and risk from available Australian BESS projects. Most of these BESS projects have |

| Issue | Submitter | ERA's response |
|---|---|---|
| | | long-term offtake contracts to manage the risk of these projects. While the BRCP provides a current price signal, the BRCP does not guarantee revenues over time. Significant risk still exists in the RCM through the certification of Capacity, and the determination of the Reserve Capacity Price.<br><br>In the WEM, capacity revenues for a BESS project can change due changes in the BRCP, the adjustment factor for overcapacity and the quantity of Capacity Credits allocated. |
| Corporate overhead costs are 20 per cent higher than in the 2025 BRCP determination and scaling of these costs should be removed. | Chamber of Minerals and Energy WA<br>Department of Energy and Economic Diversification | The actual costs for corporate overheads have increased based on market conditions, rather than from any scaling of this cost component based on a larger-sized BESS. This is discussed in section 6.4. |
| Submission acknowledges the importance of ensuring the ESR Duration Requirement (set by AEMO in the Electricity Statement of Opportunities) is set appropriate to meet the system's requirement and the important role of the BRCP in providing investment signals.<br><br>However, electricity consumers in the WEM are liable for payments to capacity providers and will face increases in the electricity costs due to higher BRCPs. | Synergy | We acknowledge the point and note that this does not impact the calculation of the BRCP in this determination as the ESR Duration Requirement has been set.<br><br>We have determined the BRCP consistently with the BRCP WEM Procedure and ESM Rules. |
| Have the recent reforms in the WEM to encourage investments been appropriately balanced against the long-term interests of consumers? | Synergy | The ERA notes this comment from Synergy. |

*Source: Submissions on the ERA's 2026 BRCP draft determination (online).*

# Appendix 4 2026 BRCP by cost component

This appendix provides a consolidated breakdown of the different cost components and their contribution to the overall BRCP (see Table 15).

**Table 15: Contribution to the BRCP by cost component**

| Component | Amount ($) | Contribution to the BRCP (%) |
|---|---|---|
| **Capital cost sub-total** | **625,639,574** | **88** |
| Lithium-ion battery modules | 246,671,109 | 35 |
| Power conversion system | 51,241,685 | 7 |
| Balance of plant | 50,134,897 | 7 |
| Total construction costs | 140,628,621 | 20 |
| Land costs | 4,372,346 | 1 |
| Transmission connection capital costs | 53,975,600 | 8 |
| Other indirect costs | 47,208,190 | 7 |
| WACC | 31,407,126 | 4 |
| **Fixed O&M cost sub-total** | **11,404,864** | **12** |
| BESS O&M | 7,605,349 | 8 |
| Transmission O&M | 128,818 | 0 |
| Transmission network service charges | 1,786,340 | 2 |
| Corporate overheads | 1,452,270 | 2 |
| Site security | 186,368 | 0 |
| Local government rates | 245,718 | 0 |
| **Capacity credits** | **200 MW** | **N/A** |

*Source: ERA analysis of BRCP data.*

*Economic Regulation Authority, 2026, Benchmark Reserve Capacity Price costs 2028/29 Capacity Year, Report prepared by GHD Advisory, (online).*

*Economic Regulation Authority, 2026, Land Values for the 2026 Benchmark Reserve Capacity Price, Report prepared by Landgate, (online).*

*Economic Regulation Authority, 2026, Total Transmission Cost Estimate for the Benchmark Reserve Capacity Price for 2028/29, Report prepared by Western Power, (online).*

*Note: Totals may not add up exactly due to rounding.*

# Appendix 5 Comparison between the 2026 BRCP determination and 2025 BRCP determination, by component

Table 16 details the differences between the 2026 and 2025 BRCPs by cost component. As noted previously, the battery storage duration has increased to 6 hours from 4 hours following the Coordinator of Energy's determination of the Benchmark Technology.

**Table 16: Comparison between the 2026 and 2025 BRCP determinations by cost components**

| Component | 2026 determination | 2025 determination | Change |
|---|---|---|---|
| Expected capacity credits | 200 | 200 | N/A |
| WACC | 10.85% | 10.46% | 0.39% |
| Power station cost ($/MW) | 2,443,382 | 1,566,815 | 876,567 |
| Margin for legal, financing, and other costs | 9.7% | 28.4% | (18.7%) |
| Transmission costs ($/MW) | 269,878 | 195,411 | (74,467) |
| Land costs | 4,372,346 | 9,905,563 | (5,533,217) |
| BESS O&M costs ($/year) | 7,605,349 | 5,041,739 | 2,563,610<br>51% |
| Transmission O&M cost ($/year) | 128,818 | 124,875 | 3,943 |
| Fixed Network Access and ongoing charges ($/year) | 1,786,340 | 1,362,173 | 424,167 |
| **Total capital costs ($)** | **625,639,574** | **474,395,074** | **151,244,500** |
| **Annualised capital costs ($/year)** | **86,285,469** | **64,016,990** | **22,268,479** |
| **Annual fixed O&M costs ($/year)** | **11,404,864** | **8,121,329** | **3,283,535<br>41%** |
| **BRCP ($/MW/year)** | **488,500** | **360,700** | **127,800<br>35%** |

*Source: ERA analysis of BRCP data and Economic Regulation Authority, 2024, 2025 Benchmark Reserve Capacity Price for the 2027/28 capacity year – Final determination, p. 27 (online).*

# Appendix 6 Comparison between the 2026 BRCP final determination and the 2026 draft determination, by component

Table 17 details the differences between the 2026 final and draft determinations, by cost component. The BRCP decreased by nearly 1 per cent between the draft and final determinations, due to the removal of the OEM extended warranty/firmware upgrade cost component from the fixed operating and maintenance costs. However, between the draft and final determinations, there were increases in the WACC and changes to forecast inflation which impacted the escalation of cost components. Further minor updates to the fixed O&M figures were received between the final and draft determinations. However, these changes did not materially affect the overall BRCP determination.

**Table 17: Comparison between the 2026 BRCP final and draft determinations, by cost component**

| Component | Final determination | Draft determination | Change |
|---|---|---|---|
| Expected capacity credits | 200 MW | 200 MW | N/A |
| WACC ($) | 31,407,126 | 30,295,832 | 1,111,294<br>4% |
| Lithium-ion battery modules ($) | 246,671,109 | 246,671,109 | N/A |
| Power conversion system ($) | 51,241,685 | 51,241,685 | N/A |
| Balance of plant ($) | 50,134,897 | 49,797,350 | 337,547<br>0.7% |
| Construction costs ($) | 140,628,621 | 140,248,550 | 380,071<br>0.3% |
| Land costs ($) | 4,372,346 | 4,342,908 | 29,438<br>0.7% |
| Transmission connection capital costs ($) | 53,975,600 | 53,975,600 | N/A |
| Annualised capital costs ($/year) | 86,285,469 | 84,223,474 | 2,061,995<br>2% |
| **Total capital costs ($)** | **625,639,574** | **623,783,677** | **1,855,896<br>0.3%** |
| Total BESS O&M ($) | 7,605,349 | 10,541,684 | (2,936,335)<br>(27.9%) |
| Transmission O&M ($) | 128,818 | 129,265 | (447)<br>(0.3%) |

| Component | Final determination | Draft determination | Change |
|---|---|---|---|
| Transmission network service charges ($) | 1,786,340 | 1,550,026 | 236,314<br>15% |
| Corporate overheads ($) | 1,452,270 | 1,457,940 | (5,669)<br>(0.4%) |
| Site security ($) | 186,368 | 187,059 | (690)<br>(0.4%) |
| Local government rates ($) | 245,718 | 244,064 | 1,654<br>0.7% |
| **Annual fixed O&M costs ($/year)** | **11,404,864** | **14,110,037** | **(2,705,174)**<br>**(19.2%)** |
| **BRCP ($/MW/year)** | **488,500** | **491,700** | **(3,200)**<br>**(0.7%)** |

*Source: ERA analysis of BRCP data, and Economic Regulation Authority, 2026, 2026 Benchmark Reserve Capacity Prices for the 2028/29 capacity year: Draft determination, p. 15 (online).*

# Appendix 7 Annualised capital costs

The formula for calculating the BRCP capital costs is:

$$\text{CAPITAL COST} = [\text{PC} \times (1 + \text{M}) + \text{TC} + \text{LC}] \times (1 + \text{WACC})\text{^}0.5$$

The values for each input in the capital cost formula are provided in Table 18.

**Table 18: Comparison of the 2026 and 2025 BRCP capital cost components**

| Component | 2026 determination | 2025 determination | Change |
|---|---|---|---|
| Power station cost ($/MW) | 2,443,382 | 1,566,815 | 876,567 |
| WACC | 10.85% | 10.46% | 0.39% |
| Capacity credits (MW) | 200 | 200 | N/A |
| Margin for legal, financing and other costs (“M”) (%) | 9.7 | 28.4 | (18.7) percentage points |
| Transmission Costs (TC) ($/MW) | 269,878 | 195,411 | 74,467 |
| Land Costs (LC) ($) | 4,372,346 | 9,905,563 | ($5,533,217) |
| **Total capital costs ($)** | **625,639,574** | **474,395,074** | **151,244,500** |
| **Annualised capital costs ($/Year)** | **86,285,469** | **64,016,990** | **22,268,479** |

*Source: ERA analysis of BRCP data and Economic Regulation Authority, 2024, 2025 Benchmark Reserve Capacity Price for the 2027/28 capacity year: Final determination, p. 29, (online).*

# Appendix 8 Comparison of operating and maintenance costs

This appendix shows the differences between the 2026 and 2025 BRCPs by fixed O&M cost component. Details on the fixed O&M components are discussed in chapter 5 and show in Table 19.

**Table 19: Comparison of the 2026 and 2025 BRCP annual fixed O&M cost components**

| Component | 2026 determination | 2025 determination | Change |
|---|---|---|---|
| **Annual fixed O&M costs ($/year)** | **11,404,864** | **8,121,329** | **3,283,535**<br>**40%** |
| BESS O&M costs ($/year) | 7,605,349 | 5,041,739 | 2,563,610<br>51% |
| Transmission O&M costs ($/year) | 128,818 | 124,875 | 3,943<br>3% |
| Transmission network service charges ($/year) | 1,786,340 | 1,362,173 | 424,167<br>31% |

*Source: ERA analysis of BRCP data and Economic Regulation Authority, 2024, 2025 Benchmark Reserve Capacity Price for the 2027/28 capacity year: Final determination, p. 30, (online).*

# Appendix 9 Battery project comparison with CSIRO GenCost report

The ERA has compared the costs of various battery projects against CSIRO's GenCost report. Table 20 shows this comparison and assumes the GenCost figure of one year prior to the battery's construction start date to account for ordering the battery. This is consistent with the general BRCP timeline as construction must be completed before the start of the relevant capacity year.

In general, costs in the NEM were relatively close to the GenCost report however, when compared to WA, the GenCost report was generally 25 per cent lower than battery project costs in Western Australia. Table 20 shows the capital costs on a $/kWh basis for various delivered BESS projects in Western Australia, in comparison to the GenCost estimates. The ERA's BRCP determination is similar to other WA battery cost projects when compared on a dollars per kilowatt-hour basis.[132]

**Table 20: Comparison of various BESS project costs against GenCost[133]**

| BESS Project Name | Capacity (MW) | Duration (Hrs) | Construction start date | Cost ($/kWh) | GenCost[134] ($/kWh) | Difference Cost to GenCost ($/kWh) | State |
|---|---|---|---|---|---|---|---|
| Stanwell[135] | 300 | 4 | 15/8/2024 | 591 | 592 | (1)<br>0% | Qld |
| Eraring Big Battery 2[136] | 240 | 4 | 31/10/2024 | 445 | 592 | (147)<br>33% | NSW |
| Orana[137] | 414.9 | 4 | 1/12/2024 | 508 | 592 | (84) | NSW |

132 Modo Energy, 20 Feb. 2026, '2026 Capex: How much does it cost to build a battery in Australia?', (online) [accessed 24 Feb. 2026].

133 CSIRO, Dec. 2025, GenCost 2025-26 Consultation draft, (online) [accessed 24 Feb. 2026],
CSIRO, July 2025, GenCost 2024-25 Final report, (online) [accessed 24 Feb. 2026],
CSIRO, May 2023, GenCost 2023-24 Final report, (online) [accessed 24 Feb. 2026]; and,
CSIRO, July 2023, GenCost 2022-23 Final report, (online) [accessed 24 Feb. 2026].

134 The 4-hour BESS GenCost figure was used for comparison based on the projected cost one year prior to the project starting construction.

135 Queensland Government, 9 May 2024, 'Stanwell's big battery gets a mega boost on pathway to clean energy hub', (online) [accessed 24 Feb. 2026].

136 Origin, 25 July 2024, 'Origin approves second stage of Eraring battery', (online) [accessed 24 Feb.2026]. This is for stages 1 and 2 of the project making it a 4-hour duration and does not include the stage 4 expansion.

137 Akaysha, 15 July 2024, 'Akaysha Energy secures largest BESS financing globally at A$650 million, together with innovative virtual toll offtake with Energy Australia', (online) [accessed 24 Feb.2026].

| BESS Project Name | Capacity (MW) | Duration (Hrs) | Construction start date | Cost ($/kWh) | GenCost[134] ($/kWh) | Difference Cost to GenCost ($/kWh) | State |
|---|---|---|---|---|---|---|---|
| | | | | | | (17%) | |
| Elaine BESS[138] | 311.1 | 4 | 6/11/2025 | 480 | 423 | 57<br>12% | Victoria |
| Tomago 1[139] | 500 | 4 | TBA | 380 | 385 | (5)<br>(1%) | NSW |
| Kwinana 2[140] | 225 | 4 | 1/6/2023 | 762 | 546 | 216<br>28% | WA |
| Collie stage 1[141] | 250 | 4 | 1/5/2024 | 800 | 592 | 208<br>26% | WA |
| Collie stage 2[142] | 250 | 4 | 1/5/2024 | 800 | 592 | 208<br>26% | WA |
| Baldivis[143] | 250 | 4 | TBA | 500 | 377 | 123<br>25% | WA |
| **ERA 2026 BRCP** | **200** | **6[144]** | **2027** | **521[145]** | **377** | **144** | **WA** |

138 Akaysha, 5 Nov. 2025, 'Akaysha closes A$460m construction financing and commences construction on Elaine BESS', (online) [accessed 24 Feb.2026].

139 AGL, 31 July 2025, 'Final Investment Decision on the 500 MW Tomago Battery', (online) [accessed 24 Feb. 2026].

140 Government of Western Australia, 26 Nov. 2026, 'Kwinana battery complete as renewable energy records tumble', (online) [accessed 24 Feb. 2026].

141 Renewables Now, 9 Feb. 2026, 'Synergy brings live 500-MW Collie battery in Western Australia', (online) [accessed 24 Feb. 2026].

142 Ibid.

143 McKenzie M., 17 Feb. 2026, 'Baldivis in running for $500m big battery', The West Australian, p.18.

144 The ERA's BRCP is based on a 6-hour duration battery or 1,200 MWh of storage for a 200 MW capacity BESS.

145 The $521/kWh figure is calculated based only on the $625.6 million capital cost of the BESS. $625.6 million is converted into kWh based on 1,200 MWh of duration ($625.6 million divided by 1,200 hours divided by 1,000 to convert to kWh).

| BESS Project Name | Capacity (MW) | Duration (Hrs) | Construction start date | Cost ($/kWh) | GenCost[134] ($/kWh) | Difference Cost to GenCost ($/kWh) | State |
|---|---|---|---|---|---|---|---|
| | | | | | | **28%** | |

Source: Modo Energy, 20 Feb. 2026, '2026 Capex: How much does it cost to build a battery in Australia?', (online) [accessed 24 Feb. 2026] and verified against the sources shown in the footnotes to this table.

# Appendix 10 Weighted Average Cost of Capital

The weighted average cost of capital (WACC) is a calculation of a firm's cost of capital in which each component of capital, debt and equity, is proportionately weighted.

For the determination of the BRCP, the WACC:

- Represents a long-term required rate of return.
- Is used in an annuity calculation to calculate an annual compensation amount to investors for capital costs over the life of the asset.
- Is updated annually to reflect efficient financing costs at a point in time.

### *Calculation of the WACC in the BRCP WEM Procedure*

Section 4.2 of the WEM Procedure directs the ERA on how to calculate the WACC for the BRCP.[146]

Specifically, clauses 4.2.5 and 4.2.6 of the WEM procedure detail the high-level framework to be used:

> 4.2.5 The ERA must compute the WACC on the following basis:
>
> (a) The WACC must use the Capital Asset Pricing Model (CAPM) as the basis for calculating the return to equity.
>
> (b) The WACC must be computed on a pre-tax basis.
>
> (c) The WACC must use the standard Officer WACC method as the basis of calculation.
>
> 4.2.6 The pre-tax Officer WACC must be calculated using the following formulae:

$$\text{WACC}_{\text{nominal}} = \frac{1}{(1 - t(1 - \gamma))} R_e \frac{E}{V} + R_d \frac{D}{V}$$

> Where:
>
> (a) $Re$ is the nominal return on equity (estimated using CAPM) and is calculated as:

$$R_e = R_f + \beta_e \times MRP$$

> Where:
>
> (i) $R_f$ is the nominal risk-free rate;
>
> (ii) $\beta_e$ is the equity beta; and
>
> (iii) *MRP* is the market risk premium

[146] Economic Regulation Authority, 2026, *WEM Procedure: Benchmark Reserve Capacity Prices*, section 4.2, (online).

(b) $R_d$ is the nominal return on debt and is calculated as:

$$R_d = R_f + DM$$

Where:

(i) $R_f$ is the nominal risk-free rate for the Capacity Year;

(ii) $DM$ is the debt margin, which is calculated as the sum of the debt risk premium ($DRP$) and debt issuance cost ($d$);

(c) $t$ is the benchmark rate of corporate income taxation, established at either an estimated effective rate or a value of the statutory taxation rate;

(d) $\gamma$ is the value of franking credits;

(e) $\frac{E}{V}$ is market value of equity as a proportion of the market value of total assets;

(f) $\frac{D}{V}$ is market value of debt as a proportion of the market value of total assets;

(g) The nominal risk-free rate is based on the annualised yield on Commonwealth Government bonds with a maturity of 10 years:

i. using the indicative mid rates published by the Reserve Bank of Australia; and

ii. averaged over a 20-trading day period;

- The debt risk premium, DRP, is a margin above the risk-free rate reflecting the risk in provision of debt finance. This will be estimated by the ERA as the margin between the annualised yields of Australian corporate bonds which have a BBB (or equivalent) credit rating from Standard and Poor's and the nominal risk-free rate;[147]

(h) If there are no Commonwealth Government bonds with a maturity of 10 years on any day in the period referred to in Clause 4.2.6(g) of this WEM Procedure, the ERA may estimate the nominal risk free rate by interpolating on a straight line basis from the two bonds closest to the 10 year term and which also straddle the 10 year expiry date; and

(i) If the methods used in step Clause 4.2.6(i) of this WEM Procedure cannot be applied due to suitable bond terms being unavailable, the ERA may estimate the nominal risk-free rate by means of an appropriate approximation.

The ERA must estimate the WACC following the WEM Procedure. The ERA's annual BRCP determination involves two sets of components listed in clause 4.2.7 of the WEM Procedure:

[147] The ERA applies the revised bond yield approach to estimate the debt risk premium. The revised bond yield approach is detailed in the 2022 final gas rate of return instrument. Economic Regulation Authority, 2022, *2022 final gas rate of return instrument: Amended 12 September 2023*, (online).

- Annual components, which require review each year and comprise the risk-free rate, debt risk premium and corporate tax rate.
- Structural components, which are fixed in the WEM Procedure until the ERA's next BRCP review. These components include the market risk premium, equity beta, debt issuance costs, franking credit value and gearing ratio.

Clause 4.2.7 of the WEM Procedure details the parameters that the WACC must use as variables each year (see Table 21):

**Table 21: WACC parameters for the BRCP calculation**

| CAPM parameter | Notation/Determination | Component | Value |
|---|---|---|---|
| **The following variables are to be determined** | | | |
| Nominal risk-free rate of return (%) | $R_f$ | Annual | 4.83 |
| Debt risk premium (%) | $DRP$ | Annual | 1.316 |
| Corporate tax rate (%) | t | Annual | 30 |
| **The following variables are specified in the WEM Procedure** | | | |
| Market risk premium (%) | MRP | Fixed | 5.80 |
| Equity beta | $\beta_e$ | Fixed | 1.2 |
| Debt issuance costs (%) | $d$ | Fixed | 0.165 |
| Franking credit value | $\gamma$ | Fixed | 0.50 |
| Debt to total assets ratio (%) | $\frac{D}{V}$ | Fixed | 40 |
| Equity to total assets ratio (%) | $\frac{E}{V}$ | Fixed | 60 |

*Source: ERA analysis; Economic Regulation Authority, 2026, WEM Procedure: Benchmark Reserve Capacity Prices, clause 4.2.7, (online).*

### *Updated annual WACC*

The ERA has reviewed and calculated the annual components as listed in the WEM Procedure, which are the nominal risk-free rate, the debt risk premium, and the corporate tax rate.

### *Nominal risk-free rate*

The risk-free rate is the return an investor would expect when investing in an asset with no risk. This is the rate of return an investor receives from holding an asset with a guaranteed payment stream. Since there is no likelihood of default, the return on risk free assets compensates investors for the time value of money.

For the BRCP calculation, the WEM Procedure uses Commonwealth Government bonds as the proxy for risk free assets in Australia for estimating the risk-free rate of return. To estimate the risk-free rate, the WEM Procedure uses indicative mid-rates published by the Reserve

Bank of Australia (RBA). Where there are no Commonwealth Government bonds with a maturity of exactly 10 years the ERA interpolates the risk-free rate on a straight-line basis.

The use of a 10-year term for the risk-free rate is consistent with the purpose of BRCP WACC calculations, which is to reflect a long-term rate of return for the annuitisation of capital costs over the life of the BESS project.

The BRCP process uses a nominal risk-free rate, which includes a component for the market expectations of inflation.

For the 2026 BRCP WACC, the ERA determined a nominal risk-free rate of 4.83 per cent.[148] This is higher than the 2025 BRCP's 4.34 per cent nominal risk free rate.[149]

### *Debt risk premium*

The debt risk premium is the rate of return above the risk-free rate that lenders require to compensate them for lending funds to a firm. The debt risk premium compensates debt holders for the possibility of default by the issuer.

The debt risk premium is closely aligned with the risk of the business. When issuing debt in the form of bonds, a credit rating can be assigned that reflects the probability of default of the issuer, and therefore the risk present in that entity's bonds. The BRCP WEM procedure requires the use of a BBB (or equivalent) credit rating from Standard and Poor's.[150]

The ERA uses a "revised bond yield approach" to determine the debt risk premium at a point in time by:[151]

- Step 1: Determining the benchmark sample – identifying a sample of relevant domestic and international corporate bonds that reflect the BBB credit rating.[152]
- Step 2: Collecting data and converting the bond yields to Australian dollar equivalents.
- Step 3: Averaging yields over the averaging period – calculating an average Australian dollar equivalent bond yield for each bond across the averaging period.
- Step 4: Estimating the yield curves – estimating yield curves on the bond data by applying the Gaussian Kernel, Nelson-Siegel and Nelson-Siegel-Svensson techniques.[153]

[148] The nominal risk-free rate of 4.83 per cent is based on a 20-trading day averaging period up to 6 February 2026.

[149] Economic Regulation Authority, 2024, *2025 Benchmark Reserve Capacity Price for the 2027/28 capacity year: Final determination*, p.18 (online).

[150] Economic Regulation Authority, 2026, *WEM Procedure: Benchmark Reserve Capacity Prices*, clause 4.2.6(h), (online).

[151] Economic Regulation Authority, 2022, *2022 final gas rate of return instrument: Amended 12 September 2023*, p.12, (online).

[152] The WEM Procedure Change Report for the BRCP details that the new reference technology for the purposes of BRCP having a credit rating of BBB.

[153] The Gaussian Kernel method recognises that the observed spreads on bonds with residual maturities close to the target tenor (or maturity) contains more relevant information for estimation. The Nelson-Siegel model captures many of the typical observed shapes that the yield curve assumes over time. As an extension of the Nelson-Siegel model, the Nelson-Siegel-Svensson method incorporates additional flexibility to more precisely capture the movement of the yield curve in a more volatile market.

- Step 5: Estimating the return on debt – calculating the simple average of the three yield curves' 10-year costs of debt to arrive at a market estimate of the 10-year cost of debt.
- Step 6: Calculating the debt risk premium by subtracting the 10-year risk free rate from the 10-year cost of debt.

For the 2026 BRCP WACC, the ERA determined a debt risk premium of 1.316 per cent.[154] This is lower than the 1.710 per cent debt risk premium for the 2025 BRCP.[155]

### *Corporate tax rate*

The ERA has reviewed the corporate tax rate which has not changed from 30 per cent.

### *Updated BRCP WACC*

This appendix provides an illustrative rate of return for the BRCP based on the approach detailed in the BRCP WEM Procedure and the 20-trading day averaging period ending on 6 February 2026.

For the 2026 BRCP, the nominal pre-tax WACC is 10.85 per cent (see Table 22). This is slightly higher than the 10.46 per cent nominal pre-tax WACC for the 2025 BRCP.[156]

The higher 2026 BRCP WACC reflects an increase in the nominal risk-free rate, which is partially offset by a lower debt risk premium for the 2026 BRCP.

The difference between the WACC used in the draft and final determinations is detailed in section 7.1 of this determination.

[154] The debt risk premium of 1.316 per cent is based on a 20-trading day averaging period up to 6 February 2026.

[155] Economic Regulation Authority, 2024, *2025 Benchmark Reserve Capacity Price for the 2027/28 capacity year: Final determination*, p.18, (online).

[156] Ibid.

**Table 22: WACC for the 2026 BRCP compared to the 2025 BRCP WACC values**

| Parameter | 2026 BRCP value | 2025 BRCP value |
|---|---|---|
| Estimation date | 6 February 2026 | 31 October 2024 |
| **Cost of equity parameters** | | |
| Nominal risk-free rate (%) | 4.83 | 4.34 |
| Equity beta | 1.20 | 1.20 |
| Market risk premium (%) | 5.80 | 5.80 |
| Pre-tax return on equity (%) | 13.87 | 13.29 |
| **Cost of debt parameters** | | |
| Nominal risk-free rate (%) | 4.83 | 4.34 |
| Debt risk premium (%) | 1.316 | 1.710 |
| Debt issuance costs (%) | 0.165 | 0.165 |
| Pre-tax return on debt (%) | 6.31 | 6.22 |
| **Other parameters** | | |
| Debt proportion (gearing) (%) | 40 | 40 |
| Franking credits (gamma) (%) | 50 | 50 |
| Corporate tax rate (%) | 30 | 30 |
| **Weighted Average Cost of Capital** | | |
| **Nominal pre-tax WACC (%)** | **10.85** | **10.46** |

*Source: ERA analysis*