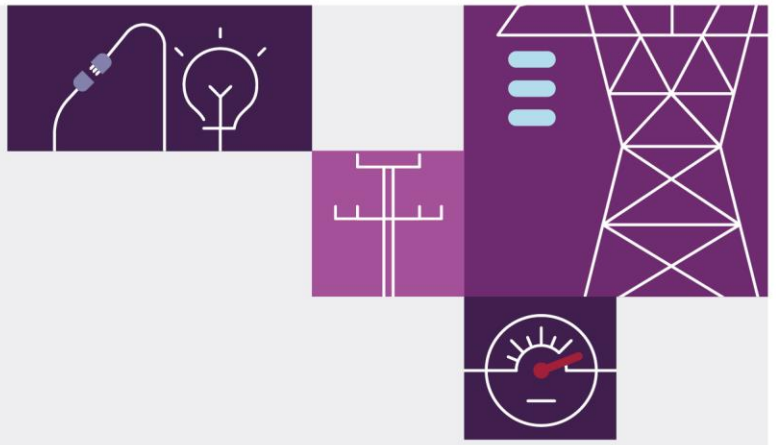


# Submission to the Economic Regulation Authority's Draft Determination

May 2024

Second In-period Funding Proposal  
under the sixth Allowable Revenue  
Period





# Important notice

## Purpose

This document, and the supporting information provided with it, comprises AEMO's submission to the Economic Regulation Authority's (ERA) Draft Determination on AEMO's application under clause 2.22A.12 and 2.22A.13 of the Wholesale Electricity Market (WEM) Rules for the ERA to consider additional costs that AEMO has incurred or will incur during its sixth Allowable Revenue period (1 July 2022 to 30 June 2025).

Note this in-period adjustment applies to the WEM only. While there are minor adjustments to Gas Services Information (GSI) operating costs resulting from some aspects of this proposal, AEMO can accommodate these within existing budgets and overrun allowances, therefore, no in-period GSI adjustment is required.

## Values used in this document

All financial information in this document is presented in nominal dollars unless otherwise stated. Some tables and figures may not sum precisely due to rounding. Financial information in this document is based on AEMO's estimates and forecasts as of 23 May 2024.

This document or the information in it may be subsequently updated or amended.

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# Executive summary

The Australian Energy Market Operator Limited (AEMO) provides this submission in response to the Economic Regulation Authority (ERA) Draft Determination for AEMO's second-in-period funding proposal under its sixth Allowable Revenue period (AR6).

AEMO's proposal sought an additional \$59.2 million in allowable revenue (opex) funding, and \$39 million in forecast capital expenditure (capex). The ERA's Draft Determination has provisionally approved around half of the expenditure requested, with \$27.7 million in opex, and \$21 million in capex.

AEMO understands the ERA's Draft Determination was based on its assessment of information available to it at that time. AEMO has welcomed the opportunity to collaborate with the ERA following the Draft Determination to understand how it can address the information required, and is committed to continuing to work collaboratively with the ERA, including supplying additional documentation, to better inform the ERA in its final determination.

## Energy transition in WA and AEMO's role

Western Australia (WA) is in the middle of a historic transition of both how energy is produced, and how energy will be consumed. The WA Government's modelling for the development of the South West Interconnected System (SWIS) shows over 90% of electricity in the SWIS may be provided from renewable sources by 2042<sup>1</sup>. Energy systems with high renewable penetration are more complex to operate, requiring a suite of new technologies and new ways of working.

Far from being a challenge for the future, the added demands from a system in transition are here today. Since 2021, demand for AEMO's services has grown, with an 18% increase in the number of market participants and 14% increase in the number of generators. Maximum and minimum electricity demand have varied significantly from 2021 assumptions, driven by economic and population growth, electrification, and volumes of rooftop solar increasing by more than 60%.

This transition is happening at pace in a context where energy consumers are facing cost pressures, as reflected in recent increases to the consumer price index, while maintaining an expectation of a reliable supply of the electricity and gas. As a not-for-profit corporation, AEMO strives to perform its functions a prudent and efficient way, conscious of costs and ensuring they remain appropriate.

The resourcing and investments outlined in AEMO's AR6 second in-period submission reflect both the resources needed to manage this additional demand on existing systems, and the extensive pipeline of reforms needed to deliver on the WA Energy Transformation Strategy.

## Costings where ERA is seeking further information

The ERA has indicated two reasons for disallowing some of AEMO's additional funding request. These were additional funding that was not considered justified, or not considered sufficiently certain. This submission seeks to provide additional information to address these concerns, which relate principally to:

- Opex: aspects of AEMO's requested labour and supplies and services costs.

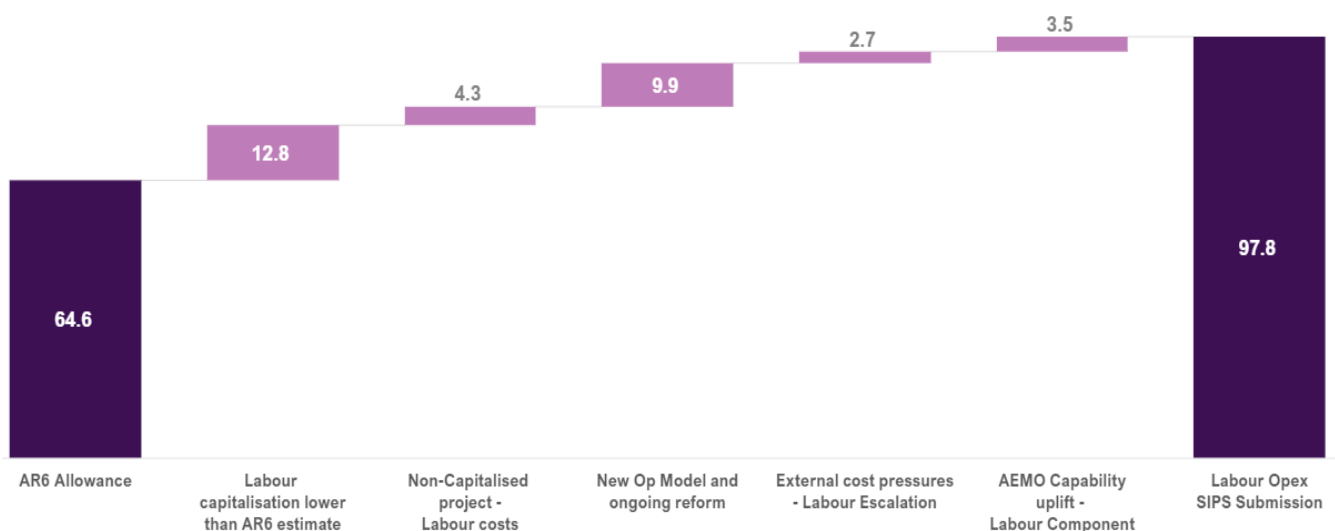
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<sup>1</sup> WA Government, May 2023, *SWIS Demand Assessment*, at [https://www.wa.gov.au/system/files/2023-05/swisda\\_report.pdf](https://www.wa.gov.au/system/files/2023-05/swisda_report.pdf).

- Capex: contingency costs and costs associated with some reform projects.

AEMO requested \$33.2 million funding for labour, with a Draft Determination of \$8 million. Figure 1 below represents our opex Labour request for the AR6 period and provides the bridge back to the original AR6 Final Determination.

**Figure 1 Labour opex (\$ million) – comparison of AR6 determination and this second in-period submission (SIPS)**



Key areas of labour funding not approved in the Draft Determination are:


- \$12.8 million, which represents the misclassification of business as usual opex resources as delivering capital activity in the original AR6 submission; and
- \$9.9 million reflecting additional roles required to deliver on new and expanded responsibilities and functions to address increased complexity in the energy system. These roles cover many functions including operations, operational support, real-time forecasting, government and stakeholder engagement, reform development and delivery, system design and IT support for a more complex IT architecture with a larger number of applications than anticipated at the time of the AR6 submission.

These labour resources are essential for AEMO to perform both its core system and market operation functions as well as to support reforms and enable the energy transition on the SWIS. AEMO understands the ERA requires further information to enable the ERA to both understand the drivers of these labour cost and reconcile them with the original AR6 Final Determination. Further information is being provided to the ERA on these and other unfunded labour costs, and is summarised in section 2.1 of this submission.

AEMO requested \$6.5 million for the category of supplies and services. Consultancies to support a number of business as usual and project activities make up most of the requested funding. AEMO is providing the ERA with further information as discussed further in section 2.2 of this submission.

The ERA's Draft Determination recommends the approval of \$21 million of the \$39 million sought to fund capex projects related to the WA Government's energy reform agenda. Of the projects partially funded, no contingency has been approved. AEMO is providing the ERA with further details and justification of contingency being requested, as discussed further in section 3.2 of this submission.

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



As AEMO's in-period capital funding proposal relates largely to new projects, they have elements of uncertainty. While AEMO has attempted to address some of this uncertainty in both its in-period submission and this response to the ERA's Draft Determination, AEMO acknowledges that some of these remain challenging for the ERA to consider. AEMO will work with Energy Policy WA to reassess project timing and overall prioritisation of any projects that remain unfunded or underfunded following the Final Determination. AEMO expects that in all cases, if projects are not funded as part of this in-period funding proposal process, project timing may be delayed beyond the timeframes envisioned by the WA Government and industry.

### AEMO's approach to strengthening financial transparency

Increasing costs is not a matter that AEMO takes lightly, and in-period proposals are only sought where additional expenditure is needed to deliver on AEMO's functions. AEMO understands that in-period proposals such as this can be difficult for those required to pay market fees, and AEMO recognises the need to improve its engagement with Wholesale Electricity Market (WEM) stakeholders, particularly on financial transparency and input into the delivery of reform.

AEMO continues to build the capabilities and culture needed to support the efficient and transparent delivery of outcomes in the dynamic WA energy market, and is committed to the following specific opportunities to enable greater stakeholder input:

- Explicitly including WA activities in the scope and membership of the Financial Consultation Committee.
- Starting the WA Strategic Energy Forum, a new executive-level forum for stakeholders to discuss AEMO's current and emerging challenges, opportunities and priorities.
- Undertaking formal consultation each year on draft budget and fees.
- A proposal to establish a Reform Delivery Working Group under the Market Advisory Committee.

As these steps are implemented, AEMO welcomes input from stakeholders to shape each outcome, ensure it is fit-for-purpose and provides stakeholders with value.

### Working with the ERA

AEMO would like to thank and acknowledge the substantial efforts of the ERA since the publishing of the Draft Determination. In that time AEMO has looked to share information and clarify points of difference in its funding request. The ERA's openness through these meetings is appreciated.

AEMO is committed to ensuring that stronger and earlier engagement occurs under its future funding proposals and invites any feedback the ERA or other stakeholders have on how we can improve our communications, including via the new mechanisms outlined in this submission.

Further to recent meetings, AEMO welcomes the opportunity to discuss the contents of the submission with the ERA. AEMO is committed to working with the ERA to find a resolution to differences in the second in-period submission, that will ensure AEMO is able to deliver on commitments to WA energy customers.

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# 1 Introduction

This document, and the supporting information provided with it, comprises AEMO's submission to the Economic Regulation Authority's (ERA's) Draft Determination on AEMO's application under clauses 2.22A.12 and 2.22A.13 of the Wholesale Electricity Market (WEM) Rules, for the ERA to consider additional costs AEMO has incurred or will incur during its sixth Allowable Revenue (AR6) period (1 July 2022 to 30 June 2025).

In March 2024, AEMO provided its second in-period funding proposal during its AR6 period for consideration by the ERA. The proposal seeks an additional \$59.2 million in allowable revenue (opex) funding, and \$39 million in forecast capital expenditure (capex). The ERA's Draft Determination has provisionally approved around half of the funding requested, with \$27.7 million in opex, and \$21 million in capex.

In its Draft Determination, the ERA identified several areas where it required additional information to consider AEMO's funding request. The most significant of these relate to labour and supplies and services. Table 1 below shows the opex provisionally approved by the ERA. Other components not approved are addressed in section 2.

**Table 1 AEMO proposed adjustment and ERA Draft Determination on WEM opex (\$ million)**

Operating cost category	In-period proposal	Draft Determination	Variance (\$)	Variance (%)
Labour costs	33.2	8.0	(25.2)	(75.8)
Accommodation	1.2	1.2	-	-
IT and telecommunications	1.0	1.0	-	-
Supplies and services	6.5	0.2	(6.3)	(96.9)
Depreciation and amortisation	9.8	9.8	-	-
Borrowing	7.2	7.2	-	-
Adjustment for under/over recovery	0.3	0.3	-	-
<b>Total allowable revenue</b>	<b>59.2</b>	<b>27.7</b>	<b>(31.5)</b>	<b>(53.2)</b>

Source: Economic Regulation Authority (2024), Australian Energy Market Operator's AR6 second in-period allowable revenue and forecast capital expenditure proposal, Draft determination, 15 May, p.8.

In its Draft Determination, the ERA has approved most of the funding sought for the Reserve Capacity Mechanism (RCM) Review, Distributed Energy Resource (DER) Aggregator Participation and WEM Investment Certainty (WIC) Review projects, however it has not approved requested contingency, as shown in Table 2 below.

**Table 2 AEMO proposed adjustment and ERA Draft Determination on WEM capex (\$ million)**

Cost category	In-period proposal	Draft Determination	Variance (\$)	Variance (%)
<b>RCM Review</b>				
Implementation	14.0	14.0	-	-
Contingency	2.8	0	(2.8)	(100)
<b>DER Aggregator Participation</b>				
Stage 1 Planning	0.5	0.5	-	-
Stage 1 Execution and Stage 2 Planning	6.1	5.3	(0.8)	(13.1)
<b>Metering System Upgrade and Cost Allocation Review</b>				



Cost category	In-period proposal	Draft Determination	Variance (\$)	Variance (%)
Execution	13.1	0.8	(12.3)	(93.9)
Contingency	1.9	0.0	(1.9)	(100)
<b>Demand Side Response (DSR) Review</b>				
Planning	0.17	0	(0.17)	(100)
Contingency	0.02	0	(0.02)	(100)
<b>WIC Review</b>				
Planning	0.35	0.35	-	-
Contingency	0.06	0	(0.06)	(100)
<b>Total capital expenditure*</b>	<b>39.0</b>	<b>21.0</b>	<b>(18.1)</b>	<b>(45.7)</b>

Source: Economic Regulation Authority (2024), Australian Energy Market Operator's AR6 second in-period allowable revenue and forecast capital expenditure proposal, Draft determination, 15 May, pp 17-19, with AEMO totals. \* Figures do not sum due to rounding.

AEMO welcomes the opportunity to provide further information to assist the ERA in considering our request and to engage with the ERA following the release of the Draft Determination to clarify the information sought. AEMO is committed to working with the ERA to find a resolution to differences in the second in-period funding proposal, that will ensure it is able to deliver on commitments to Western Australian (WA) energy customers.

## 1.1 Application of the legal test

Clause 2.22A.5 of the WEM Rules sets out factors that the ERA must take into account when assessing an in-period funding proposal and, applying administrative law principles, the ERA is required to give all the specified matters weight as fundamental elements in the assessment.

Two key matters specified in clause 2.22A.5 are:

- The Allowable Revenue must be sufficient to cover the forward-looking costs of performing AEMO's functions [clause 2.22A.5(a)].
- The Allowable Revenue and Forecast Capital Expenditure must include only costs which would be incurred by a prudent provider of the services provided by AEMO in performing its functions, acting efficiently, to achieve the lowest practicably sustainable cost of performing AEMO's functions, while effectively promoting the Wholesale Market Objectives [clause 2.22A.5(b)].

Section 1.2.1 of the Draft Determination states (by reference to the Funding Proposal Guidelines<sup>2</sup>) that the ERA has applied prudence and efficiency tests when assessing AEMO's reassessment proposal.

AEMO submits that the amounts approved in the Draft Determination are materially insufficient to cover its forward-looking costs, as demonstrated further in this submission. At the level of funding provisionally approved, AEMO will not have sufficient resources to carry out all its functions under the WEM Rules, as outlined above, and detailed further in sections 2.4 and 3.4 of this submission.

On that basis, AEMO considers that the Draft Determination appears to give significant relative weight to the matter specified in clause 2.22A.5(b), and insufficient weight to the matter specified in clause 2.22A.5(a).

<sup>2</sup> Economic Regulation Authority (2022), *Guideline to inform the Australian Energy Market Operator's funding proposal*, 28 October at <https://www.erawa.com.au/cproot/22925/2/-AR.6---Final-funding-proposal-guideline.PDF>.

## 1.2 Summary of AEMO's responses to unfunded or partially funded costs

Tables 3 and 4 below lists the costs that were not funded or partially funded under the Draft Determination, with a high-level summary of AEMO's response. More detail is provided throughout this submission and in supporting information provided to the ERA (see Appendix A2).

**Table 3 Summary – AEMO's response to opex costs unfunded or partially funded under the Draft Determination**

Cost category (In-period submission) (Draft Determination)	In-period proposal (\$ million)	Draft Determination (\$ million)	AEMO high-level response
<b>New reform and energy transition</b> <b>AEMO WA's new operating model</b>	9.9	0.0	Opex labour costs under the AR6 Final Determination were largely static over the AR6 period, with total labour declining considerably. Static labour costs would necessitate a decline in opex staff over time, due to labour cost escalation. With the increased complexity of operating the new market and systems, and greater demand for support and delivery of energy transition activities, this profile proved unworkable. Instead AEMO seeks a modest uplift in Full Time Equivalent (FTE), to maintain opex staffing levels requested under its original AR6 submission which, if approved, would increase AEMO's current opex FTE count by 4.7 FTE to 211.7. AEMO's total FTE count (capex and opex) would continue to remain below levels approved under the first year of AR6. This is explained further in section 2.1.1 and 2.1.2.  Without this additional funding, AEMO will not have sufficient resources to cover the costs of performing all its existing functions under the WEM Rules.
<b>New reform and energy transition</b> <b>Non-capitalised project labour – new projects</b>	4.3	4.0	ERA has not approved \$0.3 million requested to complete feasibility activities for the Metering System Upgrade and Cost Allocation Review since AEMO identified the possibility of repurposing part of the funds provided in the AR6 final determination for Five-Minute Settlement planning activities. AEMO accepts this decision.  The ERA has stated that all costs for opex projects Project Eagle and WEM and SWIS Power System Modelling have been approved. However, AEMO notes that it appears contingency values have not been approved for these projects, totalling \$0.79 million. Further information is provided in section 2.3.
<b>New reform and energy transition</b> <b>Labour capitalisation</b>	12.8	0.0	AEMO's forecast of labour allocation between opex and capex proved inaccurate, with more staff involved in operational activities than specified under AEMO's original AR6 funding proposal. This resulted in lower amounts of capitalised labour and higher operating expenditure, which increases market fees in the short term as opex is recovered in the year the expense occurs. Further information is provided in section 2.1.2.  Without this additional funding, AEMO will not have sufficient resources to cover the costs of performing all its existing functions under the WEM Rules.
<b>External cost pressures</b> <b>Labour cost escalation</b>	2.7	1.5	AEMO calculated the impact of labour escalation variance between its underlying AR6 submission assumption of 2.5% and the current labour escalation rate of 4.5%, which caused a \$2.7 million increase in labour costs. The detailed calculation is provided in section 2.3.  Without this additional funding, AEMO will not have sufficient resources to cover the costs of performing all its existing functions under the WEM Rules.

Cost category (In-period submission) (Draft Determination)	In-period proposal (\$ million)	Draft Determination (\$ million)	AEMO high-level response
<b>Overtime</b> <i>AEMO capability uplift - labour component</i>	1.0	0.0	In not allowing the expenditure, it appears that the ERA may have considered overtime and penalty rates to be equivalent, and therefore made an assessment that this figure is already included in other labour costs. These are separate costs, with overtime not being included in AEMO's other labour costs, as explained in section 2.1.4.
<b>Supplies and Services</b>	6.5	0.2	The ERA has requested information on the breakdown of the supplies and services category, with additional information on the consultancies included within. This information is provided in section 2.2. Without the requested funding, AEMO will face significant limitations and delays in undertaking some operational and project activities.

Table 4 Summary - AEMO's response to capex costs unfunded or partially funded under the Draft Determination

Capital Expenditure			
Cost category	In-period proposal (\$ million)	Draft Determination (\$ million)	AEMO high-level response
<b>RCM Review</b>			
<b>Contingency</b>	2.8	0	Further information was requested on how the contingency values would mitigate risks and non-financial risk mitigation measures, which has been provided to the ERA for all projects. More general information on contingency is provided in section 3.2.
<b>DER Aggregator Participation</b>			
<b>Stage 1 Execution and Stage 2 Planning</b>	6.1	5.3	AEMO recommends the planning phase for Stage 2 occur in conjunction with Stage 1 execution to minimise costs, noting that Stage 1 will inform the planning phase for Stage 2. More information is provided in section 3.3.2.
<b>Metering System Upgrade and Cost Allocation Review</b>			
<b>Execution</b>	13.1	0.8	Expenditure has been rejected pending the outcome of the planning phase in September 2024. This would require AEMO to seek funding in a future funding cycle, delaying execution. Delays to execution of the Metering System Upgrade project have flow on effects for several other important initiatives and will result in the maintenance of legacy systems for longer duration (at higher cost). AEMO has provided more information on the importance of the project and the dependencies with other reforms in section 3.3.2.
<b>Contingency</b>	1.9	0.0	Further information was requested on how the contingency values would mitigate risks and non-financial risk mitigation measures, which has been provided to the ERA for all projects. More general information on contingency is provided in section 3.2.

Capital Expenditure		
<b>DSR Review</b>		
<b>Planning</b>	0.17	0 The Draft Determination includes a reference by AEMO related to why execution funding is not being requested now. It appears that this may have been misunderstood and has been used to justify not approving planning funding. Planning funding is essential to progress this project, noting that AEMO expects to implement aspects of this project over the AR6 period. Execution may also be required to commence in the AR6 period, however funding has not been due to lack of externally driven information currently available to support execution funding sought (meaning funding may be sourced from overrun allowances or need to be sought in AR7). More information is provided in section 3.3.3.
<b>Contingency</b>	0.02	0 Further information was requested on how the contingency values would mitigate risks and non-financial risk mitigation measures, which has been provided to the ERA for all projects. More general information on contingency is provided in section 3.2.
<b>WIC Review</b>		
<b>Contingency</b>	0.06	0 Further information was requested on how the contingency values would mitigate risks and non-financial risk mitigation measures, which has been provided to the ERA for all projects. More general information on contingency is provided in section 3.2.

## 2 Opex

AEMO's in-period funding proposal requested \$59.2 million in opex with \$27.7 million being provisionally approved under the Draft Determination. Table 5 below outlines the funding requested and provisionally approved by category.

**Table 5 In-period proposal and Draft Determination on opex (\$ million)**

Operating cost category	In-period proposal	Draft Determination	Variance (\$)	Variance (%)
Labour costs	33.2	8.0	(25.2)	(75.8)
Accommodation	1.2	1.2	-	-
IT and telecommunications	1.0	1.0	-	-
Supplies and services	6.5	0.2	(6.3)	(96.9)
Depreciation and amortisation	9.8	9.8	-	-
Borrowing	7.2	7.2	-	-
Adjustment for over/under recovery	0.3	0.3	-	-
<b>Total Allowable Revenue</b>	<b>59.2</b>	<b>27.7</b>	<b>(31.5)</b>	<b>(53.2)</b>

Source: Economic Regulation Authority (2024), Australian Energy Market Operator's AR6 second in-period allowable revenue and forecast capital expenditure proposal, Draft determination, 15 May, p.8.

The remainder of this section addresses each opex allocation that the ERA did not approve, in part or whole, in the Draft Determination relative to AEMO's in-period funding proposal. AEMO has provided additional supporting information to the ERA in relation to these matters and remains committed to working collaboratively with the ERA on any further information required. A full list of all supporting documents is provided in Appendix A2.

### 2.1 Labour

AEMO requested \$33.2 million funding for labour, with a Draft Determination of \$8 million, which includes \$4 million for new opex projects (see Table 6 below). This is a substantial reduction in labour funding which, if unrevised in the Final Determination, will have significant impacts on AEMO, Market Participants, consumers, and the WA Government's reform agenda. These implications are discussed further in section 2.3.

**Table 6 ERA Draft Determination of AEMO's in-period funding proposal (\$ million)**

Labour costs	In-period proposal	Draft Determination	Variance (\$)
Expenditure reallocation	12.8	-	(12.8)
Non-capitalised project labour	4.3	4.0	(0.3)
New operating model and ongoing reform	9.9	-	(9.9)
External cost pressures (labour escalation)	2.7	1.5	(1.2)
Overtime	1.0	-	(1.0)
System upgrades	2.5	2.5	-
<b>Total</b>	<b>33.2</b>	<b>8.0</b>	<b>(25.2)</b>

Source: Economic Regulation Authority (2024), Australian Energy Market Operator's AR6 second in-period allowable revenue and forecast capital expenditure proposal, Draft determination, 15 May, p.13.

### 2.1.1 Staff numbers

AEMO and the ERA have established in workshops held since the Draft Determination that each has been working to a different understanding of AEMO's Full Time Equivalent (FTE) headcount at the commencement of the AR6 period. This section discusses the reasons for this discrepancy, and how AEMO seeks to communicate FTE in this submission to minimise confusion for the reader.

AEMO uses two main types of FTE numbers, with variations for WEM and Gas Services Information (GSI) as well as capex and opex:

- **WA Department:** this includes all staff working exclusively in the WA division.
- **WA Segment:** this includes all FTEs who provide support to AEMO's WEM functions, including staff working across the WEM and AEMO's other functions, including digital, corporate and support functions.

Depending on the context, both categories can be further segmented to include WEM only, GSI only, or both (for example, where AEMO is seeking funding for both). Again, depending on context, the above can also be segmented into opex, capex, or total labour.

To minimise confusion, this submission uses the term **WEM Segment**, which includes only the WEM components of the WA Segment. AEMO will identify where this value includes opex, capex, or total labour. The WEM Segment numbers will misalign with values under section 2.1.4 of AEMO's in-period funding proposal, which, because it was outlining the organisational restructure of the WA Department, only made specific reference to staffing numbers in that department.

Table 7 below is provided for comparison when cross-checking values. The table estimates the FTE numbers by department and segment at the conclusion of each year of the AR6 period. AEMO has included 2021-22 from AR5 as this value also represents the FTE number at the commencement of the AR6 period. FTE values are derived by dividing labour values by an average AEMO salary, including base salary, superannuation and on-costs. These values have been provided confidentially to the ERA.

**Table 7 FTE figures under each year of AR6 by WEM Department and WEM Segment against the ERA AR6 Final Determination**

FTE type	2021-22 (AR5)	2022-23	2023-24	2024-25
<b>WEM Department</b>				
AEMO opex		93.7	110.8	118.9
AEMO capex		35.2	21.7	18.4
AEMO total labour	<b>124.7</b>	<b>128.9</b>	<b>132.5</b>	<b>137.3</b>
<b>WEM Segment</b>				
AEMO opex		124.0	157.8	168.8
AEMO capex		62.9	49.2	42.9
AEMO total labour	<b>178.0</b>	<b>186.9</b>	<b>207.0</b>	<b>211.7</b>
AR6 Final Determination Opex		94.8	112.9	108.7
AR6 Final Determination Capex		132.2	63	15
AR6 Final Determination total labour	<b>N/A</b>	<b>226.8</b>	<b>175.9</b>	<b>123.7</b>

Important to this discussion is the rationale for AEMO's labour costs, which is provided under section 2.1.2 below.

### 2.1.2 Efficient operating model and capex reallocation

The Draft Determination did not approve \$9.9 million of labour costs under the category 'New operating model and ongoing reform' or \$12.8 million in labour costs under the category 'Expenditure reallocation'.

Over the AR6 Period AEMO requires on average 202 FTE per annum to deliver the required energy reform activities, perform the additional roles and responsibilities conferred on AEMO and importantly continue to operate the energy system and markets in an increasingly challenging environment.

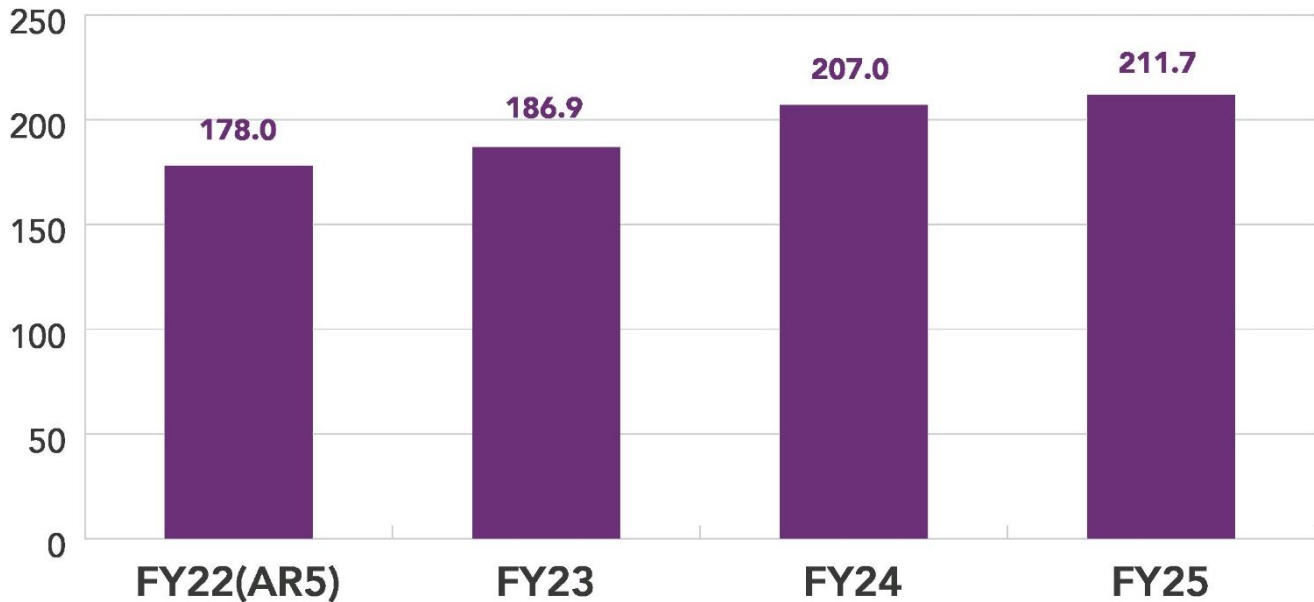
The AR6 Final Determination approved expenditure in the first year (2022-23) equivalent to 226.8 FTE for the WEM Segment. Due to industry-wide skilled labour shortages, AEMO was unable to recruit to this maximum and started the AR6 period with a staffing level of 178 FTE<sup>3</sup>. While staffing levels have increased over the period, despite the expanding scope and challenges, AEMO has retained staffing numbers at below 227 FTE (see 07 above for years 2022-23 to 2024-25). AEMO's new operating model was designed to respond efficiently to the challenges of the energy transition, in recognition that energy reform is an ongoing process as the electricity system decarbonises (discussed further in section 2.1.4 of AEMO's in-period funding proposal). Importantly, the new operating model did not materially grow AEMO's FTE labour count. The funding sought for labour in AEMO's second in-period submission supports marginal growth in staffing levels across its core services.

AEMO's WEM Segment is currently 207.0 FTE, and AEMO is seeking to increase this to 211.7 FTE by mid-2025, which is an increase of 4.7 FTE. This will still be below the staffing levels approved under the first year of AR6.

<sup>3</sup> The WEM Segment includes all FTEs who provide support AEMO's WEM functions, including staff working across the WEM and AEMO's other functions, including corporate and support functions. To this extent, only the FTE value assigned to WEM support is included.

Figure 2 below provides a diagram illustrating FTE numbers at the end of each year of the AR6 period, with FY22 included as it also represents the FTE number at the commencement of the AR6 period<sup>4</sup>.

**Figure 2 AEMO's WEM Segment FTE count under its in-period proposal**



Containing FTE growth over this period has been especially challenging considering AEMO's roles and responsibilities have grown substantially since the beginning of AR6, owing to the commencement of the new market on 1 October 2023 and the ongoing energy transition.

While AEMO outlined the roles of each team within its new organisational structure under section 2.1.4 of its in-period funding proposal, Figure 3 below provides an overview of the new or expanded roles since the commencement of AR6, with a detailed assessment provided in Appendix A1. In the majority of cases, the new and expanded roles could not have been accurately predicted at the time AEMO made its AR6 funding proposal in December 2021. Indeed, many of these new and expanded roles relate to implementing functions resulting from WEM Rules changes and challenges associated with navigating the tighter reliability outlook and operating conditions in the WEM since this time.

<sup>4</sup> FTE numbers are derived by dividing labour values by an average AEMO salary, including base salary, superannuation and on-costs. These values have been provided confidentially to the ERA.



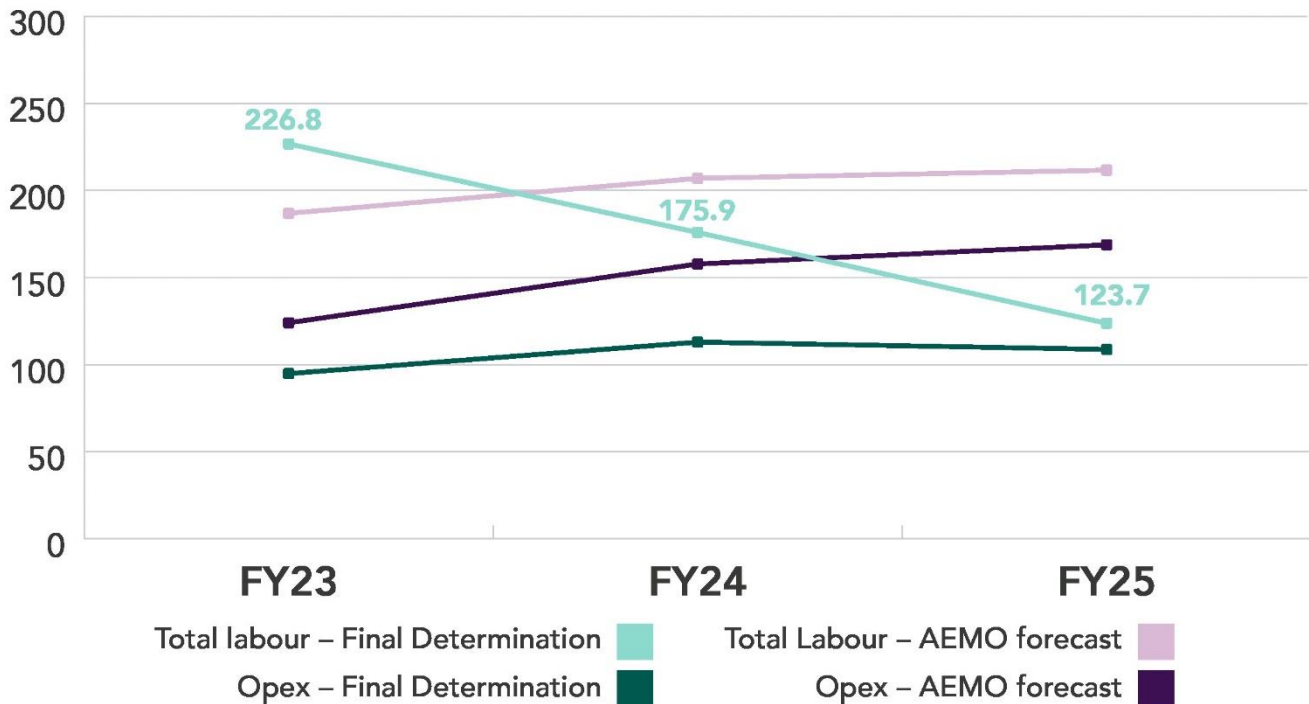
**Figure 3 New and expanded roles and responsibilities since the commencement of AR6**

<p><b>Power System Planning and Forecasting</b></p> <ul style="list-style-type: none"> <li>Seven of the 10 highest demand days since the commencement of the WEM have occurred after 1 October 2023. New minimum demand records each Spring.</li> <li>Greater complexity in modelling arising from impact of varying weather conditions.</li> <li>Increased frequency of forecasting to plan for Lack of Reserves and Minimum Demand Threshold days.</li> <li>Increase in the creation of bespoke constraint equations to capture higher frequency of outages.</li> <li>Significant training required to interpret new forecast simulations to ensure informed planning decisions for NCESS, SRC, outages and heightened risk areas.</li> <li>Refinements to the Electricity Statement of Opportunities to account for a Security Constrained Economic Dispatch (SCED) market and, more recently, the RCM Review.</li> <li>Assisting EPWA to include constraint development under a SCED market in the Whole of System Plan.</li> </ul>	<p><b>NCESS and Supplementary Capacity</b></p> <p>The triggering of Non-co-optimised Essential System Services (NCESS) and Supplementary Reserve Capacity (SRC) has occurred more frequently than expected. Activities include:</p> <ul style="list-style-type: none"> <li>Identification of the requirements for and procurement of NCESS and SRC, which are bespoke and labour-intensive processes.</li> <li>Bespoke contract development for necessary deviations from standard form contracts.</li> <li>Network Access Quantity (NAQ) assessments are required for each tenderer.</li> <li>Settlement and performance verification tools required for each NCESS service provider.</li> <li>Development of an Unregistered Equipment Portal to assist with SRC and NCESS activation, leveraging capability developed during Project Symphony.</li> </ul>
<p><b>NAQ and Congestion Modelling</b></p> <ul style="list-style-type: none"> <li>Significant collaboration required with Western Power to revise Non-Thermal Limit Advice and Limit Advice.</li> <li>Frequent updates to NAQ constraint equations due to more revisions to RCM Limit Advice than anticipated.</li> <li>Progressing automation for creating constraint equations to enable future hypothetical constraint equation self-service.</li> <li>Creation of new constraint sets for every combination of existing network outages, and credible contingencies due to an unexpected increase in outages.</li> <li>Creation of custom network model due to unexpected incompatibilities in the model provided Western Power through Limit Advice to ensure NAQ calculations could be created in permitted timeframes.</li> <li>Development of bespoke education materials to explain NAQ.</li> </ul>	<p><b>Dispatch Optimisation</b></p> <ul style="list-style-type: none"> <li>Updates to WEMDE to address security issues caused by rapid commitment and decommitment due to WEMDE considering a single interval at a time.</li> <li>Resolution of WEMDE issues arising from record high demand days.</li> <li>Resolution of WEMDE issues associated with poor SCADA data.</li> <li>Frequent updates to WEMDE to reflect real time experiences and short-term forecasts due to numerous unexpected power system events.</li> <li>Updates to WEMDE to cater for inadequacies in market bidding associated with unusual connection arrangements and Essential System Services accreditation.</li> <li>Updates to WEMDE demand forecasting inputs to consider real-time learnings for efficient dispatch.</li> </ul>
<p><b>WEM Surveillance</b></p> <p>Activities associated with Market Surveillance have been considerably more resource intensive than anticipated, including:</p> <ul style="list-style-type: none"> <li>Establishing and managing the Market Surveillance Data Catalogue (MSDC).</li> <li>Providing MSDC analysis user support and access management.</li> <li>Significant increase in WEM Surveillance support to the ERA and Energy Policy WA, including bespoke analysis, increase in frequency of meetings, and requests for data.</li> </ul>	<p><b>Generator Monitoring Plans</b></p> <p>Higher than expected activity for new connections, including:</p> <ul style="list-style-type: none"> <li>Negotiation on proposed Generator Monitoring Plans (GMPs) for 26 facilities, and in progress on GMPs for 47 facilities.</li> <li>Review and approval of a Generator Performance Standards (GPS) Test Procedure prior to Commissioning Test Plan works, including compliance testing.</li> <li>Progressing 6 generators through the GMP process due to NCESS.</li> </ul>
<p><b>Regulatory Development and Stakeholder Engagement</b></p> <p>AEMO has experienced a sizeable and unanticipated uplift in its regulatory responsibilities, including:</p> <ul style="list-style-type: none"> <li>A significant increase in regulatory submissions associated with the pace of the energy transition.</li> <li>Increased frequency of in-period funding proposals associated with new reform, with significant internal resourcing requirements.</li> <li>Substantial increase in the development and amendment of WEM Procedures.</li> <li>An increase in updates to Guidelines and technical specifications.</li> <li>Considerable and ongoing support to Energy Policy WA to develop new reforms and address matters arising since the commencement of the new market.</li> <li>Implementation of new Market Information framework, which is considerably more resource intensive, with higher rates of information requests.</li> <li>Review of AEMO's 61 WEM Procedures for consistency with the new State Electricity Objectives.</li> <li>Market readiness uplift to support issue tracking, system and release documentation across more complex and inter-dependent operating systems.</li> <li>Contributing to designing and developing DER orchestration arrangements.</li> <li>Responding to an increasing number of media queries as public interest in the energy transition has increased.</li> <li>Overall increase in engagement with existing, new and prospective market participants regarding the new market frameworks, market outcomes, investment opportunities, connections, GPS and NAQ.</li> </ul>	

Given that staffing levels have not grown substantially, and AEMO is not expecting to materially grow its workforce, the question may be asked: why does AEMO need more funding?

The ERA’s Final Determination under AR6 provided largely static opex labour costs and declining total labour (capex and opex) costs over the period. This is depicted in Figure 4 below alongside the labour costs under AEMO’s in-period funding proposal (total and opex only)<sup>5</sup>.

**Figure 4 FTE under the AR6 Final Determination, compared to AEMO’s in-period funding proposal**



Static opex labour costs would necessitate a decline in FTE over the period, due to labour cost escalation (discussed further in section 2.1.3 below). As such, AEMO would have had to reduce its FTE numbers to stay within the opex funding level. This has not been possible due to additional workload largely arising from the ongoing energy transition and implementation of the new market, as outlined in Figure 3 above. AEMO has also experienced higher salary costs for new recruits as a result of the tight labour market conditions, which is captured under the labour cost escalation category below.

However, the most significant driver of opex labour cost increase relates to the allocation of costs between opex and capex categories. In its original AR6 determination, AEMO predicted that more staff time would be allocated to capex projects than has been the case. Lower capitalisation of labour costs resulted in a \$5.8 million higher opex labour cost in 2022-23.

AEMO’s workforce plan submissions provided as part of the AR6 supporting documents has roles classified as supporting capital reform initiatives (capex), rather than ongoing BAU operational roles (opex). Many of these

<sup>5</sup> FTE numbers are derived by dividing labour values by an average AEMO salary, including base salary, superannuation and on-costs. These values have been provided confidentially to the ERA.

roles support the operation of energy systems and markets, including market analysts, regulatory specialists, power system controllers, engineers and change managers.

Where AEMO's allocation of labour between capex and opex proves incorrect when compared to its forecasts, AEMO cannot choose to reallocate the expenditure and must reapply for funding. While capital expenditure is recovered via depreciation over the useful life of the asset, opex is recovered in the year that the associated activities occur.

Table 8 below provides an example using actual values for 2022-23 to illustrate this point. It shows that the total actual labour expenditure for 2022-23 was \$11.2 million lower than forecast. Despite this, funding is sought to recover an additional \$5.8 million in opex for 2022-23 as the higher opex component must be recovered in the year the expense occurs.

**Table 8 2022-23 actual vs forecast labour (\$ million)**

2022-23	Opex	Capex	Total
<b>Forecast</b>	19.1	29.6	<b>48.7</b>
<b>Actual</b>	24.9	12.6	<b>37.5</b>
<b>Difference</b>	(5.8)	17.0	11.2

Under usual circumstances, one would expect that a reallocation from capex to opex would result in a lower capex value, and this is certainly shown in 08 above, with capex labour being \$17 million below forecast levels. However, in April 2023 AEMO provided its first in-period funding proposal under AR6 to request around \$45 million in additional capex to fund the WEM Reform Program<sup>6</sup>. These capex costs were associated with expenses beyond labour. Therefore, lower capex values associated with labour from reallocation of capex to opex are simply reflected as a lower additional funding request, relative to a scenario where the assumed capex allocation was correct. As a result, there is no corresponding decrease in capex associated with this in-period submission.

AEMO was not able to reflect the higher opex costs in its first in-period submission, as the WEM Rules do not permit opex in-period proposals after March of the year in which the funding is required. This second in-period submission is the first opportunity AEMO has had to request the additional opex funding in accordance with clause 2.22A.12 of the WEM Rules.

The Draft Determination does not approve the funding required to recover costs of capex reallocated as opex. As the reallocation is an unavoidable cost that AEMO must incur, in the absence of funding capex reallocation, if this request is not approved in the Final Determination, AEMO will have less funding available to support business as usual (BAU) staff. The impacts are discussed in section 2.3 below.

AEMO understands that the provisional decision not to fund the capex reallocation relates to queries on how staff were 'redeployed' and the need for clarification on resulting capex surplus that should result. The latter is discussed above, while the former has been communicated to the ERA through the provision of supporting information. To clarify, AEMO staff were not redeployed, but rather staff spent more time on opex activities and less time on capex activities than forecast. This is due to a combination of forecasting errors already discussed,

<sup>6</sup> AEMO's First In-Period Funding proposal, at <https://www.erawa.com.au/cproot/23228/2/Attachment-1-AEMO-Adjustment-to-2022-2025-Forecast-Capital-Expenditure-proposal.pdf>.

and changes to the accounting treatment of capex and opex costs<sup>7</sup>. A short list was provided following the ERA's query on this matter, and AEMO has provided further information in Figure 3 above and in Appendix A1.

AEMO acknowledges the workforce plan submissions provided as part of the AR6 process had roles incorrectly classified as supporting capital reform initiatives (capex), rather than accurately classified as ongoing operational roles. AEMO has sought to address this through the second in-period submission. Several of these roles support the operation of energy systems and markets, including market analysts, regulatory specialists, power system controllers, engineers and change managers.

### Breakdown of labour costs

The ERA has requested that AEMO provide a breakdown of its labour requests using a waterfall chart, which is provided in Figure 5 below.

As part of its initial AR6 submission, AEMO requested \$70.2 million towards internal labour costs. As part of the final AR6 determination, a total reduction of \$5.6 million was applied to internal labour expenditure due to the inability, at the time, to provide adequate support to satisfy the regulatory tests. This in-period proposal seeks to provide that additional information, as well as addressing past errors and providing information to support new and expanded activities.

**Figure 5 Changes to Labour expenditure between AR6 Final Determination and Second In-period Adjustment (\$ million)**



Key components of the above waterfall chart include:

- \$12.8 million represents the misclassification of BAU opex resources as delivering capital activity in the original AR6 submission, as described above. This relates to approximately 55 FTE (an equivalent of ~18 staff for the three-year submission period).

<sup>7</sup> For example, feasibility studies, early stages of planning, and project management activities are now considered opex categories.

- \$4.3 million reflects the opex labour component of the following new non-capital projects: WEM DER Aggregator Participation, Metering System Upgrade and Cost Allocation Review, RCM Review, Project Eagle and WEM Market and SWIS Power System Modelling. \$4.0 million of this labour cost was provisionally approved by the ERA in the Draft Determination.
- \$9.9 million reflecting additional roles required to deliver on new and expanded responsibilities and functions to address increased complexity in the energy system. These roles cover many functions including operations, operational support, real-time forecasting, government and stakeholder engagement, reform development and delivery, system design and IT support for a more complex IT architecture with a larger number of applications than anticipated at the time of the AR6 submission. This equates to approximately 43 FTE, with approximately 24 supporting the IT systems and infrastructure.
- \$2.7 million representing higher wage inflation over the three-year AR6 period, with actual wage inflation exceeding the wage growth assumptions when the initial request was submitted in 2021.
- 3.5 million is the opex labour costs related to projects to uplift AEMO's capability, most notably the Cyber Security Program and Project Up, being the WA allocation of costs for the introduction of an Enterprise Resource Planning (ERP) system.

The above FTE equivalent figures are approximate as there is complexity in reconciling between AEMO classifications and ERA categories between different points in time. AEMO is continuing to work closely with the ERA and providing supporting information at an individual FTE level to validate detailed workforce plans.

### 2.1.3 External cost pressures – Labour escalation

AEMO requested \$2.7 million to recover costs associated with labour cost escalation, with \$1.5 million being provisionally approved under the Draft Determination.

The ERA requested additional information on how AEMO has calculated labour cost escalation. Table 9 below shows AEMO's workings, with the calculation based on the difference between the AR6 labour escalation rate of 2.5% and the actual rate of 4.5%.

**Table 9 Variance in labour escalation rates in AR6 period**

Finance Year ending June	2023	2024	2025	Total
<b>Variance in labour escalation rates</b>				
SIPS	3.0%	4.5%	4.5%	
AR6	2.5%	2.5%	2.5%	
Variance in escalation rates	0.5%	2.0%	2.0%	
<i>Index of variances (FY22 = 1.00)</i>	1.005	1.025	1.046	
<b>Base case forecasts</b>	\$24,896,963	\$33,614,404	\$39,255,468	
<b>Impact of escalation variance</b>	\$123,865	\$823,063	\$1,712,055	\$2,658,983

AEMO is experiencing increases in employee and contract labour costs higher than were forecasted in its AR6 submission made in December 2021. AEMO is seeking to recover the impact of the variance between the original AR6 labour escalation rate assumption and the actual escalation rate experienced.

The current labour escalation growth rate reflects the actual increase in compensation to employees made in 2022-23 and planned for the remainder of the AR6 period. Labour cost increases are made with reference to industry benchmarks, namely the Korn Ferry salary survey, Australian Bureau of Statistics wage price index<sup>8</sup>, whose growth rate has been tracking over 4% in Western Australia since December 2022, and are reflected in recent amendments to AEMO's Enterprise Agreement<sup>9</sup>.

#### 2.1.4 Overtime

Overtime costs accounted for \$1 million of AEMO's original AR6 submission and were rejected in full by the ERA in its original AR6 Final Determination and again in AEMO's in-period proposal. Since the Draft Determination was made, AEMO has clarified with the ERA and understands that the decision to provisionally reject this funding relates to a misunderstanding between how penalty rates and overtime are incorporated in AEMO's labour costs.

Penalty rates and overtime are different payroll categories. Penalty rates are higher payments made for working standard shifts outside of business hours, such as weekends or evening, whereas overtime relates to staff working in excess of their standard hours. While penalty rates are included in AEMO's labour costs, overtime costs are not included in labour costs, or within any other cost category.

Overtime is used predominately to fund operational staff (~90%) working in system management functions, with around 60% relating to Control Room staff. Other examples of overtime include staff who work above normal hours, including on weekends. The payment of overtime is not discretionary and AEMO must comply with its obligations to pay overtime under the AEMO Enterprise Agreement<sup>10</sup> and, where applicable, for its staff on Common Law Contracts.

The Control Room operates 24 hours a day, seven days a week, with overtime being essential to ensuring unplanned gaps in the roster can be filled and we can continue to operate the power system without additional risk. This is similar to any workforce with a 24/7 requirement, including police, hospital staff, firefighters, paramedics, and air traffic controllers.

For operational and workplace safety reasons, at least two controllers must be on shift at all times. If a controller is unable to commence or complete their shift, they must be replaced by another controller, who is paid overtime. The reasons for roster gaps vary, but include illness, carer's leave, staff training, and periods of heightened operational risk<sup>11</sup>. In the lead up to the commencement of the WEM Reform Program, overtime was also paid to enable controllers to be appropriately trained, as well as supporting the testing of new systems. In other cases where overtime is paid, this is generally as a result of the need to cover unplanned absences of rostered staff and to enable training.

Eliminating overtime is not practical, but it can be reduced by increasing the number of employees. For example, a third Controller on shift would allow for one to be on personal leave while still maintaining a minimum of two Controllers at any time. However, this is not a cost-effective outcome, with an additional five Controllers required

<sup>8</sup> Australian Bureau of Statistics, Series 6345.0 Wage Price Index, Australia, Quarterly Index: Total hourly rates of pay excluding bonuses: Western Australia: Private: All industries.

<sup>9</sup> Latest AEMO enterprise agreement is a two-year agreement from 1 July 2024.

<sup>10</sup> AEMO Enterprise agreement, accessible by using the search function on the Fair Work Commission website at: <https://www.fwc.gov.au>.

<sup>11</sup> During periods of heightened risk, such as a lack of reserve or major network outages, AEMO may require more than two controllers.

to manage all shifts. AEMO has provided estimated values to the ERA to demonstrate efficiency in using overtime compared with mitigation through additional staffing.

Since the commencement of AR6, AEMO has paid \$750,000 in overtime, and forecasts a total expenditure of \$1.2 million over the AR6 period (noting that only \$1.0 million has been requested).

## 2.2 Supplies and services

AEMO requested \$6.5 million in funding under the category of supplies and services; the Draft Determination provisionally approved \$0.2 million due to inflationary cost pressures but rejected the majority of funding requested citing insufficient information. AEMO has provided further information to the ERA since submitting the in-period proposal and further sets out a summary of that information in this section.

Consultancies make up most of the requested supplies and services funding and represent the majority of AEMO's requested increase. Consultancies are required to support internal and externally driven projects, as well as several of AEMO's BAU functions. For example, consultancy support forms part of AEMO's funding request for Project Eagle and the WEM and SWIS Modelling Project. An example of a BAU function involving consultants is AEMO's WEM Electricity Statement of Opportunities, and similarly, the timing and scope of this work would need to be reconsidered where there is insufficient funding. Prior to engaging a consultant for a particular activity, AEMO will consider the most efficient and effective way of undertaking the required work, including the use of internal labour as an alternative.

Table 10 below outlines the cost categories captured under supplies and services, along with the variances to the AR6 Final Determination.

**Table 10 Supplies and services categories (\$ million)**

Supplies & Services	AR6 Final Determination	In-period funding proposal	Total
Agency & Licence Fees	\$798,101	-\$581,529	<b>\$216,572</b>
Consulting	\$4,287,019	\$6,424,853	<b>\$10,711,872</b>
Recruitment	\$0	\$86,684	<b>\$86,684</b>
Training & Education	\$844,874	-\$17,575	<b>\$827,299</b>
Travel & Accommodation	\$662,621	\$39,733	<b>\$622,888</b>
Printing and Stationary	\$142,061	-\$82,744	<b>\$59,310</b>
Other Expenses	\$3,928,206	\$687,751	<b>\$4,615,957</b>
<b>Total</b>	<b>\$10,662,883</b>	<b>\$6,557,173</b>	<b>\$17,220,056</b>

In engaging consultant services, AEMO applies its Purchasing Policy, which has been provided to the ERA as part of AEMO's supporting documents. The Purchasing Policy demonstrates that best efforts are made to obtain business value and requires a benchmarking exercise to be undertaken before renewing contracts. AEMO also uses preferred supplier agreements for purchases below \$200,000.

Table 11 below outlines the consultancy services sought in FY24 and FY25. AEMO has withheld the forecast cost of each consultancy to maintain the integrity of our procurement processes, but this information has been

provided to the ERA confidentially. Period to date, AEMO has spent \$3.5 million over the AR6 period on consultant services.

**Table 11 Consultancy expenditure related to AEMO's in-period funding proposal**

Supplies & Services	Year required	BAU or project
<b>P3111 Project Eagle Power System Security and Reliability (PSSR) standard framework</b>	FY24 & FY25	Project
<b>P3112 WEM Market and SWIS Power System Modelling</b>	FY24 & FY25	Project
<b>Cyber Security projects</b>	FY25	Project
<b>Project UP - ERP implementation</b>	FY24 & FY25	Project
<b>Market Modelling - establish internal capability</b>	FY25	BAU
<b>SWIS Engineering Roadmap</b>	FY24 & FY25	BAU
<b>Regulatory submissions (2x in-period &amp; AR7)</b>	FY24 & FY25	BAU
<b>LT PASA - consultant modelling support</b>	FY24 & FY25	BAU
<b>System Restart - engineering consultant support</b>	FY24 & FY25	BAU
<b>WA Reform Delivery - PMO</b>	FY24 & FY25	BAU & Project
<b>Rule change - technical consultant support</b>	FY24 & FY25	BAU
<b>Supplementary Reserve Capacity &amp; Certified Reserve Capacity support</b>	FY25	BAU
<b>Legal team support</b>	FY24 & FY25	BAU
<b>Post new market commencement - analytical and operational support</b>	FY24 & FY25	BAU

After consultancies, the “Other Expenses” sub-category is the second largest sub-category for which additional supplies and services expenditure is requested, at \$0.68 million. Other Expenses is primarily associated with corporate allocations, which includes items such as the WEM’s portion of cyber-related labour, corporate support, Board costs and insurances.

The remaining categories are either marginal cost increases or decreases based on forecasting against expenditure to date.

## 2.3 Non-capitalised project labour

Section 3.1.1.2 of the Draft Determination provisionally approves \$4.0 million of the \$4.3 million requested in the in-period funding proposal. AEMO accepts the ERA’s view in relation to the \$0.3 million requested for the Metering System Upgrade project. However, we note that the two new opex projects are not in fact fully funded.

Table 20 of the Draft Determination incorrectly states that AEMO requested \$2.5 million for Project Eagle and \$1.1 million for WEM and SWIS Power System Modelling, with the full value being approved. However, AEMO requested full project costs of \$3.18 million for Project Eagle (see Appendix 5 of the in-period proposal) and \$1.21 million for the WEM and SWIS Power System Modelling project (see Appendix 4 of the in-period proposal).

In discussions with the ERA since the Draft Determination was made, AEMO has ascertained that while the values above were included in its submission, the supporting information provided did not include contingency values associated with these projects. If approved by the ERA, this would result in an increase to labour from \$33.2



million to \$33.99 million. AEMO has provided the relevant contingency calculators, Financial Tracking Sheets and Investment Briefs to support the contingency requested.

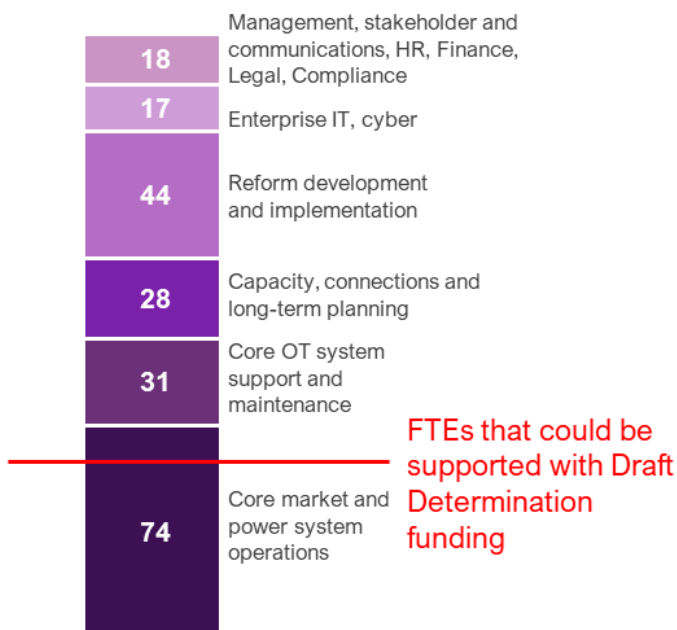
## 2.4 The impact of not being appropriately funded for opex

Staff are critical to the functioning of AEMO's business and our ability to deliver our functions under the WEM Rules. The funding under the Draft Determination provides for only a fraction of AEMO's current staffing requirement and falls drastically short of the resources required to meet the needs of Market Participants, consumers and the WA Government's energy agenda.

The Draft Determination level of funding would sustain staffing levels in the final year of AR6 of around 50-60 FTE (depending on the composition of staff), a shortfall of at least 145 FTE based on current staffing numbers and around 150 based on forecast need.

Figure 6 illustrates the staff requirements under key areas of AEMO's business, and the staffing levels that would be supported with funding under the Draft Determination.

**Figure 6 AEMO FTE requirements by function**



AEMO estimates that with around 50-60 FTE AEMO would need to prioritise the core aspects of the system and market operation functions, but with increased risk associated with the lower staffing levels (currently 74 FTE).

Activities that AEMO could no longer undertake within the AR6 period at the proposed level of funding include:

- **Reform implementation:** including projects funded or partially funded under the Draft Determination, which cannot be delivered without the associated staffing<sup>12</sup>.
- **Reform development:** including all support currently provided to Energy Policy WA in the development of new reform initiatives. These include the Essential System Services Review, WEM Investment Certainty Review (WIC Review), Demand Side Response Review (DSR Review), Distributed Energy Resources Roadmap (DER Roadmap), Procedure Content Assessment, all submissions to external consultations (see Appendix A3), and a range of daily support provided in the understanding of new and emerging issues, as well as drafting and editing of WEM Rules.
- **Industry training and support:** such as the regular training for industry on market bidding and settlement, as well as updating materials that support industry understanding, such as the WEM Design Summary and website information.
- **Internal projects:** such as upgrades to finance and HR systems.

In addition, at the proposed level of funding, after prioritising core market and system operations, there are existing WEM functions that AEMO will not be sufficiently funded to undertake, including:

- **Procuring capacity and services to manage emerging risks:** such as the RCM, Supplementary Reserve Capacity (SRC) and Non-Co-optimised Essential System Services (NCESS).
- **WEM Surveillance:** such as market monitoring and supporting the ERA and Energy Policy WA in assessing market activity and outcomes.
- **Facilitating new connections:** such as commissioning, testing, and the negotiation of generator performance standards.
- **Forecasting and planning:** such as the Electricity Statement of Opportunities and planning to enable higher levels of renewable generation on the power system, including managing associated risks.

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<sup>12</sup> While many projects under the 'Reform development and implementation' section of the bar graph in Figure 6 have partial funding either under the current Draft Determination or the prior AR6 Final Determination, AEMO could not deliver these projects without sufficient core opex labour resources.

## 3 Capex

The Draft Determination recommends that \$21 million of the requested \$39 million in forecast capital expenditure is approved. AEMO's capex funding request relates solely to new Government-driven energy reform projects, which AEMO is required to support and implement in accordance with its WEM functions under clause 2.1A.2(II) of the WEM Rules.

This capex section provides AEMO's feedback on rationale for the Draft Determination, followed by a discussion on project contingencies and each project that has been provisionally unfunded or underfunded under the Draft Determination. The section concludes with further information provided in section 3.4 on the implications if funding is not approved in the Final Determination.

### 3.1 Rationale for the Draft Determination outcomes

#### 3.1.1 Managing low certainty

While Investment Briefs for all projects have been provided, with elaborated information on the cost components, AEMO has noted that in many cases it is not possible to have a high degree of confidence in costs as many projects are still in the policy design or rule making phases. Where projects do have Amending Rules, these are often draft, or have been made recently and are still subject to detailed planning. AEMO understands the difficulty faced by the ERA in considering projects with higher degrees of uncertainty.

In making its Draft Determination not to fund components of the expenditure requested, the ERA refers to the uncertainty in cost estimations, and its requirements under clause 2.22A.5(b) of the WEM Rules (see section 0 for more information).

While AEMO understands the ERA's challenge in relation to clause 2.22A.5(b), prudent and efficient operators across a range of sectors must manage low certainty in the operation of their business. Choosing not to incur costs as a means of managing low certainty is rarely an optimal outcome for a continuing business with clear ongoing functions.

Low certainty is undesirable, but it is a necessary factor to be managed during the energy transition. Indeed, the WEM Rules contemplate uncertainty in its approach to AEMO's funding by requiring the ERA's Funding Proposal Guidelines to include information on "how future projects that carry a risk of not proceeding or for which the associated costs are not able to be quantified may be dealt with" [clause 2.22A.9]. To date, the Guidelines have not directly addressed this matter, but rather required AEMO to undertake in-period proposals, via provisions in the WEM Rules where AEMO forecasts and overspend of more than 10% or \$10 million over a regulatory period.

While the energy sector is in the midst of a transition, this is not a temporary challenge. In our March submission, AEMO shared a view that amendments to the allowable revenue regulatory framework are needed in the context of the energy transition, to avoid delaying progress on reforms and other initiatives required to enable ongoing secure and reliable operations, achieve emission reduction targets, and drive the lowest possible costs for consumers. AEMO is developing a proposal for how this may be approached and welcomes the opportunity to work alongside the Energy Policy WA to develop a suitable alternative approach that provides for effective overhit

of AEMO's costs, while accommodating the challenges of the rapid energy transition. Irrespective of any change to the regulatory model, AEMO is also committed to uplifting its stakeholder engagement as outlined in section 4.

### 3.1.2 Challenges with re-submitting under in-period proposals

In order to manage the uncertainty with some reform delivery proposals, the ERA has requested that AEMO resubmit unfunded projects as part of future funding cycles. However, AEMO expects to incur expenses in relation to these projects within the AR6 period and included information in its in-period funding proposal under each project to explain why expenditure is being sought now, rather than deferring the request to its AR7 submission.

While there are practical limitations in what AEMO can deliver, it does not, and cannot, set the pace of change in the energy sector. Reform projects are not established to align with AEMO's funding cycles, and at any given time, all projects may be at different stages of development. Indeed, this is of benefit to AEMO, as it allows optimal use of resources. Cost certainty is an outcome of the planning phase, therefore if funding is not approved until there is cost certainty, AEMO will likely be required to undertake multiple rounds of in-period proposals to accommodate projects at each phase (feasibility, planning, and execution). This is explained further in relation to the DSR Review in section 3.3.3 below.

Resubmitting through additional in-period proposals is also resource intensive for AEMO in preparing, and the ERA in determining. The costs associated with in-period proposals are ultimately borne by Market Participants, where costs are either passed through to consumers or taxpayers<sup>13</sup>. In addition to the direct costs, in-period proposals also divert AEMO and ERA staff from other important work.

### 3.1.3 Development of the WEM

In its Draft Determination, the ERA states that it must also consider whether the need to implement a project will assist in the development of the WEM. AEMO notes that, with the exception of the WIC Review project, all projects in which it is seeking funding have undergone a public consultation process.

Public consultation is a critical part of all policy development, and AEMO considers that the public consultation process is the best point in time to consider the merits of a policy initiative. Providing this feedback at the funding request stage means that, in most cases, the project is delayed or may be cancelled after the policy decision has been made and communicated to industry.

AEMO has recognised that it can also assist market participants and other stakeholders to better understand, and where practical influence the likely costs, scope and timing of its activities to implementing reform, before commencing delivery activities. A proposed approach to facilitate this engagement is outlined in section 4.2 below.

## 3.2 Contingency

The Draft Determination has recommended that no contingency funding is provided for any of the five projects under the in-period funding proposal.

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<sup>13</sup> AEMO estimates that for its second in-period submission, staff time amounting to more than 5,000 hours was required from multiple areas of the organisation. This figure excludes time taken to respond to additional information requests and to develop this response to the ERA's Draft Determination.

Contingency is an important element of project budget management, allowing for the identification and planned management of known risks. The project Investment Briefs and contingency calculators provided as supporting documents (see Appendix A2) detail the cost components of AEMO's contingency requests. AEMO's internal program governance arrangements require these to be endorsed by the Project Sponsor and approved by the WA Reform Program Steering Committee and the Investment Committee, which are both executive level forums which report regularly to the AEMO Board. AEMO also has strong governance processes for the management of contingency once a project is initiated, with all requests to release contingency funding being approved by the WA Reform Program Steering Committee, through formal Change Requests. These must detail the reasons for the additional expenditure requirement and steps taken or options considered to limit the amount or otherwise manage the issues that have arisen.

AEMO's approach to contingency is to ensure that risks are clearly identified and centrally controlled to avoid the practices of 'padding' estimates to allow for uncertainty, or 'scope creep' to use unspent contingency.

Since the Draft Determination was published, the ERA has requested further information on how the contingency values would mitigate risks and non-financial risk mitigation measures, which has been provided to the ERA for all projects.

The ERA has previously communicated the potential for overspend provisions under the WEM Rules to be used to manage project contingency in relation to unknown risks. While unknown risks are legitimate risks that form part of most project management frameworks, AEMO does not request funding in relation to unknown risks as these are not permitted under the Funding Proposal Guidelines.

In discussions since the Draft Determination was published, the ERA has asked AEMO for further information to explain why all project contingencies (including known risks) should not be recovered from overspend provisions. AEMO is of the view that reliance on overspend provisions to fund legitimate project expenses is not a sound project management approach. AEMO's overspend is limited to \$10 million each for capex and opex<sup>14</sup>, and where AEMO forecasts an overspend exceeding this, AEMO must seek funding in advance of the overspend. The contingency associated with some of AEMO's larger projects exceeds our overspend provisions. Using overspend to fund contingency is likely to result in a higher number of in-period proposals, which as outlined above, creates considerable costs and the potential for project delays.

The ERA has previously raised concerns regarding the potential to overfund, due to contingencies which may or may not ultimately be required. Where contingency is provided, but not used, AEMO would simply not incur the expense, and therefore these costs are not passed through to Market Participants via market fees. While technically AEMO could reallocate excess contingency to other capex projects, it cannot be reallocated to opex to be used for BAU activities including opex labour. As outlined above, AEMO has well-established governance processes for the allocation of project funds and the release of contingency. In addition, any deviation from forecast project expenditure would also be transparently reported as part of AEMO's annual reporting requirements, which must comply with the ERA's Regulatory Reporting Guidelines and include rationale for any changes in project expenditure.

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<sup>14</sup> See clause 2.22A.12 and 2.22A.13 of the WEM Rules, which require the lower of 10% or \$10 million forecast overspend before AEMO must seek in-period funding. In the case of both opex and capex, the lower value is \$10 million.

Where the ERA approves any project funding in the upcoming Final Determination, AEMO requests the ERA also approve the associated contingency requested, for both capex projects and the opex projects discussion in section 2.3.

## 3.3 Projects

### 3.3.1 Distributed Energy Resources Aggregator Participation

As outlined in 02 below, AEMO requested \$6.6 million to fund the DER Aggregator Participation project. This includes planning and execution funding for Stage 1, and planning funding for Stage 2. No contingency was sought.

**Table 12 DER Aggregator Participation project and funding variance from ERA draft determination (\$ million)**

Item	AEMO proposal	ERA draft determination	Variance (\$)
Stage 1 Planning	0.5	0.5	0
Stage 1 Execution and Stage 2 Planning	6.1	5.3	(0.8)
Contingency	0	0	0
<b>Total</b>	<b>6.6</b>	<b>5.8</b>	<b>(0.8)</b>

Source: Economic Regulation Authority (2024), Australian Energy Market Operator's AR6 second in-period allowable revenue and forecast capital expenditure proposal, Draft determination, 15 May, p.17.

The DER Aggregator Participation project implements recommendations arising from the WA Government's DER Roadmap<sup>15</sup>. Specifically, the project seeks to enable the participation of end-consumer DER through providers that aggregate DER to collectively provide services to the WEM.

The ERA has provisionally approved \$5.8 million for Stage 1 but not approved planning costs for Stage 2, as shown in 02 above.

Section 3.3.1 of AEMO's in-period funding proposal outlines the project steps, with Stage 2 planning to be undertaken in parallel with Stage 1 execution (see Figure 11, page 38 of that proposal). As outlined in our in-period proposal, clarity on the regulatory and technical implementation requirements to inform Stage 2 planning is one of the outcomes of Stage 1. AEMO's proposed approach to undertake this work in parallel represents its estimate of the lowest cost approach to planning and execution, enabling continuation of the project in accordance with the DER Roadmap milestones for the DER Aggregator Participation project and related policy development. As there are interlinkages between design elements of Stage 1 and Stage 2 (particularly for the Visibility Framework which must align with changes necessary to the Registration Framework), separating Stage 2 planning is therefore likely to result in reduced costs efficiencies and this may be reflected in the funding requested under a future funding proposal.

The ERA's Draft Determination includes a reference by AEMO related to why execution funding is not being requested now. It appears that this has been used to justify not approving planning funding<sup>16</sup>.

<sup>15</sup> Distributed Energy Resources Roadmap, at <https://www.wa.gov.au/government/distributed-energy-resources-roadmap>.

<sup>16</sup> Section 3.2.4 of the ERA's Draft Determination, at <https://www.erawa.com.au/cproot/24027/2/AR-6-2nd-In-Period-CapEx-and-OpEx-Funding-Proposal-Draft-Determination.PDF>.

As explained in section 3.1.2 above, the planning process enables AEMO to gain a sound understanding of the execution costs, which comprise the majority of project expenditure. Without a planning investment for Stage 2, AEMO will be unable to provide the ERA with the costs to execute the project. As with the DSR Review in section 3.3.3 below, AEMO would be required to seek funding for Stage 2 over three separate funding proposals (feasibility, planning and execution). In addition to higher costs, this will result in inefficiencies and longer-term project delays.

### 3.3.2 Metering System Upgrade and Cost Allocation Review

As outlined in 0 below, AEMO sought \$15 million for the Metering System Upgrade and Cost Allocation Review projects, of which only planning funding of \$800,000 has been provisionally approved.

**Table 13 Metering System Upgrade and Cost Allocation Review project and funding variance from ERA draft determination (\$ million)**

Item	AEMO proposal	ERA draft determination	Variance (\$)
Execution	13.1	0.8	(12.3)
Contingency	1.9	0	(1.9)
<b>Total</b>	<b>15.0</b>	<b>0.8</b>	<b>(14.2)</b>

Source: Economic Regulation Authority (2024), Australian Energy Market Operator’s AR6 second in-period allowable revenue and forecast capital expenditure proposal, Draft determination, 15 May, p.18.

The Metering System Upgrade project provides for substantial updates to AEMO’s metering systems to increase the number of meters that can be accommodated from the current 60,000 to more than 1 million at a granularity from 30 minutes to five minutes. The Cost Allocation Review is a government-driven project that seeks to improve the allocation of costs to Market Participants to better align with the principle of ‘causer pays’.

The Five-Minute Settlement rules completed consultation in August 2023, with Cost Allocation Rules completing consultation in November 2023 following public consultation on the review outcomes in December 2022.

While the Cost Allocation Review is a largely unrelated project to Metering System Upgrades in terms of scope, AEMO seeks to implement the project in conjunction with the Metering System Update project to improve efficiencies and reduce technical debt<sup>17</sup> of the affected systems. Separate implementation will result in higher costs, and possibly project delays as system changes need to be staged around other projects and system maintenance requirements.

As outlined in AEMO’s in-period funding proposal, the Metering System Upgrade project is required to support several government-driven reform initiatives, including:

- Five-Minute Settlement.
- Western Power’s Rollout of Advanced Metering Infrastructure and subsequent reduction in the Notional Wholesale Meter.
- The RCM Review Flexible Capacity Product.
- DER Aggregator Participation.

<sup>17</sup> AEMO intends to investigate the possibility of aligning the metering calculations required for various systems (for example, RCM, Settlements) to ensure only a single source of truth exists, which if possible, will reduce the volume of data in the Settlement System.

Detailed information on the dependencies with the above projects, and the implications of not progressing the Metering System Upgrade project are outlined in section 3.3.2 of AEMO's in-period proposal<sup>18</sup>.

At the ERA's industry forum on 22 May 2024, questions were asked about the potential to reduce costs by excluding meters for non-contestable customers (mostly households) from the project. The non-contestable customer base is included to capture dependencies with Five-Minute Settlement, the rollout of advanced meters, and the DER Aggregator Participation project<sup>19</sup>. As such, AEMO considers that a change in policy decision would be required to proceed with this option. AEMO can consider this option as part of the feasibility and planning stages to develop a fit-for-purpose and cost-effective scope for consideration by Energy Policy WA. However, AEMO understands that the software design will be highly dependent on the performance impact imposed by storing and providing the 1 million non-contestable meters. Any policy decision not to include these meters should be considered carefully to avoid wasted costs, noting that if there is a later change to include non-contestable customers, a full replacement of the system will likely be required.

AEMO is unable to determine a high-level understanding of the cost impacts until the feasibility stage is complete, with a detailed understanding post planning phase. For clarity, project costs included in the in-period proposal are:

- Upgrades to AEMO's metering system.
- Reduction in technical debt in the provision of meter data.
- Implementation of changes to the cost recovery of Contingency Raise services (Upcoming Miscellaneous 3 WEM Rules).
- Implementation of changes to the allocation and recovery of Contingency Lower services (Cost Allocation Review Amending Rules).
- Implementation of changes to the cost recovery of Regulation services (Cost Allocation Review Amending Rules).
- Implementation of changes to settlement of energy at five-minute granularity (Five-Minute Settlement Amending Rules).

### Options, solution and benefits

While planning activities will be completed by September 2024, project feasibility has progressed since AEMO's initial submission. A high-level options analysis is a required deliverable of the feasibility stage and several options have been considered with regards to the metering solution:

- Do nothing.
- Technical debt remediation.
- Reuse.
- Buy.
- Build.

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<sup>18</sup> AEMO's First In-Period Funding proposal (pp. 42-47), at <https://www.erawa.com.au/cproot/23228/2/Attachment-1-AEMO-Adjustment-to-2022-2025-Forecast-Capital-Expenditure-proposal.pdf>.

<sup>19</sup> DER Aggregator Participation requires non-contestable customers who are part of the aggregator service.



When undertaking the analysis, AEMO will take into consideration its planned software and hardware remediation program. This program applies across the whole of AEMO to ensure all software and hardware remains “under support”, that is, it remains covered by a support period in which equipment can be fixed and/or maintained without significant additional costs. This workstream includes upgrades to software and hardware that will come “out of support” during the AR6 period, as failure to mitigate or remediate legacy systems prior to their support ending places significant risk to the confidentiality, availability, and integrity of AEMO’s systems and data.

At this point in time, AEMO is confident of the need for investment in its metering system. On completing planning activities in September 2024, AEMO will be in a better position to identify the most cost-efficient option for a solution to support the Metering System Upgrade project and its dependent projects.

Where the funding request for the Metering System Upgrade is not approved by the ERA’s Final Determination, AEMO will at least need sufficient funding to maintain the legacy metering system at the necessary level of functionality. Based on past experience, AEMO delivered a metering maintenance project in November 2020, for which the ERA had approved \$0.97 million during the AR5 process. The project was delivered for \$0.89 million; assuming around 3% growth per annum, the cost of delivering a comparable project today would be around \$1 million.

AEMO anticipates the options analysis will substantiate that there needs to be some minimum investment in the next financial year under any of the options. The \$1 million figure provided above, and the \$13.1 million (excluding contingency) funding requested as part of AEMO’s in-period submission, represent the ‘bookended’ funding requirement during the AR6 period. The options analysis will take three months to complete; it will likely recommend a solution that reflects the criticality of delivery timelines for Five-Minute Settlement and the Cost Allocation Review outcomes. Where insufficient funding is approved as part of the ERA’s Final Determination, there will be delay of at least nine months to the delivery of these projects<sup>20</sup>.

While AEMO provided significant detail on the breakdown of costs in the supporting documentation provided, including the project Investment Brief, it also noted that the planning phase is scheduled to commence shortly, with a higher confidence in costs expected to be achieved in September 2024.

AEMO appreciates that this represents a challenge for the ERA in assessing this sizable funding request and understands the basis for the ERA’s initial assessment. Notwithstanding, our in-period proposal explained the implications of not receiving execution funding, including the likelihood of delays, which in turn affect the dependent projects. AEMO stands ready to provide any further information it can to support a change in decision to allow it to execute the project within the timeframes required.

### 3.3.3 DSR Review

As outlined in Table 14 below, AEMO sought \$190,000 in planning costs under the DSR Review project. This funding is additional to feasibility funds, which is an opex category and therefore does not appear in Table 14.

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<sup>20</sup> With some minimal amount of funding AEMO can prepare to make the system changes that are required but cannot undertake any activities to upgrade or build (as necessary) until the AR7 period commences in July 2025.

**Table 14 Demand Side Response Review and funding variance from ERA draft determination (\$ million)**

Item	AEMO proposal	ERA draft determination	Variance (\$)
Planning	0.17	0	(0.17)
Contingency	0.02	0	(0.02)
<b>Total</b>	<b>0.19</b>	<b>0</b>	<b>(0.19)</b>

Source: Economic Regulation Authority (2024), Australian Energy Market Operator's AR6 second in-period allowable revenue and forecast capital expenditure proposal, Draft determination, 15 May, p.19.

The DSR Review, led by Energy Policy WA, was tasked with identifying and removing barriers to the effective participation of loads in the WEM. Encouraging greater participation of loads provides many benefits to the market, including earlier entry of services required for reliability, and the potential to reduce market costs. AEMO also expects the implementation of the DSR Rules will have benefits for other connecting facilities, including generators, enabling more flexibility in WEM participation that will improve competition in the market, service offerings (and hence revenue streams) as well as potentially reducing Market Participant costs<sup>21</sup>.

Public consultation on the DSR Review outcomes concluded in November 2023, with the proposed WEM Rule amendments undergoing consultation in April 2024. AEMO continues to work with Energy Policy WA to finalise these rules for implementation, with components of the DSR Review expected to be implemented within the AR6 period. Despite this, AEMO has not sought funding for execution, noting that it could not be compliant with the ERA's Funding Proposal Guideline requirements. Instead, AEMO has sought \$0.19 million planning (section 3.3.4 of the in-period funding proposal), and \$0.1 million for feasibility (opex). Only feasibility has been approved, with the ERA citing uncertainty as the main reason for the rejection of planning costs, as shown in 04 above.

AEMO undertakes projects in stages of feasibility, planning and execution, and does not have a confident understanding of costs until planning is complete. This means that AEMO will need to make a second submission to request planning funding for the DSR Review, and then likely a third submission to seek execution funding. Three in-period funding proposals in relation to the same project is likely to delay the project, potentially by several years, while the increase in in-period proposals will result in higher costs to the market.

As the project is at a post-consultation stage, with draft Amending Rules released subsequent to AEMO's in-period submission, AEMO considers it an appropriate time for funding for planning to be approved.

### 3.4 The impact of not being appropriately funded for capex

Most of the five projects that AEMO has sought funding for under the in-period funding proposal are new projects. As such, if funding is not approved in the Final Determination, AEMO will work with Energy Policy WA and other stakeholders to reassess project timing and overall prioritisation. AEMO expects that in all cases, project timing will be delayed beyond the timeframes envisioned by the WA Government and wider electricity sector, delaying the realisation of benefits, possibly causing inefficient 'stop-start' progress on projects and creating a potential 'bow wave' in the future reform agenda.

If contingency remains unfunded and project funds prove insufficient, AEMO has three potential options:

- Suspend the project and submit an in-period funding proposal.

<sup>21</sup> For example, enabling the separate registration of components as facilities will enable some facilities to reduce their Contingency Reserve Raise costs.

- This option will ensure the project is not progressed without appropriate funding but will create delays that may have implications for Market Participants and consumers, as well as AEMO’s resource planning, and lead to higher costs overall.
- Divert capex funding from other projects, if available.
  - This option would allow for project completion but may in turn jeopardise the potential to deliver other projects. It also misaligns with the intended use of funding under the ERA’s Final Determination. AEMO would ensure this is accurately communicated as part of its annual reporting processes to the market.
- Use overspend provisions, if available.
  - This option may allow for project completion but misaligns with the intended funding allocation under the ERA’s Final Determination. This option is also likely to be unavailable if opex remains under-funded or new funding pressures emerge, with prioritisation of overspend likely to be required to fund core staffing needs.

As outlined, each of these options has benefits and challenges, and AEMO would consider the merits of each option on a project-by-project basis in conjunction with Energy Policy WA and stakeholders.

## 4 Improved transparency and engagement

AEMO recognises its responsibility to be economically prudent and deploy resources effectively with transparency and accountability.

Transparency and stakeholder engagement are already features of AEMO's planning and budget process. For the WEM, in addition to submissions and reporting under the allowable revenue framework, AEMO regularly provides updates on its activities, priorities and funding processes via forums such as the WA Electricity Consultative Forum (ECF), which is an open forum for Market Participants and other stakeholders.

Notwithstanding this, AEMO recognises that these existing arrangements are not providing Market Participants and other stakeholders, including consumer representatives with the opportunity to fully understand and provide feedback on AEMO's plans and expected costs.

AEMO recognises there is an opportunity and a need to improve our engagement with WEM stakeholders, in two particular areas: financial transparency, and input into the delivery of reforms. In these areas, AEMO has taken steps in recent years to uplift its engagement across the AEMO enterprise as a whole and in the delivery of National Electricity Market (NEM) reforms. AEMO is committed to apply the learnings from these uplifts to deliver a step change in our engagement on WA priorities, reforms and costs.

### 4.1 Enabling greater financial transparency

AEMO is committed to being transparent with our stakeholders about our financial planning, investments, management and cost recoveries so that stakeholders can have confidence that AEMO's contribution to their operating costs (and ultimately energy retail costs) is fair and reasonable.

Our goal is to provide transparency about AEMO's costs and priorities for each market segment ahead of each financial year and improve stakeholders' understanding of how these costs translate to fees.

In 2021, AEMO established its Financial Consultation Committee (FCC) to improve transparency around the development of AEMO's budget and fees and our financial health and performance. Members include representatives across industry, consumer groups and governments.

The FCC's primary purpose is to:

- Assure stakeholders of AEMO's balance sheet health and provide financial transparency.
- Build stakeholder confidence in AEMO's financial management and commitment to being cost-effective.
- Build stakeholders' confidence that AEMO is maturing its financial management, governance, accountability and transparency.
- Grow stakeholders' understanding of the budget and fee impacts of AEMO's evolving roles and responsibilities.

To date, the annual budget for WA activities is discussed at a high level as part of the consideration for AEMO's overall budget and fees, and there is no specific requirement for WA representation on the committee.

As a further step to provide greater financial transparency and rigour for AEMO's WA activities, AEMO has identified three specific opportunities to enable greater stakeholder input:

1. Explicitly including WA activities within the scope and membership of the FCC – with updated terms of reference for the FCC to be considered at the next FCC meeting in June 2024.
2. Commencing the WA Strategic Energy Forum (SEF) – on 30 May 2024, AEMO is hosting the meeting of a new executive-level forum for WEM and GSI Participants and other industry stakeholders to discuss AEMO's current and emerging challenges, opportunities and priorities. A key agenda item for this forum will be consultation on AEMO's activities, priorities, budget and fees for its WEM and GSI functions.
3. Undertaking formal consultation each year on draft budget and fees including:
  - a. publishing the draft WA budget and fees and inviting written stakeholder feedback;
  - b. hosting FCC and SEF meetings during the consultation period to present on the draft budget and fees; and
  - c. publishing a response to stakeholder feedback, along with our final budget and fees for the coming financial year.

As part of this consultation, AEMO will also continue to utilise existing forums such as the WA ECF and key forums held by EPWA such as the Market Advisory Committee (MAC) and the WA Advocacy for Consumers forum and the Expert Consumer Panel.

Figure 7 in section 4.2 below summarises the annual consultation process on AEMO's activities, priorities, budgets and fees. AEMO will commence the establishment of these arrangements at the upcoming SEF and FCC meetings.

As these steps are implemented, AEMO welcomes input from stakeholders to shape each outcome, ensure it is fit-for-purpose and provides stakeholders with value.

## 4.2 Engaging further with stakeholders on delivery of reforms

AEMO strives to be a trusted partner working with our stakeholders to deliver better outcomes for energy consumers. One of AEMO's core functions is the delivery of market reforms, which often involve new or upgraded systems and processes, which AEMO and Market Participants use to operate and participate in the WEM and the SWIS. Given the inter-dependencies between AEMO's reform delivery activities and those of Market Participants, AEMO acknowledges the need to improve collaboration and coordination across the delivery of the reform agenda.

Drawing on the experience of AEMO's Reform Delivery Committee in the NEM, AEMO will:

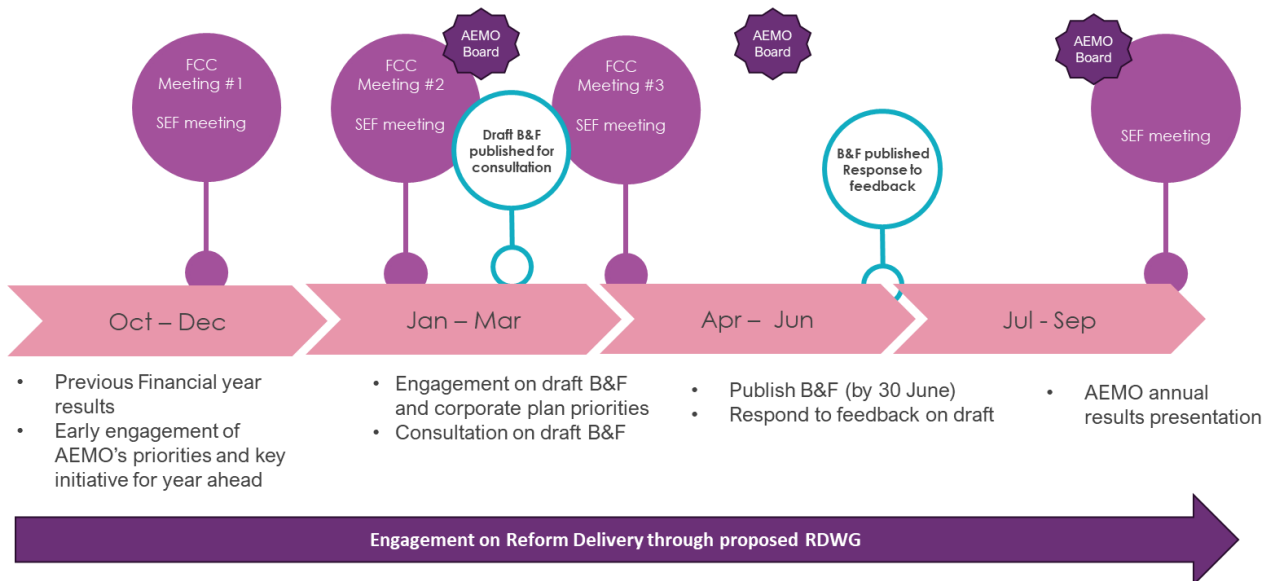
- Establish a WEM Reform Delivery Working Group (RDWG) to seek feedback from industry on the prioritisation, interdependencies, sequencing and cost of market reforms and change initiatives.
- Develop an Implementation Roadmap in partnership with industry, which will consider longer-term planning, bundling, sequencing and prioritising initiatives. The aim of this is to plan and deliver change as efficiently as possible and, where possible, identify and drive out costs through solution design and implementation.

- Include industry in governance of the reform delivery program by establishing a change management, stage gate, and investment commitment process. This includes development of informed go-live date process (building on the learnings from the recent WEM Reform Program) to optimise delivery, development of high-level impact assessment early in the reform life-cycle, development of business cases for related but non-reform items (that is, strategic and foundational investments).
- Provide transparency around delivery by communicating the program and initiative delivery status, scope, timing, risks and financials through AEMO’s regular forums.
- Enable continuous improvement through the development of lessons learned and post-implementation review. These are developed and shared with stakeholders.

AEMO considers that this RDWG could be established as a new working group established under the MAC and chaired by AEMO. AEMO will engage with Energy Policy WA and the Independent MAC Chair to request the opportunity to discuss establishment of this at the July 2024 MAC meeting. We also welcome stakeholder feedback on the options for doing this at the upcoming SEF and MAC meetings.

**Figure 7 Summary of mechanisms AEMO is establishing for greater financial transparency and engagement on reform delivery**

**AEMO WA engagement for financial year starting 1 July (indicative timing)**



## 5 Conclusion

As a not-for-profit corporation, AEMO strives to deliver its statutory functions and run its business in a prudent and efficient way, conscious of costs and ensuring they remain appropriate.

As outlined in this submission, the level of funding provisionally approved in the Draft Determination will not enable AEMO to effectively resource its core operational activities, or the activities required to enable the energy transition in the SWIS, which will have impacts on AEMO, Market Participants, consumers, and the wider reform agenda.

AEMO readily acknowledges the need to provide more information to the ERA and other stakeholders to enable consideration of its in-period submission. In this submission in response to the Draft Determination, AEMO has endeavoured to provide the clarity required, and additional information sought, to ensure there are no unresolved matters as the ERA prepares its Final Determination.

Since the Draft Determination was published, AEMO and the ERA have worked closely to share information and clarify points of difference in understanding of AEMO's funding request. AEMO appreciates the ERA's openness through these meetings and understands that, like AEMO, the ERA is subject to timing limitations that pose challenges. AEMO is committed to ensuring that stronger and earlier engagement occurs under its future funding proposals and invites any feedback the ERA or other stakeholders have on how we can improve our communications, including via the new mechanisms outlined in this submission.

AEMO's in-period funding proposal reflects its better understanding of the requirements of operating the reformed market and of planning and operating the transforming power system. Consistent with its response to the ERA's Draft Determination on its original AR6 submission, AEMO remains of the view that the costs of operating the WEM and the power system will stabilise as new market arrangements are bedded down, but that there is a higher degree of cost, uncertainty and risk that must be managed during the AR6 period<sup>22</sup> and indeed the energy transition.

Although automated systems and processes are fundamental to ensuring AEMO can fulfil its core functions, suitably knowledgeable and qualified personnel are still needed to administer core processes, respond to events, undertake analysis, support stakeholders and understand the WEM and SWIS at the depth needed to design for and implement reforms. Sufficient staffing is required on an ongoing basis, together with an operating model that will support AEMO in keeping the lights on while efficiently responding to the challenges of the energy transition. The reorganised structure implemented in July 2022 reflects this thinking, and it is allowing AEMO to undertake considerably more work at a similar headcount.

To the extent that AEMO is able to provide detailed forecast costs for capex projects, it had done so, and acknowledges that supporting information for some projects have a higher certainty on costs than others. AEMO has provided reasons why costs for each capex project should not be deferred to the AR7 period for all projects, including those with lower cost certainty.

AEMO understands and appreciates the ERA's challenge in making its Draft Determination on AEMO's in-period funding proposal. The environment in which the energy sector operates has changed substantially since the

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<sup>22</sup> AEMO (2022) *Response to the ERA's Draft Determination, Proposal to the Economic Regulation Authority*, April, pp.4-5.

## *Conclusion*

regulatory framework governing AEMO's funding was established, and much has already changed in the period since December 2021 when AEMO made its original AR6 submission.

Further to recent meetings, AEMO welcomes the opportunity to discuss the contents of this submission and supporting information with the ERA and is committed to working with the ERA to find a resolution to any outstanding differences in understanding to ensure the ERA is best placed to make its Final Determination.



# A1. New and expanded roles and responsibilities

This appendix provides further detail on the new and expanded roles and responsibilities AEMO has undertaken since the commencement of the AR6 period, arising predominantly from the energy transition and the commencement of the new market. The appendix supports section 2.1.2 of this submission, which outlines how AEMO is efficiently utilising its labour resources through its organisational realignment, resulting in static staff numbers despite AEMO’s growing roles and responsibilities that were unanticipated at the commencement of the funding period.

WEM Surveillance	
Role/Responsibility and expected duration	Detail
<p><b>Role/responsibility: Market Surveillance Data Catalogue (MSDC)</b>  <b>New or expanded: Expanded</b>  <b>Expected duration: Temporary and long term</b></p>	<p>Although provision of market data is not a new function for AEMO, resourcing requirements to assist with establishing and managing the MSDC have increased.</p> <p>The MSDC is newly created by AEMO and was developed in accordance with the ERA and the Coordinator of Energy’s <a href="#">requirements</a>. Work to establish the MSDC and associated Data Dictionary has been significant and although the creation of the MSDC was funded via a capex allocation, operational resources have been required to assist with testing to ensure data information gathered through systems developed under WEM Reform projects flow from the source systems to the MSDC correctly. In addition to ensuring the data flows correctly, the operational resources have spent considerable time updating the Data Dictionary to ensure every data point is accurately described.</p> <p>Additionally, operational resources are required to manage the MSDC by providing, for the ERA and Energy Policy WA, user support, access management support, information requests, triaging potential defects and documenting established defects. Further, the responsible team must induct and train a new specialist in preparation to take on the product owner role for the next phase of MSDC development.</p>
<p><b>Role/responsibility: WEM Surveillance</b>  <b>New or expanded: Expanded</b>  <b>Expected duration: Long term</b></p>	<p>The new WEM has brought increases to AEMO’s WEM Surveillance function resulting from additional market complexity, data volumes and data structure complexity. This has led to a significant increase in support requirements, by senior resources, to respond to requests for information and analysis from the ERA and Energy Policy WA.</p> <p>Examples of the increased support are the recent investigations into Frequency Co-optimised System Services (FCESS) pricing, and <i>available</i> versus <i>in-service</i> capacity. The Market Surveillance meetings between Energy Policy WA and the ERA have also moved to a weekly basis (previously fortnightly), where significant support and bespoke analysis is required to be provided by AEMO.</p>

Regulatory Development	
Role/Responsibility and expected duration	Detail
<p><b>Role/responsibility: In-period funding submissions</b>  <b>New or expanded: Expanded</b></p>	<p>The pace of the energy transition, combined with the detailed requirements of the current regulatory framework, requires AEMO to undertake multiple rounds of in-period funding to meeting its functions under the WEM Rules. AEMO has undertaken two in-period proposals under AR6 and expects this frequency will increase under AR7. This is a significant change from submitting a single proposal for Allowable Revenue and Forecast Capital Expenditure once every three years.</p>

## A1. New and expanded roles and responsibilities

Regulatory Development	
<b>Expected duration: Permanent (under existing framework)</b>	
<b>Role/responsibility: WEM Procedure changes</b> <b>New or expanded: Expanded</b> <b>Expected duration: Long term</b>	<p>With the commencement of the new market, AEMO has seen a significant increase to WEM Procedure changes. Since New WEM Commencement Day, AEMO has made amendments to eight WEM Procedures as a result of amendments to the WEM Rules, changes to operational processes due to market complexities or operational learnings.</p> <p>AEMO expects to progress at least another 25 WEM Procedure changes throughout the 2024 calendar year.</p>
<b>Role/responsibility: Policy support</b> <b>New or expanded: Expanded</b> <b>Expected duration: Long term or permanent</b>	<p>Post New WEM Commencement Day, AEMO has worked to support Energy Policy WA in their capacity as the policy maker, to assist with the identification of emerging or potential issues with policy implemented via WEM Reform.</p> <p>AEMO has spent considerable time collaborating with Energy Policy WA, utilising operational resources from across our business, to provide input into proposed solutions to emerging issues. AEMO policy support activities include the provision of data and information, subject matter analysis, and assistance with WEM Rule drafting and reviewing.</p> <p>AEMO's involvement is necessary to ensure technical elements are duly considered, noting that this expertise is highly specialised and unique to AEMO.</p>
<b>Role/responsibility: Market Information (MI) requests</b> <b>New or expanded: New</b> <b>Expected duration: Permanent</b>	<p>The new Market Information framework under Chapter 10 of the WEM Rules replaced the previous information framework. Although AEMO has managed Market Information in the past, this is an entirely new framework that was not known at the commencement of the AR6 period. The new framework is more onerous, necessitating the development of detailed internal processes and requiring legal resources on an ongoing basis. There has been an increase in market information requests, with 11 received so far since New WEM Commencement Day.</p>
<b>Role/responsibility: Embedding new State Electricity Objective (SEO) into WEM Procedures</b> <b>New or expanded: New</b> <b>Expected duration: Short-medium term</b>	<p>The new State Electricity Objective requires decision makers with obligations or powers under the <i>Electricity Industry Act 2004</i> (including AEMO) to consider the energy trilemma of reliability, affordability and sustainability.</p> <p>AEMO is responsible for 61 WEM Procedures, all of which must be consistent with the new SEO. This will necessitate a thorough review of each WEM Procedure, some of which are voluminous and/or contain significant technical content that requires consideration and input of multiple staff. Changes to these WEM Procedures (including as a result of the SEO) are required to be undertaken through the standard Procedure Change Process. Applying the timing and consultation requirements under the WEM Rules, the Procedure Change Process takes an average of three months.</p>
<b>Role/responsibility: Guidelines and Technical Specification changes</b> <b>New or expanded: Expanded</b> <b>Expected duration: Permanent</b>	<p>AEMO has internal procedures, guidelines, technical specifications and standards to assist and provide guidance to Rule Participants around the technical aspects of operating in the SWIS. These documents may support WEM Procedures, or they may be standalone documents. The pace of change post New WEM Commencement Day has resulted in these guidelines requiring updates to ensure Rule Participants have the correct technical information. AEMO expect to update approximately five of these guidelines in the 2024 calendar year, with more changes to these guidelines expected in the long-term as the pace of change continues.</p>
<b>Role/responsibility: Market Readiness support</b> <b>New or expanded: New</b> <b>Expected duration: Medium term</b>	<p>Through WEM Reform, AEMO and Market Participants identified a wide range of issues and potential improvements to the way AEMO delivers market readiness support. Specifically, improvements are being made to the scope and quality of system and release documentation across complex and inter-dependent operating system, establishing more sophisticated external issue tracking and improving the quality and timeliness of query response.</p> <p>Ongoing resources are required to provide input into process design, undergo training, develop internal documentation and embed improved ways of working to support the Market Readiness improvements.</p>

## A1. New and expanded roles and responsibilities

Regulatory Development	
<p><b>Role/responsibility: Ongoing engagement and development of DER orchestration implementation</b></p> <p><b>New or expanded: Expanded</b></p> <p><b>Expected duration: Medium term</b></p>	<p>In developing AEMO's AR6 submission, a faster implementation of the DER Roadmap was expected. AEMO also anticipated resources and costs would be capitalised. Energy Policy WA's DER Roadmap implementation has evolved since that time.</p> <p>Under Energy Policy WA's implementation of the DER Roadmap and subsequent implementation work (FY24-FY27), AEMO has been engaged in a large number of technical and system design activities required to contribute to the design and development of the DER orchestration arrangements. Examples include defining technical standards for DER equipment, designing integration requirements for the Distribution System Operator (DSO), AEMO and aggregators, and ensuring that DER connections processes reforms support compliance and technical performance of DER.</p> <p>This work plan has been defined by Energy Policy WA and is to be delivered under Energy Policy WA's DER Roadmap Coordination Committee and its working groups, and supports the implementation of the defined DER Orchestration Roles and Responsibilities. Under the DER Roadmap, AEMO is expected to partner and collaborate on these activities.</p> <p>This effort will define supporting arrangements for the requirements and effective implementation of P3099 DER Aggregator Participation, and the effective end-to-end DER orchestration ecosystem. However, as these actions do not deliver assets to AEMO, this effort is treated as opex external to the project and cannot be capitalised.</p>

NCESS and Supplementary Reserve Capacity (SRC)	
Role/Responsibility and expected duration	Detail
<p><b>Role / Responsibility: Procuring SRC and NCESS</b></p> <p><b>New or expanded: Expanded</b></p> <p><b>Expected duration: Medium-long term</b></p>	<p>Additional reliance has been placed on existing and new stop gap mechanisms such as SRC and NCESS due to stronger than forecast demand growth coupled with high temperatures, coal supply challenges, delays in facilities coming online and potential reductions in the reliability of aging thermal generators. While SRC had not been utilised prior to the AR6 period since 2007-08, it has been procured and activated by AEMO in each of the first two years of the AR6 period and may be required in FY2025.</p> <p>Identifying the requirement for and procuring and settling SRC is a manual and labour-intensive process, further complicated by the requirements for bespoke contracts to be created for approaches that deviate from the standard form contract. The SRC process requires AEMO to support the Coordinator's SRC review(s), translate the findings (if any) of the review in tender documents and amended WEM Procedures, develop the SRC trigger, and undertake the procurement process, which includes information sessions, a formal call for tenders, consultation with the Network Operator, negotiations, and contract management. AEMO is also required to undertake verification, measurement and manual settlement of eligible SRC services contracted for the relevant Hot Season.</p> <p>Similarly, AEMO's experience with NCESS has shown the process requires significant resourcing and is subject to tight timeframes. AEMO may identify potential shortfalls through forecasting or other means and apply to the Coordinator of Energy to trigger NCESS services. Procurement of this service is manual, and contracts are bespoke, increasing resourcing requirements.</p> <p>Additionally, the SRC and NCESS processes have required AEMO to undertake assessments of the likely NAQ of each tenderer as if they were part of the Reserve Capacity Mechanism, in assessing capability and value for money. Because SRC and NCESS processes were not expected to be used as extensively as they have been, more assessments have been required to be completed by operational teams. If AEMO did not complete these assessments, it would potentially result in incorrect value for money calculations, inefficient selection of tenders, paying for unusable capacity, and/or unexpected capacity insufficiency during peak events.</p> <p>AEMO is also working on the development of an Unregistered Equipment Portal to assist with SRC and NCESS activation, leveraging capability developed during Project Symphony.</p>

## A1. New and expanded roles and responsibilities

### NCESS and Supplementary Reserve Capacity (SRC)

Upon completion of the NCESS procurement process, AEMO is required to develop settlement tools and verify performance for each NCESS provider. In some circumstances, these settlement tools and performance verifications are bespoke, which can take significantly more time.

### Power System Planning and Forecasting

Role/Responsibility and expected duration	Detail
<b>Role/responsibility: Power system planning</b> <b>New or expanded: Expanded</b> <b>Expected duration: Permanent</b>	<p>While power system planning is not a new function for AEMO, due to the changing landscape of the SWIS, AEMO is consistently required to assign additional resources to plan for Lack of Reserve (LOR) days and Minimum Demand Threshold (MDT) Days to ensure forecasts are accurate to maintain Power System Security and Reliability.</p> <p>The additional planning and forecasting requirements are a result of the unprecedented instances of record minimum demand each spring and significant increases in record high demand, where seven of the 10 highest demand days since the commencement of the WEM have occurred since the start of the new market.</p> <p>Increased frequency of AEMO's forecasting and planning has also required AEMO to increase resourcing allocated to rescheduling affected outages that have been recalled or deferred.</p>
<b>Role/responsibility: Increased training</b> <b>New or expanded: Expanded</b> <b>Expected duration: Permanent</b>	<p>Succession planning to accommodate natural attrition of some existing FTEs to retirement, career progression, or career movement is essential and includes training on many systems and processes.</p> <p>The new market is significantly more complex, with increased training requirements to perform operational roles.</p>
<b>Role/responsibility: Outage Management</b> <b>New or Expanded: New and expanded elements</b> <b>Expected duration: Permanent</b>	<p>AEMO's role in outage management has increased significantly due to the complexities introduced via WEM Reform and the retirement of ageing facilities.</p> <p>The retirement of ageing facilities has resulted in a significant reduction in the ability for concurrent network and generation outages to occur, which has increased the coordination efforts required by AEMO to ensure critical outages can be undertaken, not only for maintenance but for the connection of new Facilities to the SWIS.</p> <p>The introduction of a constrained market has required the creation of bespoke constraint equations based on transmission outages, known network conditions/limitations, and regional constraints. This is a new function and a highly specialised skillset, taking up senior resources. Unexpected increases in outages since the commencement of the new market has resulted in the creation of more of these bespoke constraint equations, which are key in ensuring AEMO's dispatch engine works efficiently for network outages and regional network constraints.</p>
<b>Role/responsibility: Forecast Simulations</b> <b>New or expanded: New</b> <b>Expected duration: Short term</b>	<p>Planning in a constrained market is a new function for AEMO. To ensure AEMO can make informed determinations on SRC, NCESS, outage approvals and heightened risk areas, it is critical for AEMO to accurately interpret results of Co-optimized Energy market simulations from PLEXOS Energy Modelling Software. This has required significant training for planning engineers and support from consultants to ensure AEMO planning engineers have sufficient understanding of the models and their outcomes. This learning is expected to continue as the SWIS continues to evolve.</p>
<b>Role /responsibility: Demand forecasting</b> <b>New or expanded: New</b> <b>Expected duration: Permanent</b>	<p>The introduction of the Wholesale Electricity Market Dispatch Engine (WEMDE) brought with it additional demand forecasting responsibilities to ensure WEMDE is updated to include inputs of real-time experiences, short-term forecasts of Unscheduled Operational Demand and ongoing improvements. These inputs are critical in ensuring WEMDE continues to dispatch efficiently and effectively. With the rollout of the constrained market, the occurrences resulting in the creation of these inputs greater than expected and are expected to continue into the future.</p>

## A1. New and expanded roles and responsibilities

Power System Planning and Forecasting	
	With the introduction of Electric Storage Resources and additional renewable generation in regional areas, AEMO's planning team are required to place more emphasis on regional load forecasts and allocate additional resourcing to build forecasting models. This reflects the changing energy landscape and requirement for AEMO to adequately forecast to ensure there are no adverse power system outcomes.
<b>Role/responsibility: Electricity Statement of Opportunities (ESOO) refinements</b> <b>New or expanded: Expanded</b> <b>Expected duration: Short term</b>	<p>Following the implementation of the new market, AEMO has been required to make refinements to the ESOO to account for a Security-Constrained Economic Dispatch (SCED) market. Changes required were more significant than initially anticipated and were required to ensure the impact of SCED and congestion was accurately represented in long-term planning.</p> <p>AEMO has also provided assistance to Energy Policy WA to accommodate this information into the Whole of System Plan (WOSP).</p>

Dispatch Optimisation	
Role/Responsibility and expected duration	Detail
<b>Role/responsibility: WEMDE Optimisation</b> <b>New or expanded: Expanded</b> <b>Expected duration: Short term</b>	<p>WEMDE is a newly implemented dispatch engine that began operation in October 2023. Unexpected enhancements and optimisations have been required to be made to WEMDE since 1 October, including enhancements to:</p> <ul style="list-style-type: none"> <li>• Address security issues caused by rapid unit commitment and decommitment resulting from WEMDE considering a single interval at a time.</li> <li>• Resolve issues that occurred in response to record high demand days.</li> <li>• Resolve unexpected issues with poor quality supervisory control and data acquisition (SCADA) data (for example, injection testing).</li> <li>• Cater for inadequacies in market bidding associated with unusual connection arrangements, and Essential System Services (ESS) accreditation, state of charge.</li> </ul>
<b>Role/responsibility: Constraint Validation and Analysis Software changes</b> <b>New or expanded: Expanded</b> <b>Expected duration: Short term</b>	<p>With the roll out of SCED, AEMO has made significant changes to the way constraints are formulated. Constraints perform a critical input to WEMDE, so they must be carefully validated and checked before use.</p> <p>The complexity of the requirements of the Constraints Planning Tool was more than originally envisaged and changes to software functionality has been required by the operational teams to perform constraint validation and analysis. If these changes had not been made, it would increase the risk that the software would produce incorrect or inaccurate constraints, which would impact Power System Security.</p>

NAQ and Congestion Modelling	
Role/Responsibility and expected duration	Detail
<b>Role/responsibility: Non-Thermal Limit Advice Validation</b> <b>New or expanded: New</b> <b>Expected duration: Medium term</b>	<p>Review of Non-Thermal Limit Advice provided by Western Power is a new function performed by AEMO. Significant liaison and coordination has been undertaken with Western Power to revise Non-Thermal Limit Advice.</p> <p>If AEMO does not seek revisions to Non-Thermal Limit Advice in situations where it considers it may impact the SWIS, it may result in compromises to Power System Security and Power System Reliability.</p>

## A1. New and expanded roles and responsibilities

NAQ and Congestion Modelling	
<p><b>Role/responsibility: Creation of Constraint Equation sets</b></p> <p><b>New or expanded: Expanded</b></p> <p><b>Expected duration: Unclear</b></p>	<p>WEMDE requires new constraint sets for every combination of existing network outages, and credible contingencies (including re-classifiable contingencies). These constraints need to be remade for various reasons such as the addition of new facilities, changes to the WEMDE interface and formatting requirements (for example, required by unrelated projects), and identification of unexpected issues associated with market participant behaviour. The volume of constraint equations required to be produced daily is much higher than initially anticipated. In addition, many outages were deferred by the Western Power prior to WEMDE go-live, which has placed additional pressure on outages after WEMDE go-live. It is not yet known if this will reduce over time as changes to WEMDE become less frequent or increase as new facilities are commissioned at a faster pace. If these constraints are not created, WEMDE would produce sub-optimal results, which could result in inefficient market outcomes or impact Power System Security.</p>
<p><b>Role/responsibility: NAQ Constraint Set automation</b></p> <p><b>New or expanded: Expanded</b></p> <p><b>Expected duration: Medium term</b></p>	<p>Prior to implementation of the NAQ, constraint equations were estimated to be produced once or twice a year. AEMO have already been required to produce these equations 10's of times more than estimated to manage unanticipated updates to RCM Limit Advice and to assist with other processes, such as assisting Market Participants with identifying constraint equations for hypothetical new facilities. If AEMO had not completed these estimates, NAQs would have been calculated with out-of-date RCM Limit Advice and Market Participants would have been unable to estimate their NAQ for hypothetical facilities. To assist with this and reduce the resource burden on AEMO's operational team, AEMO is working to develop an automated constraint equation process to handle increased throughput, improve consistent and enable potential for "self-service" constraint equations for hypothetical facilities.</p>
<p><b>Role/responsibility: NAQ education and queries</b></p> <p><b>New or expanded: Expanded</b></p> <p><b>Expected duration: Medium Term</b></p>	<p>NAQ is new to Rule Participants and as such, AEMO has to spent considerable time developing bespoke education materials and responding to a high volume of queries from industry. While industry education was expected, the volume has been higher than anticipated, and included non-Market Participants (such as consultants). This results from of the complexities and importance placed on the NAQ process. AEMO considers it important to ensure this education is provided and queries are responded to, without which, may lead to poor capacity investment. This is expected to continue as industry becomes more familiar with the NAQ process.</p>
<p><b>Role/responsibility: Network model</b></p> <p><b>New or expanded: New</b></p> <p><b>Expected duration: Long term</b></p>	<p>AEMO has undertaken significant work to develop a custom network model using information provided by Western Power for the purpose of creating RCM constraint equations. While it was originally anticipated that a network model provided by Western Power as part of Limit Advice would be able to be used, varying complexities meant this model needed significant changes. As a result, a bespoke approach was required to ensure NAQ calculations could be completed in the permitted timeframes.</p>
<p><b>Role/responsibility: Limit Advice Validation</b></p> <p><b>New or expanded: Expanded</b></p> <p><b>Expected duration: Medium Term</b></p>	<p>Review of Limit Advice provided Western Power is a new function performed by AEMO. Significant liaison and coordination have been required to revise Limit Advice, specifically for circumstances where the Limit Advice could not produce NAQ calculations, or produced inaccurate NAQ calculations due to issues with the information provided.</p>

## A1. New and expanded roles and responsibilities

Generator Monitoring Plans	
Role/Responsibility and expected duration	Detail
<p><b>Role/responsibility: Generator Monitoring Plans review and approval</b></p> <p><b>New or expanded: Expanded</b></p> <p><b>Expected duration: Permanent</b></p>	<p>The process in which a Transmission Connected Generating System must submit a proposed Generator Monitoring Plan to AEMO for the purposes of monitoring compliance in accordance with applicable Registered Generator Performance Standards and an approved Generator Monitoring plan was introduced in the WEM Rules in 2021.</p> <p>It was initially expected that all existing Transmission Connected Generating Systems would have approved Generator Monitoring Plans by 1 October 2023, after which AEMO would only be required to assess proposed Generator Monitoring Plans by new Transmission Connected Generating Systems.</p> <p>Extensions provided by Western Power to the submission of proposed Generator Performance Standards and proposed Generator Monitoring Plans due to the underestimation of the volume of work associated with the processes has resulted in no Existing Transmission Connected Generating Systems having approved Generator Monitoring Plans in place by 1 October 2023.</p> <p>Significant work has been required by AEMO as part of ongoing negotiations of proposed Generator Monitoring Plans for 26 Existing Transmission Connected Generating Systems and one new Transmission Connected Generating System in collaboration with relevant Market Participants. This work is expected extend to the remaining 47 Existing Transmission Connected Generating Systems, and will continue with the ongoing connection of new Transmission Connected Generating Systems.</p> <p>AEMO has also been required to witness commissioning works for new facilities, which includes review and approval of a GPS Test Procedure prior to the works being undertaken, witnessing of the commissioning and reviewing and accepting the final commissioning results.</p> <p>NCESS has also resulted in an unexpected increase in new Transmission Connected Generating Systems entering the market, where AEMO is expecting to progress six generators through the Generator Monitoring Plan processes by the end of the 2024 calendar year.</p> <p>AEMO will soon be entering the final stages of approving Generator Monitoring Plans, after which it is anticipated that significant resources will be required to assess a Market Participant's compliance with an approved Generator Monitoring Plan.</p>

### Glossary of Terms in Appendix A1

Term	Meaning
<b>New function</b>	An unexpected function that could not have been anticipated at the commencement of the AR6 period
<b>Expanded Function</b>	An existing or known function that has increased in its scope or level of complexity, necessitating additional resourcing requirements
<b>Short Term</b>	Role/Responsibility expected to be complete for one year
<b>Medium Term</b>	Role/Responsibility expected to continue for between one and two years
<b>Long Term</b>	Role/Responsibility expected to continue for more than two years
<b>Permanent</b>	Role/Responsibility expected to continue for the foreseeable future

## A2. Supporting documents

The purpose of this appendix is to improve transparency for Market Participants and consumers by briefly outlining the supporting documents provided to the ERA on a confidential basis to the support AEMO's in-period funding proposal.

Supporting documents	Explanation
<b>AEMO Enterprise Agreement 2022</b>	AEMO's Enterprise Agreement, which stipulates, among other things, overtime provisions for WEM Power System Operators and other covered staff.
<b>Depreciation breakdown by project</b>	Set of excel sheets providing information on depreciation costs by project to support AEMO's funding submission.
<b>Demand Side Response – Contingency Calculator</b>	Spreadsheet providing information on contingency costs for the project using the ERA template to support AEMO's request for DSR Project funding.
<b>Demand Side Response – Financial Tracking Spreadsheet (FTS)</b>	Financial tracking spreadsheets for the DSR Project which provide an overview of the project's financial information to support AEMO's funding submission, with Power Query functions.
<b>Demand Side Response– Investment brief</b>	The Investment Brief describes the business justification for the DSR project, alignment to corporate priorities, scope, expected outcomes, benefits, and the investment estimate.
<b>ERA Financial Templates</b>	ERA's financial templates that AEMO must complete under the Funding Proposal Guidelines. The information provided includes project criteria information, capital expenditure costs, contingency costs, operating expenditure costs.
<b>Metering System Upgrade (MSU) and Cost Allocation Review – Contingency Calculator</b>	Spreadsheet providing information on contingency cost for the project using the ERA template to support AEMO's request for MSU Project funding.
<b>Metering System Upgrade and Cost Allocation Review - FTS</b>	Financial tracking spreadsheets for the MSU Project which provide an overview of the project's financial information to support AEMO's funding submission.
<b>Metering System Upgrade and Cost Allocation Review – Investment brief</b>	The Investment Brief describes the business justification for the MSU project, alignment to corporate priorities, scope, expected outcomes, benefits, and the investment estimate.
<b>Power BI consolidated summary of WA capex and opex projects</b>	A data visualisation providing a summary of the WA capex and opex projects for AEMO's in-period proposal. There was also an 'unlocked' version of the FTS above, which in addition to allowing the viewer to see Power Queries, it also allows for greater cross-referencing.
<b>RCM Review – contingency calculator</b>	Spreadsheet providing information on contingency costs for the project using the ERA template to support AEMO's request for RCM Review project funding.
<b>RCM Review - FTS</b>	Financial tracking spreadsheets for the RCM Review Project which provide an overview of the project's financial information to support AEMO's funding submission.
<b>RCM Review – Investment brief</b>	The Investment Brief describes the business justification for the RCM Review, alignment to corporate priorities, scope, expected outcomes, benefits. and the investment estimate.
<b>Staff Manifest</b>	Confidential spreadsheet detailing staffing information.
<b>WEM DER Aggregator – Contingency calculator</b>	Spreadsheet providing information on contingency costs for the project using the ERA template to support AEMO's request for DER Aggregator Project funding.
<b>WEM DER Aggregator - FTS</b>	Financial tracking spreadsheets for the DER Aggregator Project which provide an overview of the project's financial information to support AEMO's funding submission.
<b>WEM DER Aggregator – Investment brief</b>	The Investment Brief describes the business justification for the DER Aggregator, alignment to corporate priorities, scope, expected outcomes, benefits, and the investment estimate.
<b>WEM Investment Certainty (WIC) – Contingency Calculator</b>	Spreadsheet providing information on contingency costs for the project using the ERA template to support AEMO's request for WIC Project funding.
<b>WEM Investment Certainty (WIC) - FTS</b>	Financial tracking spreadsheets for the WIC Project which provide an overview of the project's financial information to support AEMO's funding submission.
<b>WEM Investment Certainty (WIC) – Investment brief</b>	The Investment Brief describes the business justification for the WIC Project, alignment to corporate priorities, scope, expected outcomes, benefits, and the investment estimate.



Supporting documents	Explanation
<b>Workforce plan (capex)</b>	AEMO has developed a spreadsheet providing a list of resources for capex projects to support AEMO's funding submission.
<b>Workforce plan (opex)</b>	AEMO has developed a confidential spreadsheet providing a list of resources for opex projects to support AEMO's funding submission.
<b>ERA Follow up questions</b>	The ERA requested additional information and/or clarification relating to AEMO submission content on four occasions between 27 March and 17 April 2024- totalling 26 items. AEMO compiled and emailed the responses to ERA on requested matters.
<b>AEMO's Purchasing Policy</b>	The Purchasing Policy outlines how AEMO procures services, including those under the Supplies and Services category.
<b>Additional information</b>	
<b>Various internal AEMO documents relating to operating model changes over 2022 and 2023</b>	Provided in response to additional information on AEMO's organisation restructure.
<b>Project Eagle PSSR Standards Review – FTS</b>	Financial tracking spreadsheets for Project Eagle which provide an overview of the project's financial information to support AEMO's funding submission.
<b>Project Eagle PSSR Standards Review – Contingency Calculator</b>	Spreadsheet providing information on contingency costs for the project to support AEMO's request for Project Eagle funding.
<b>Project Eagle PSSR Standards Review – Investment brief</b>	The Investment Brief describes the business justification for Project Eagle, alignment to corporate priorities, scope, expected outcomes, benefits, and the investment estimate.
<b>WEM/SWIS Power System Modelling - FTS</b>	Financial tracking spreadsheets for the WEM/SWIS Power System Modelling project which provide an overview of the project's financial information to support AEMO's funding submission.
<b>WEM/SWIS Power System Modelling – Contingency Calculator</b>	Spreadsheet providing information on contingency costs for the project to support AEMO's request for WEM/SWIS Power System Modelling project funding.
<b>WEM/SWIS Power System Modelling – Investment brief</b>	The Investment Brief describes the business justification for the WEM/SWIS Power System Modelling project, alignment to corporate priorities, scope, expected outcomes, benefits, and the investment estimate.

## A3. Submissions to external consultation processes

This appendix provides a list of all external submissions made by AEMO since the commencement of AR6, compared with submissions in 2017 and 2018. The appendix is provided as supporting documentation in relation to the new and expanded roles and responsibilities. It illustrates an example of the significant additional workload associated with the pace of reform, which has continued post-WEM Reform Program implementation and will likely continue for many years as WA progresses towards its carbon emission reduction goals.

Num	Submission title	Organisation	Date Submitted	Link to submission
1	Proposed changes to WEM, GSI and Pilbara Regulations – Civil Penalties and Reviewable Decisions	EPWA	17 August 2022	<a href="#">EPWA website</a>
2	Ministerial Draft Statement of Policy Principles: Penalties for high emission technologies in the Wholesale Electricity Market	EPWA	17 August 2022	Provided confidentially
3	ERA's Triennial Review of the Effectiveness of the Wholesale Electricity Market	ERA	24 August 2022	<a href="#">ERA website</a>
4	Market Power Mitigation Strategy	EPWA	29 August 2022	<a href="#">EPWA Website</a>
5	ERA's Draft AEMO Regulatory Reporting Guideline and Supporting Template	ERA	13 September 2022	<a href="#">ERA Website</a>
6	Reserve Capacity Mechanism Stage 1 Consultation Paper	EPWA	29 September 2022	<a href="#">EPWA Website</a>
7	ERA Guidelines to inform the Australian Energy Market Operator's funding proposal	ERA	20 October 2022	<a href="#">ERA Website</a>
8	Application of re-authorisation lodged by Western Australia and Northern Territory LNG Producers	ACCC	30 November 2022	<a href="#">ACCC Website</a>
9	Market Power Mitigation Exposure Draft 2	EPWA	7 March 2023	<a href="#">EPWA Website</a>
10	Proposed State Electricity Objective	EPWA	15 March 2023	<a href="#">EPWA Website</a>
11	Review of Supplementary Reserve Capacity Provisions Stage 1 Consultation Paper	EPWA	21 March 2023	<a href="#">EPWA Website</a>
12	Electricity Industry Amendment (DER) Bill 2023 Consultation Paper	EPWA	2 June 2023	Provided confidentially
13	Reserve Capacity Mechanism Stage 2 Consultation Paper	EPWA	6 June 2023	<a href="#">EPWA Website</a>
14	Review of Supplementary Reserve Capacity Provisions Stage 2 Consultation Paper	EPWA	21 June 2023	<a href="#">EPWA Website</a>
15	ERA WEM Procedure Monitoring Protocol	ERA	17 July 2023	<a href="#">ERA Website</a>
16	ERA WEM Procedure Portfolio Determination	ERA	17 July 2023	Provided on request
17	ERA WEM Procedure ERA triggering the Supplementary Essential System Service Mechanism (SESSM)	ERA	17 July 2023	<a href="#">ERA Website</a>
18	Proposed changes to the Electricity Networks Access code – Priority Projects	EPWA	31 July 2023	<a href="#">EPWA Website</a>
19	ERA Draft determination on AEMO AR6 in-period forecast capital expenditure adjustment	ERA	1 August 2023	<a href="#">ERA Website</a>

### A3. Submissions to external consultation processes

Num	Submission title	Organisation	Date Submitted	Link to submission
20	Exposure Draft of Five-Minute Settlement Wholesale Electricity Market Amending Rules	EPWA	2 August 2023	<a href="#">EPWA Website</a>
21	Parliamentary Inquiry into the WA Domestic Gas Policy	Parliament	11 August 2023	<a href="#">Parliament Website</a>
22	ERA Consultation on Frequency Co-optimised Essential System Services (FCESS) Offer Price Ceiling draft determination	ERA	15 August 2023	<a href="#">ERA Website</a>
23	Western Power's Transmission System Plan 2023	Western Power	22 August 2023	<a href="#">Western Power Website</a> Additional feedback provided at officer level.
24	WEM Guideline: Non-Co-optimised Essential System Services (NECESS)	EPWA	7 September 2023	Provided on request
25	Western Power's draft WEM Procedure Determining Loss Factors	Western Power	8 September 2023	Provided on request
26	Reserve Capacity Mechanism Review - WEM Amending Rules Exposure Draft	EPWA	19 October 2023	<a href="#">EPWA Website</a>
27	Demand Side Response Review	EPWA	2 November 2023	<a href="#">EPWA Website</a>
28	Facilitating timely connection of critical projects	Western Power	8 November 2023	
29	Exposure Draft of the Cost Allocation Review Wholesale Electricity Market (WEM) Amending Rules	EPWA	28 November 2023	<a href="#">EPWA Website</a>
30	Benchmark Reserve Capacity Price Reference Technology	ERA	30 November 2023	<a href="#">ERA Website</a>
31	Demand Side Response Review Amending Rules	EPWA	24 April 2024	<a href="#">EPWA Website</a>
32	Electricity Industry (Wholesale Electricity Market) Regulations 2004 amendments	EPWA	26 April 2024	
33	Benchmark Reserve Capacity Price WEM Procedure (EEPC_2024_01)	ERA	15 May 2024	<a href="#">ERA Website</a>
34	Procedure Change Process Review	EPWA / Acil Allen	Due 30 May 2024	Currently drafting
35	Market Advisory Committee Review	EPWA/ Acil Allen	Due 30 May 2024	Currently drafting
36	ERA Draft Determination	ERA	Due 29 May 2024	Currently drafting
37	ERA Energy Offer Price Ceiling Draft Determination	ERA	Due 29 May 2024	Currently drafting

### AEMO External Submissions prior to AR6 Period

Num	Submission Title	Organisation	Date Submitted	Link to submission
1	WEM Procedure Change Monitoring Protocol	ERA	13 April 2017	Provided on request
2	MAC Constitution and Appointment Guidelines	Rule Change Panel	27 April 2017	Provided on request
3	GAB Constitution and Appointment Guidelines	Rule Change Panel	11 May 2017	Provided on request
4	Rule Change Proposal – Reserve Capacity Mechanism Manifest Errors 2017	Rule Change Panel	19 May 2017	Provided on request
5	Rule Change Proposal – Implementation of 30-Minute Balancing Gate Closure	Rule Change Panel	12 June 2017	Provided on request

### A3. Submissions to external consultation processes

Num	Submission Title	Organisation	Date Submitted	Link to submission
6	Rule Change Proposal – AEMO Role in Market Development	Rule Change Panel	22 November 2017	Provided on request
7	Rule Change Proposal – Correction of Gazettal Errors	Rule Change Panel	1 February 2018	Provided on request
8	Draft Balancing Submission Guideline	ERA	12 February 2018	Provided on request
9	Rule Change Proposal – Removal of Resource Plans and Dispatchable Loads	Rule Change Panel	13 February 2018	Provided on request
10	Rule Change Proposal – Capacity Credit Allocation Methodology for Intermittent Generators	Rule Change Panel	20 April 2018	Provided on request

## A4. Procedures developed or updated since the commencement of AR6

This appendix provides a list of all WEM Procedures created or updated by AEMO, as Procedure Administrator, since the commencement of AR6. At the time of writing, AEMO is in the process of amending 25 WEM Procedures. AEMO expects to maintain an ongoing high rate of WEM Procedure changes due to ongoing reform initiatives and increased complexity of the new market compared to pre-October 2023. This is in addition to a more temporary uplift associated with ‘settling in’ of the new market.

The appendix is provided as supporting documentation in relation to the new and expanded roles and responsibilities.

	WEM Procedure	Consultation closed	Publication	Standard/ Transitional
1.	<a href="#">Declaration of Bilateral Trades</a>	04/07/2022	01/09/2022	Transitional
2.	<a href="#">Undertaking the Long Term PASA</a>	03/06/2022	20/09/2022	Transitional
3.	<a href="#">Certification of Reserve Capacity for the 2022 and 2023 Reserve Capacity Cycle</a>	09/12/2022	15/12/2022	Standard
4.	<a href="#">Assignment of Network Access Quantity Model</a>	06/02/2023	01/03/2023	Transitional
5.	<a href="#">Distributed Energy Resource Register Information</a>	24/01/2023	24/04/2023	Standard
6.	<a href="#">Transitional Registration Processes</a>	26/05/2023	01/06/2023	Transitional
7.	<a href="#">Supplementary Capacity</a>	22/06/2023	01/07/2023	Standard
8.	<a href="#">Certification of Reserve Capacity for the 2022 and 2023 Reserve Capacity Cycle</a>	19/05/2023	11/07/2023	Transitional
9.	<a href="#">Electric Storage Resource Obligation Intervals (Second Revision)</a>	19/05/2023	11/07/2023	Transitional
10.	<a href="#">Reserve Capacity Security v6.0</a>	18/08/2023	18/08/2023	Standard
11.	<a href="#">Adjustment of Real-Time Inputs</a>	30/03/2023	01/10/2023	Transitional
12.	<a href="#">Capacity Credit Allocations</a>	04/03/2022	01/10/2023	Transitional
13.	<a href="#">Commissioning Tests</a>	13/09/2023	01/10/2023	Transitional
14.	<a href="#">Congestion Information Resource</a>	09/06/2023	01/10/2023	Transitional
15.	<a href="#">Constraint Formulation</a>	15/09/2023	01/10/2023	Transitional
16.	<a href="#">Consumption Deviation Applications</a>	08/09/2023	01/10/2023	Transitional
17.	<a href="#">Determination of Market Schedules</a>	25/08/2023	01/10/2023	Transitional
18.	<a href="#">Dispatch Algorithm Formulation</a>	30/03/2023	01/10/2023	Transitional
19.	<a href="#">Dispatch Settlement and Monitoring Data</a>	15/09/2023	01/10/2023	Transitional
20.	<a href="#">Essential System Service Quantities</a>	25/08/2023	01/10/2023	Transitional
21.	<a href="#">Facility Dispatch Process</a>	01/09/2023	01/10/2023	Transitional
22.	<a href="#">Frequency Co-Optimised Essential System Services Accreditation</a>	11/03/2023	01/10/2023	Transitional
23.	<a href="#">GPS Compliance Tests and Generator Monitoring Plans (Second Revision of GMP)</a>	06/06/2023	01/10/2023	Transitional
24.	<a href="#">Identification of Affected Dispatch Intervals</a>	25/08/2023	01/10/2023	Transitional
25.	<a href="#">Individual Reserve Capacity Requirements</a>	09/03/2023	01/10/2023	Transitional

A4. Procedures developed or updated since the commencement of AR6

	WEM Procedure	Consultation closed	Publication	Standard/ Transitional
26.	<a href="#">Limit Advice Requirements</a>	01/09/2023	01/10/2023	Transitional
27.	<a href="#">Meter Data Submission</a>	18/07/2023	01/10/2023	Transitional
28.	<a href="#">Monitoring and Reporting Protocol</a>	01/09/2023	01/10/2023	Transitional
29.	<a href="#">Notices and Communications</a>	01/05/2023	01/10/2023	Transitional
30.	<a href="#">Outages</a>	09/08/2023	01/10/2023	Transitional
31.	<a href="#">Power System Security</a>	01/05/2023	01/10/2023	Transitional
32.	<a href="#">Prudential Requirements</a>	20/09/2023	01/10/2023	Transitional
33.	<a href="#">Real Time Market Timetable</a>	21/02/2023	01/10/2023	Transitional
34.	<a href="#">Reserve Capacity Market Constraint Formulation</a>	13/06/2022	01/10/2023	Transitional
35.	<a href="#">Distributed Energy Resources Register Information</a>	24/01/2023	02/10/2023	Standard
36.	<a href="#">Reserve Capacity Security v7.0</a>	18/08/2023	01/10/2023	Standard
37.	<a href="#">Reserve Capacity Testing</a>	08/09/2023	01/10/2023	Transitional
38.	<a href="#">Reserve Capacity Performance Monitoring</a>	08/09/2023	01/10/2023	Transitional
39.	<a href="#">Rule Participant Registration Processes</a>	15/06/2023	01/10/2023	Transitional
40.	<a href="#">Settlements</a>	08/09/2023	01/10/2023	Transitional
41.	<a href="#">Supplementary Capacity</a>	08/09/2023	01/10/2023	Transitional
42.	<a href="#">Undertaking the Long Term PASA</a>	03/06/2022	01/10/2023	Transitional
43.	<a href="#">Verification of Dispatch Inflexibility</a>	18/07/2023	01/10/2023	Transitional
44.	<a href="#">WEM Submissions</a>	21/02/2023	01/10/2023	Transitional
45.	<a href="#">Dispatch Algorithm Formulation Updates</a>	23/11/2023	12/12/2023	Standard
46.	<a href="#">Indicative Facility Class</a>	01/03/2024	21/03/2024	Transitional
47.	<a href="#">Determination of Market Schedules</a>	14/03/2024	28/03/2024	Transitional
48.	<a href="#">Dispatch Algorithm Formulation</a>	14/03/2024	28/03/2024	Transitional
49.	<a href="#">Facility Dispatch Process</a>	14/03/2024	28/03/2024	Transitional
50.	<a href="#">Supplementary Capacity</a>	19/03/2024	01/04/2024	Standard
51.	<a href="#">Certification of Reserve Capacity</a>	28/03/2024	15/04/2024	Standard
52.	<a href="#">Long Term Projected Assessment of System Adequacy</a>	29/05/2024 (currently under consultation)	TBC	Standard
53.	<a href="#">RCM Constraint Formulation</a>	30/05/2024 (currently under consultation)	TBC	Standard
54.	<a href="#">Electric Storage Resource Obligation Intervals</a>	20/06/2024 (currently under consultation)	TBC	Standard