Response to ERA's Draft Findings
ERA Draft Findings Report
AEMO Submission

AEMO's proposed Adjustment to 2019-22 Forecast Capital Expenditure – DER Roadmap Implementation Costs

November 2020

WEM Market Operations and System Management

Important notice

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VERSION CONTROL

Version	Release date	Changes
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Executive summary

This submission is provided in response to the Economic Regulation Authority's (ERA) Draft Findings Report (Draft Report) on AEMO's proposed *Adjustment to 2019-22 Forecast Capital Expenditure – DER Roadmap Implementation Costs*, submitted to the ERA on Friday, 25 September 2020. This document responds directly to the matters raised in the Draft Report and is issued as a complement to the information already provided to the ERA under clauses 1.20A.2 and 1.20A.3 of the Wholesale Electricity Market (WEM) Rules. For context:

- The ERA issued its first request for information (RFI) under clause 1.20A.2 on Thursday, 8 October 2020. AEMO submitted its response on Thursday, 15 October 2020.
- The ERA issued its second RFI under clause 1.20A.3 on Thursday, 29 October 2020. AEMO submitted its response on Monday, 9 November 2020.
- The ERA's Draft Findings Report was published for stakeholder consultation on Monday, 9 November 2020.

AEMO's response to the ERA's second RFI does not take into consideration the ERA's observations and draft positions in its Draft Report. Similarly, the timing of the ERA's public consultation process indicates that the Draft Report does not take into consideration the information provided to the ERA in response to the ERA's second RFI. AEMO considers that many of the issues raised by the ERA in the Draft Report have been addressed or clarified in that response and trusts the ERA will revisit its initial assumptions and analysis when forming its final determination.

AEMO notes that in making its final determination, the ERA must have regard to the information provided to it in response to both RFIs.[1]

Context for this investment

Australia's electricity system owners and operators are becoming leaders in the integration and management of distributed energy resources (DER) and other forms of renewable energy. Across the country, energy sector stakeholders are working to address the clear and present risks associated with the ongoing uncoordinated penetration of DER in traditional electricity networks, as well as unlocking the potential opportunities.

In March 2019, AEMO published its landmark report on the Integration of Utility-scale Renewables and Distributed Energy Resources in the South West Interconnected System (SWIS). This report identified pressing issues and concerns with the penetration of Distributed Energy Resources (DER)and the implications for the secure and reliable operation of the SWIS.[2]

The challenges associated with DER penetration were reaffirmed in AEMO's 2020 Wholesale Electricity Market Electricity Statement of Opportunities (WEM ESOO), which identified that under a 50 per cent probability of exceedance forecast minimum load system security threshold would be met in 2023-24.[3]

Further, AEMO's comprehensive 2020 Renewable Integration Study investigated system security and reliability risks associated with the transition from conventional thermal generation to renewable energy generation[4].

[1] As required by clause 1.20A.7(b) of the WEM Rules.
[2] AEMO 2019, Integrating Utility-Scale Renewables and Distributed Energy Resources in the SWIS.
[3] AEMO 2020, Electricity Statement of Opportunities.
[4] AEMO 2020, Renewable Integration Study - Stage 1.

This report clarified the actions required to manage this newer form of generation and the broad-reaching implications it is having on Australia's power systems.

Urgent action is required.

The Western Australian (WA) Government's response to addressing the DER challenge was to develop and implement a roadmap of actions to resolve DER-related issues in a timeframe between 2020 and 2024. The DER Roadmap was developed through extensive engagement and consideration alongside Australia's leading experts on DER and renewable energy integration. Its recommendations and actions are each recognised as critical to the successful evolution of the WEM and SWIS as it becomes increasingly reliant on energy from customer-led investments in DER.

As detailed in AEMO's submission and in preceding government consultation papers[5], AEMO has been requested to contribute to delivering the DER Roadmap actions by the WA Minister for Energy. AEMO's involvement in the DER Roadmap implementation is to facilitate the integration of DER technologies into the SWIS to enhance management of power system security and reliability. AEMO's role also includes enabling participation of DER in the WEM's electricity service markets to deliver more efficient market outcomes.

It follows that AEMO's submission for the ERA's assessment relates to only those investments required to undertake the Roadmap actions. As required by the WEM Rules, AEMO must seek to achieve the lowest practicably sustainable cost to deliver the Roadmap implementation activities.

AEMO's capex forecast reflects a fully-informed view of what AEMO reasonably considers the DER Roadmap activities will cost. These estimates are informed by the market and historical costs, where possible. As a not-for-profit essential service provider, funded my Market Participants, AEMO has incentive to deliver the works for lowest practicably sustainable cost. The WEM Rules provide that AEMO will only recover the capital expenditure it actually incurs.

The DER Roadmap Actions are fundamental to WA's energy transformation, and it is acknowledged within the WEM Rules these reforms *will require a substantial commitment of resources by AEMO during the Review Period* [AR5][6]. The WEM Rules expressly require that the ERA must determine and approve an adjustment on this basis.

To demonstrate the substantial commitment of resources required in AR5, AEMO has conducted detailed assessments of the resource requirements and specialist skills required to deliver the Roadmap activities within AEMO's scope. This was provided to the ERA as a confidential attachment to AEMO's submission.

AEMO's September 2020 capex adjustment submission presented activities and costs consistent with those of a prudent service provider seeking to achieve the lowest practicably sustainable cost of delivering the DER Roadmap implementation activities.

The plan AEMO has put forward for the ERA's assessment has been informed by all its related activities to date, drawing on the best local, national and international experience with DER integration. It presents a comprehensively planned package of activities against the DER roadmap actions, with each component being critical to achieving the overall objectives.

Overview of AEMO's response

AEMO welcomes the ERA's decision to issue draft findings prior to its final determination and appreciates the opportunity to respond. AEMO supports providing stakeholders the opportunity to comment on proposed costs and activities.

AEMO recognises that the ERA's Draft Report represents the ERA's initial views and observations, and does not consider all aspects of AEMO's submission. AEMO submits that the information provided in response to the ERA's RFIs, and in this submission, will enable it to make a fully-informed assessment of AEMO's capital

[5] For example, DER Roadmap Implementation Rule Change Industry Consultation Paper, Energy Transformation Taskforce, May 2020.
[6] Clause 1.20A.7(e)(i).

expenditure (capex) forecast, and welcomes further queries to clarify any other aspects of the DER Roadmap activities forecast prior to the ERA making its final determination.

AEMO is mindful of the impact of its investments on Market Fees and continually assesses opportunities to manage the scope and costs of projects as they are progressing, while ensuring delivery of the program objectives. As a result, AEMO has identified the following opportunities to adjust the capex forecast:

- Since its capex adjustment submission, AEMO has been able to gain greater clarity over some of the IT architecture requirements for Project Symphony. Subsequent adjustments to the forecast internal and contractor resources have allowed AEMO to revise its proposed forecast labour costs downwards by $584,000, noting that this also includes a subsequent change to related financing costs and proposed contingency allowances.
- Since its submission, AEMO has entered new financing arrangements, which will enable AEMO to access capital funding at a lower cost. This has allowed AEMO to revise its proposed financing costs downwards by $199,000.
- Subsequent to the above adjustments, a resulting adjustment to forecast contingency allowances leads to a reduction of the contingency allowance by $147,000.

These adjustments reduce AEMO's forecast capital adjustment from $18.9 million to $17.9 million, as detailed in Section 2.

AEMO highlights that its submission presents a forecast, and the costs AEMO actually incurs will be driven by the market. This is important in the context of DER integration, as the range of activities are broad and novel. Uncertainties and unknowns will arise, and it is vital AEMO has capacity to manage them to deliver the Roadmap scope and objectives. AEMO will endeavour to outperform its forecasts when undertaking the DER Roadmap activities and will seek to deliver the work for the lowest practicably sustainable cost. Market Fees will only be adjusted to recover actual costs.

Responses to the ERA's draft findings and observations

Labour costs

- The labour unit cost comparisons published by the ERA do not reflect the requirements of the roles AEMO will need to fill and have been developed without considering all the detailed information provided to the ERA on the nature and competencies for each role.
- AEMO has provided detailed information to the ERA to enable it to carry out a robust assessment of labour costs against requisite competencies and capabilities. The ERA did not have this information when preparing its Draft Report.
- AEMO submits that using existing labour costs as the basis of forecasting labour costs is a generally accepted method of estimating forward-looking expenditure, and that it produces a reasonable forecast of the costs AEMO is likely to incur.
- AEMO highlights that actual labour costs will be determined by the prevailing market conditions and calibre of applicants at point of recruitment, and will therefore likely vary from the averages used in AEMO's five-tier approach.
- AEMO is concerned at the level of asymmetry of information provision associated with the ERA's draft positions. For AEMO to address relevant issues in this submission, it has requested further clarification on aspects of the ERA's workings and assessment of labour unit costs that informed its draft decisions. A response has not been provided to date.
- AEMO has proposed an adjustment of $584,000 to its forecast labour costs. This is a result of having greater visibility and understanding of the IT solution for Project Symphony and the resourcing effort required to deliver that solution. Note that the same cannot be said for other elements of the DER Roadmap actions. As such, AEMO's risk profile across all projects remains unchanged.

Property costs

- In response to the second RFI, AEMO provided information to the ERA that identifies rental, utility and consumable costs within the occupancy charge. The ERA did not have this information when preparing its Draft Report.
- The occupancy charge is a cost associated with employing any resource. All resources/employees either use or can reasonably be expected to use AEMO's utilities and accommodation, and AEMO incurs a cost associated with this.
- The more resources AEMO has, the greater total cost of accommodating them, irrespective of where a resource is based (i.e. Perth or other AEMO office locations).

Project contingency

- The ERA's draft position to not approve a contingency amount is inconsistent with its AR5 determination and prior determinations. AEMO's proposed contingency allowance is already substantially below what the ERA considered acceptable for approved WEM Reform activities. However, it appears the ERA seeks to delineate between projects that require IT investments presenting technology risks and those that may be more analytically grounded presenting resource risks.
- It appears the ERA supports $1.8 million of contingency associated with IT elements of the DER Roadmap activities in principle. Allowing an amount for IT contingency would be consistent with previous ERA decisions. However, it should be noted that if AEMO is to rely solely on the 10% overspend provision in clause 2.22A.9 of the WEM Rules to accommodate contingency, there is a heightened risk of a funding shortfall.
- The ERA's view that the 10 per cent allowance provided for in clause 2.22A.9 can be used to accommodate any DER Roadmap contingency is a reversal of its position in the AR5 determination, whereby it agreed that this provision should be reserved for in-period rule changes and minor unexpected opex or capex.
- AEMO maintains its position that clause 2.22A.9 should be reserved for unforeseen and uncontrollable new capex projects that arise during the period, and that it remains prudent to include an amount for contingency related to specific projects in the capex forecast.
- Clause 1.20A provides a modified framework for an adjustment to AEMO's Allowable Revenue and Forecast Capital Expenditure in respect of DER Roadmap Implementation Costs, but is otherwise consistent with the standard framework for adjustments in clause 2.22A. In AEMO's view, the purpose of the adjustment process is to provide certainty for AEMO (and, in turn, for Market Participants) regarding whether proposed additional expenditure satisfies the criteria in clause 2.22A.11. It follows, in AEMO's view, that a decision by the ERA not to approve any contingency amount, or to approve an insufficient contingency amount, would create uncertainty for AEMO if proposed additional expenditure will, or is considered likely to, exceed the 15 per cent and 10 per cent thresholds.
- AEMO highlights that the potential to be able to backfill does not eliminate the risk that resourcing costs will vary from forecast. Having resources available does not necessarily mean resourcing costs will not change.

Capitalisation policy, intangible assets and future benefit

- Any prospective and unquantified future benefits that may be derived from intellectual property gained from the ERA's approved expenditure are not *DER Roadmap Implementation Costs* as defined by the WEM Rules. It follows that such future benefits are not relevant matters that the ERA may take into account when assessing and determining AEMO's application with respect to DER Roadmap Implementation Costs.

- As AEMO has advised the ERA, it has not placed a value on intellectual property as it does not intend to sell or make profit from it – identifying intellectual property is a requirement under the asset related accounting standards. This was further clarified in AEMO's response to the ERA's second RFI.
- AEMO does not consider it appropriate to charge NEM participants for intellectual property. There is no basis for the charge given that those benefits are currently speculative and unquantifiable. Moreover, the WEM Rules expressly address market cross-subsidisation in clause 2.22A.11(d) with respect to AEMO's functions.
- AEMO has not included a charge to WEM participants for the intellectual property and benefits NEM employees have brought to the WEM DER Roadmap program. Further, AEMO is concerned that such a cross-charging would serve to inhibit knowledge sharing and innovation, and artificially increase the cost of addressing challenges posed by DER
- AEMO does not earn a return on a regulated capital base and receives no additional revenue if costs are capitalised or otherwise, but notes that Clause 2.22A.11(a)(i) provides that recurring costs should be expensed in the year incurred. The expenditure on the DER Roadmap implementation activities is not recurring, and therefore cannot be classified under this clause which would necessitate an immediate adjustment to Market Fees.
- Clause 2.22A.11(a)(i) provides that recurring costs should be expensed in the year incurred. The expenditure on the DER Roadmap implementation activities is not recurring. It is generally accepted practice to recover these costs as capex via depreciation and amortisation as per clause 2.22A.11(a)(ii).

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1. Response to ERA Draft Findings Report

1.1 Structure and context of this submission

This submission is provided in response to the ERA's Draft Findings Report (Draft Report) on AEMO's proposed *Adjustment to 2019-22 Forecast Capital Expenditure – DER Roadmap Implementation Costs*.

1.1.1 Structure

This document responds directly to the matters raised in the ERA's Draft Report. Section 1 of this submission is therefore structured to reflect the four key areas of focus identified by the ERA:

- Internal labour costs and resource requirements;
- Property costs;
- Project contingency; and
- Capitalisation policy, intangible assets and future benefit

Section 1.6 addresses other issues raised by the ERA in its Draft Report.

Section 0 of this submission presents AEMO's revised capital expenditure forecast.

1.1.2 Context

This submission is issued to the ERA as a complement to the detailed information already provided by AEMO in response to the ERA's RFIs, as below:

1. The ERA issued its first RFI under clause 1.20A.2 on Thursday, 8 October 2020. AEMO submitted its response on Thursday, 15 October 2020.
2. The ERA issued its first RFI under clause 1.20A.3 on Thursday 29 October 2020. AEMO submitted its response on Monday, 9 November 2020.

AEMO acknowledges that the objectives of the DER Roadmap – i.e. the proper consideration of DER integration with the power system and market to enable the secure and reliable operation of the system now and into the future – are novel in the context of regulatory assessment. The benefit of a clear roadmap on which to focus is that it enables detailed planning to occur against set objectives. During the review process, AEMO has respected the ERA's need for detailed information and constructively responded in a timely manner to numerous questions to support the ERA's deliberations.

An outline of the types of information provided to the ERA is included in Appendix A1. This has been provided to assist market participants in understanding the extent of the information being provided by AEMO, upon request to the ERA, given the novel DER works.

By providing this information, AEMO expects that market or network operators facing similar challenges in different jurisdictions may benefit.

The ERA's Draft Findings Report was published on Monday, 9 November 2020. AEMO submits that many of the matters raised by the ERA in its Draft Report are addressed in AEMO's second RFI response, and considers the information provided to date will allow the ERA to assess and determine AEMO's forecast capital adjustment proposal.

AEMO also observes there are matters raised in the ERA's Draft Report that have not featured in any of the ERA's RFIs to date. AEMO welcomes further engagement with the ERA on any aspects of its forecast. Due to the tight timeframes for approval, AEMO is willing to clarify any further points via a workshop with the ERA's Secretariat or Authority.

Notwithstanding this, there are several material issues AEMO considers it must address in this submission, to ensure the ERA and energy sector stakeholders have sufficient clarity on AEMO's forecasting approach. These matters are discussed in the following sections.

1.2 Internal labour costs

In its Draft Report, the ERA has recalculated AEMO's total internal labour costs to deliver the DER Roadmap activities. The ERA has taken AEMO's five-tier unit rates (or pay grades) and compared them with the pay grades of roles that have similar titles in other private and public sector organisations. In its submission and RFI responses, AEMO explained and provided detail to the ERA demonstrating that the five-tier approach is based on an average of the total remuneration of the existing 1,100 AEMO employees allocated across the five tiers.

AEMO provided detailed resource plans against each DER Roadmap action in its submission. As described in the Draft Report, the ERA compared the *position titles* identified in AEMO's resource plans with a selection of similar position titles it identified from publicly available information. The Draft Report indicates public information sources for the position titles include:

- Hays 2020/21 Salary Guide
- Online search at Seek.com
- Western Power and Australian Services Union Enterprise Agreement 2017
- Synergy Perth Enterprise Agreement 2018
- WA Government Jobs Board
- WA Public Sector General Agreement 2019

The ERA has calculated a base salary for each of AEMO's five tiers and compared them with the salaries for roles with similar job titles from the above sources. Using this approach and calculation, the ERA concludes that "*[o]n average across all positions AEMO's base salary rates exceeded the indicative market rate by 26 per cent*"[7] and that the ERA's calculation "*suggests that AEMO's estimated internal resources are costed at $2.4 million above market rates*."[8]

The ERA accepts that AEMO cannot apply the ERA's alternative rates to existing staff, therefore the ERA's initial view is that the market rates should apply only to new contract hires, which would reduce internal staff costs by $1.7 million.[9]

1.2.1 AEMO's response

The ERA's alternative labour unit cost calculation was conducted in the absence of information[10] on role requirements and competencies that would achieve reasonable accuracy in a comparison with market rates.

AEMO considers the information provided to the ERA in its forecast capital expenditure adjustment submission and in response to both RFIs – including explanations of the expected resource capabilities and competencies for each role identified in the labour forecast – is consistent with that reasonably required to allow the ERA to assess and determine AEMO's submission. This additional information will enable the ERA to make a more informed market comparison. AEMO trusts the ERA will revisit its assumptions in light of more complete data and context.

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[7] ERA Draft Report, page 14.
[8] Ibid, page 15.
[9] Ibid.
[10] Ibid, page ii.

AEMO maintains its labour cost forecast provided on 25 September[11] was arrived at on a robust and reasonable basis and *only includes costs which would be incurred by a prudent provider of services, acting efficiently, seeking to achieve the lowest practicably sustainable cost* of delivering the DER Roadmap activities.[12] Since the September forecast was developed, AEMO has gathered more up-to-date information on the technical solution required for Project Symphony, and has taken steps to review the resourcing effort and associated costs required to implement the DER Orchestration Pilot. The revised resource requirements for Project Symphony are discussed in section 1.2.2 below.

AEMO highlights that labour cost revisions have been possible for Project Symphony only. No new information relating to technical scope has been obtained for the other DER projects, therefore AEMO's risk profile is unchanged and the need for appropriate contingency allowances is unchanged.

In the following sections, AEMO summarises several observations on the labour cost forecast and matters raised in the ERA's Draft Report.

Actual labour costs are a sound basis for forecasting future labour costs

AEMO has provided detailed information to the ERA on its approach to forecasting labour costs for the DER Roadmap activities. As identified in the ERA's Draft Report[13], AEMO has:

- identified the number and type of different personnel required for each activity;
- estimated the number of days required from each individual for each DER action; and
- applied a unit day rate to calculate the cost of each resource.

The unit rate applied for each role is drawn from AEMO's five-tier system of labour rates. The five-tier labour rates are calculated by allocating all existing AEMO roles (some 1,100 employees) to one of five tiers or pay grades, and then taking an average of the total remuneration[14] for the positions in that tier.

Essentially, the five-tier system is based on the actual remuneration being paid to AEMO employees. AEMO then uses these actual costs to *forecast* the likely remuneration costs it will incur for new hires in similar roles.

The approach of using actual historical labour costs to inform future labour costs for similar roles is a reasonable and commonly accepted approach to developing expenditure forecasts. As the ERA is aware, it is common practice in regulatory determinations to estimate forward-looking costs based on comparable actual costs, particularly where expenditures are subject to variability and contingencies.

AEMO considers that developing its forecast costs in this way is fully consistent with the expectations of a *prudent provider of services which is seeking to achieve the lowest practicably sustainable costs of delivering the services*. Moreover, only the actual costs incurred are recovered from market participants.

The unit rates AEMO secures will be driven by the market

AEMO has not yet appointed the necessary resources to deliver the DER Roadmap actions. For the purpose of developing a forecast, AEMO considers it prudent to base the estimated cost of these new roles on the rates already being paid to AEMO employees.

It is not reasonable nor prudent to assume new hires will be paid less than existing employees performing similar roles. If lower rates are assumed across the capex forecast, then it places AEMO at risk of being unable to secure sufficient funding to recruit the necessary resources to deliver the critical and time constrained DER Roadmap activities.

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[11] Subject to adjustments for revised financing arrangements as described in section 1.6.2.
[12] As required by clause 2.22A.11(b) of the WEM Rules.
[13] ERA Draft Report, page 12.
[14] Total remuneration includes base salary and allowances for performance rewards and long service leave.

Actual remuneration paid to new hires will be driven by the market, and AEMO will only recover the costs it incurs. Forecasts submitted to the ERA have been developed on a reasonable basis and seek to only include the lowest practicably sustainable cost of providing the services.

AEMO submits that it will seek to outperform the forecasts and is committed to delivering the DER Roadmap actions for the lowest practicably sustainable cost. This includes securing labour at a lower rate where possible. The labour costs AEMO incurs will be influenced by the market conditions at the time and the calibre/experience of applicants at point of recruitment. It therefore follows that actual labour costs will vary to some extent from the forecast.

Given the challenges in estimating labour costs in a market subject to considerable disruption during the ongoing COVID-19 pandemic, AEMO considers it prudent and appropriate to base labour cost estimates on current actuals rather than assuming a lower unit rate can be secured.

Forecasting and planning in this way is consistent with the behaviour of a *prudent provider of services which is seeking to achieve the lowest practicably sustainable costs of delivering the services*.

AEMO's labour rates are consistent with its peers

The ERA has compared AEMO's five-tier unit rates with comparable job titles in the private and public sectors. The ERA states that its private sector comparisons indicate AEMO's labour rates are between 19 per cent and 44 per cent greater than those identified in its research.[15] The ERA has also compared AEMO's rates with public sector roles.

AEMO has requested further clarification on aspects of the ERA's workings and assessment of labour unit costs that informed its draft position. However, the ERA has not provided this information. In the absence of this information, AEMO highlights the following:

- The ERA's analysis was conducted before it received information on AEMO's resource requirements and role competencies provided in response to the second RFI, it is therefore (as the ERA acknowledges[16]) not a fully informed or robust comparison.
- The DER Roadmap activities are part of an industry-leading program of work and therefore have unique deliverables. The skills and competencies required to deliver the works are not readily comparable with roles apparently selected without a comparison of skills, competencies and experience.
- Given the nature of the DER Roadmap activities, the most appropriate comparison would be with the other entities delivering the work (e.g. Synergy and Western Power). The ERA's Draft Report shows that AEMO's labour rates are broadly the same as equivalent roles at Synergy and Western Power under the respective enterprise bargaining agreements.
- AEMO is not a public sector organisation, and the nature of the DER Roadmap work and deliverables is not contemplated in the public sector roles and responsibilities identified in the ERA's desktop analysis. For these reasons, AEMO doesn't follow the validity of the comparison with public sector roles, responsibilities and remuneration.

AEMO is particularly concerned that the analysis in the ERA's Draft Report misrepresents how AEMO's labour unit rates may compare with the market. Table 5 in the Draft Report presents AEMO's base salary rate as being up to 44 per cent greater than the market rate. AEMO highlights that the ERA's assessment is based on generic, rather than sector-specific, information.

It is unclear in the ERA's analysis whether it regards the contract/consulting rate card information provided to it as part of the response to the first RFI. The information provided to the ERA under clause 1.20A.2 presents daily rates for comparable contracting roles, sourced from five different vendors. An assessment of the average consultant rates for each tier indicates that AEMO's base rates are between 24 per cent and 37 per cent below the consultant rates. This indicates that estimates for equivalent positions in AEMO's forecast are

[15] ERA Draft Report, page 13.
[16] Ibid.

reasonable and in line with market expectations. A further reduction of 19-44 per cent below AEMO's base rates as proposed by the ERA does not appear to align with market expectations.

The rate ultimately achieved will be driven by the market. While the actual cost will likely vary from forecast, AEMO sees no evidence to suggest that its forecast is up to 44 per cent greater than a comparable market rate for equivalent resources.

AEMO submits that the labour unit costs assumed for the DER Roadmap capex forecast are consistent with those AEMO expects to achieve in the market and are comparable with relevant peers. AEMO trusts that when considered by the ERA, the information provided under clause 1.20A.3 will enable an appropriately robust assessment of the nature and cost of the resources required to deliver the DER Roadmap actions.

AEMO does not intend to pay contract hires performance rewards and long service leave

On page 14 of the Draft Report, the ERA observes that AEMO's five-tier labour rates are calculated based on existing staff costs and include allowances for performance rewards and long service leave. The ERA's view is that AEMO should not apply these performance incentives and long service leave payments in the labour cost estimate for new hires.

AEMO would like to clarify that it does not intend to offer performance incentives and long service leave payments to new hires appointed on a short-term contract basis. However, AEMO submits that the five-tier labour unit rates remain an appropriate basis for a forecast. This is because the total remuneration of employees (including all performance and leave benefits) is also a reasonable benchmark for the higher rate typically paid to short-term hires.

A day rate paid to a short-term contractor is typically higher than the base day rate paid to a permanent employee (excluding performance and leave benefits). This is because the rate is loaded to compensate for the contractor not being entitled to paid leave or the benefits and security of a permanent role.

It is therefore reasonable and prudent to use the total remuneration of employees in similar roles as a proxy for the estimated day rate payable to new short-term contractors appointed to work on the DER Roadmap implementation activities. This ensures labour costs are not underestimated and the forecast represents a practically sustainable cost. However, it should not be inferred that contractors will receive the same benefits package as employees.

AEMO also notes that all labour costs provided to the ERA in the forecast capital adjustment submission are forecasts only. As discussed in AEMO's submission, AEMO's preference is to use in-house resources wherever practicable, and will only use external contractors where no in-house resource is readily available. Therefore, for the purpose of a forecast, it is appropriate to use the same rates for both internal and external resources, as the actual mix of resource types used will likely vary. AEMO only recovers costs it incurs.

1.2.2 Adjustment to labour requirements for Project Symphony

On page iii of the Draft Report the ERA notes it has "*requested that AEMO provides more information to justify the number of positions identified as necessary for DER activities and how it has estimated the number of days required from each position*"[17]. As part of its September 2020 submission, AEMO provided a detailed breakdown of the number and type of personnel required to deliver the DER Roadmap implementation activities, and a forecast of the number of days per month required from each individual for each DER Roadmap action (i.e. AEMO's entire scope of work).

In response to the second RFI AEMO has provided the ERA extensive detail on the forecasting process, and how AEMO applied a bottom-up and top-down approach to the development, review and approval of its forecasts. Throughout this process AEMO conducted detailed assessments of the resource requirements and specialist skills required to deliver the DER Roadmap activities within AEMO's scope. Many of the specialist skills AEMO requires to implement the DER Roadmap actions are not generic or generalist in nature. In

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[17] Ibid, page iii.

developing its forecasts AEMO fully considered this and applied a lens of optimising resources across the DER Roadmap actions.

AEMO is satisfied that its forecasts were arrived at through comprehensive planning and governance processes and represent the best possible forecast at the time. AEMO's forecast are consistent with good practice and reflect those of a prudent provider acting efficiently, seeking to achieve the lowest practicably sustainable costs for delivering the DER Roadmap implementation activities.

Since making its submission AEMO has continued to undertake design activities for the DER Orchestration Pilot (Project Symphony). Recent discussions and workshops on technology solutions and integration requirements between the Project Symphony partners has refined AEMO's understanding of the IT requirements. This has allowed AEMO to adjust its forecasts for some of its forecast internal technology resources (e.g. architects, designers, developers, etc) and contractor expectations. Revisions of the forecast resource profile have identified a $584,000 reduction in these forecast labour capital costs. This change has a resulting impact on other elements of the forecast such as finance and contingency for Project Symphony.

AEMO notes that the same cannot be said for other projects. AEMO has no new information on the scope and technical requirements that would have a material impact on the forecast for the other three DER Roadmap workstreams. AEMO's risk profile remains the same and project contingency requirements are unchanged.

1.3 Property costs

In its Draft Report, the ERA observes that AEMO has included property costs as part of a fixed occupancy charge per full-time equivalent (FTE) hour applied to all internal and external staff and contractors. The property cost charge includes rental, floorspace, utilities and consumables.[18]

The ERA considers that current working from home arrangements adopted during the ongoing COVID-19 pandemic may limit the need for additional floor space to accommodate AEMO resources. At the time of developing its Draft Report, the ERA considers AEMO had not provided enough evidence to justify its property costs and the ERA's initial view is to not approve the proposed $427,664 property cost.[19]

1.3.1 AEMO's response

In its initial submission, AEMO did not separately identify rent, utilities and consumables as separate line items in the property charge. This breakdown has since been provided to the ERA on 9 November in response to the ERA's second RFI.

With regard to the principle of charging property costs, AEMO reiterates that the occupancy charge is a cost associated with employing any resource. All contractors/employees either use or can reasonably be expected to use AEMO utilities and accommodation, and AEMO incurs a cost associated with this.

It therefore follows that as the number of resources increase, so too does the total cost of accommodating them, irrespective of whether additional floor space is required. This occupancy charge is incurred against all resources, whether based in the NEM or the WEM.

If a NEM resource works on a WEM project, then it is equitable and simple for the whole cost associated with that resource be charged to the WEM for the time the resource is working on the project. Similarly, where a WEM resource works on a NEM project, the entire cost (including all on-costs) is charged to the NEM.

With regard to the question about additional floor space requirements, it is unclear whether the additional floor space will be required or can indeed be secured given the ongoing COVID-19 working arrangements. However, including the occupancy change is a prudent approach to forecasting as it ensures there is provision for the additional space if necessary.

[18] Ibid, page 15.
[19] Ibid, page 16.

1.4 Project contingency

In its Draft Report the ERA identifies that as per the AR5 determination, AEMO undertook a risk assessment of each DER Roadmap action and from this calculated a project contingency. AEMO's approach considers two categories of risk assessment:

- the risk that resource costs may vary from the forecast; and
- the risk that the cost of hardware, software and licences may vary from the forecast.

The ERA states that it "*supports AEMO maintaining a risk-based approach to determining project costs consistent with the approach approved by the ERA in AR5*."[20] However, the ERA's initial view in its Draft Report is that it does not support AEMO's project contingency estimates.

The ERA considers that the contingency associated with the resource risk, estimated at $600,000, is not required on the basis that the necessary resources are readily available from the NEM, and that there is a contingency already approved to allow for backfilling WEM resources.[21]

Conversely, the ERA appears to support the principle that there is a scoping risk, stating:

> *There may be some residual project risk, for example an unexpected change in the scope or complexity of a project, such that specialist, higher cost resources are required or different IT platform requirements are needed.*

On this basis the ERA has identified the projects with the highest project contingencies relating to hardware, software and licences, and implies that $1.8 million of AEMO's estimated $2.4 million is justifiable. However, the ERA's position is that this $1.8 million *can be accommodated within the 10 per cent above forecast expenditure that AEMO is able to spend before it needs to apply to the ERA for a budget uplift*.[22]

The ERA has since clarified that this position refers to the overspend allowance provided by clause 2.22A.9 of the WEM Rules, which the ERA considers also applies to any forecast capex approved in this in-period adjustment process. The ERA's initial view is therefore not to approve the $2.4 million contingency allowance proposed by AEMO.

1.4.1 AEMO's response

In making its assessment the ERA appears to accept AEMO's risk-based method of estimating contingencies, however it does not consider that the resourcing risk is valid in this instance. The ERA seems to conclude that the ability to backfill NEM and WEM roles means that the risk these resources are not available is minimal, and as a result no contingency is required.

AEMO highlights that resources flagged in the funding submission is a forecast reflecting capabilities and experiences required for the DER program. Majority of the resources are yet to be recruited or engaged. There exists real risk that these resources may not be readily available internally due to reasons beyond AEMO's control (e.g. turnover, inability to backfill) and externally due to market conditions. In addition, changes in a project's scope or complexity may lead to higher cost or specialist resources being required or to the established resources being required to spend more time on the project. Either way, the overall resourcing cost would be higher than anticipated and contingency allowances are required for this purpose.

However, the ERA appears to conclude that the potential for changes in scope does not apply to the Technology Integration and DER Participation workstreams, presumably because these DER Roadmap actions are analysis-based rather than heavily reliant on IT investment, and the scope appears fixed.

While it is reasonable to assume the scope of a more analysis-based project would generally be less likely to change than a project requiring substantial hardware/software investment, the DER Roadmap actions are novel and require investigation and design of emerging challenges that are not well understood (in the

[20] Ibid, page 17.
[21] Ibid.
[22] Ibid.

absence of the investigation). As a result, there remains a credible risk that projects are required to flex to undertake additional work or analysis to deliver the same scope objectives. This would clearly require specialised resources to be added or increased in duration in any given action.

For example, Table 24 of AEMO's September 2020 submission explains that contingencies within the inverter standards and power system design projects in the Technology Integration workstream relate to the "*actual performance of equipment that will be encountered during the studies and detailed assessments*". This clearly indicates that DER performance is not well understood and any significant variations in performance may lead to further modelling analysis and re-work to deliver DER Roadmap action's objectives. Though this risk is low (hence a 10 per cent contingency allowance is acceptable by AEMO management), it is a material risk and it is prudent to accommodate it in the forecast. Were such a risk to arise, the availability of resources already dedicated to a given activity would not necessarily mitigate the risk or eliminate the cost of addressing it in the absence of a contingency allowance.

Further, any decision to backfill positions will depend on business requirements at that point in time, and AEMO will assess the requirement and ability to backfill as appropriate. AEMO considers it prudent to assume positions will be backfilled for the purpose of developing a capex forecast to confirm funding. However, it does not follow that all resources are readily available and that all positions can be readily backfilled by resources that AEMO already employs and can be released (e.g. due to completion of another project or in the rare case that the normal work undertaken by that person is no longer required).

With regard to the risk associated with hardware, software and licences (specifically the DER Orchestration and DER Register workstreams), the ERA appears to support the $1.8 million contingency identified, however its initial view is not to include this amount in the capex forecast. This position is inconsistent with the approach adopted in previous Allowable Revenue and Forecast Capital Expenditure determinations, whereby the ERA has agreed that these specific contingencies be included in the forecast[23].

The ERA comments that the 15 per cent project contingency "*appears high, given the nature of the proposed expenditure*".[24] The ERA does not expand upon this line of thinking, however, AEMO notes that the nature of the proposed expenditure is not dissimilar to the WEM Reform activities approved in the AR5 determination, and that the 15 per cent contingency proposed for the DER Roadmap activities is substantially less than the 25 per cent approved for the WEM Reform activities.

The ERA considers the 10 per cent overspend allowances under clause 2.22A.9 should be used to accommodate AEMO's contingency. AEMO maintains its view that the principle behind the allowances provided for by clauses 2.22A.8 and 2.22A.9 are to support minor capital cost requirements that arise during an allowable revenue period, which could not be forecast when AEMO submitted its allowable revenue proposal and the ERA made its determination. Further, AEMO remains of the view that separate identification of contingencies is important to maintain transparency and accountability.[25]

AEMO highlights that the purpose of this standalone in-period process, as contemplated by the transitional provisions in the WEM Rules and discussed in the Energy Transformation Taskforce's May 2020 consultation paper[26], is to provide certainty that AEMO can secure funding for and recover the costs of implementing the DER Roadmap activities. AEMO also notes that this submission is specific to a series of defined projects over a defined timeframe, rather than a longer-term and broad-reaching operational and capital expenditure approval such as is contemplated in the standard regulatory determination cycle.

Clause 1.20A provides a modified framework for an adjustment to AEMO's Allowable Revenue and Forecast Capital Expenditure in respect of DER Roadmap Implementation Costs incurred by AEMO in the 1 July 2019 to 1 July 2022 Review Period. The modified framework covers certain matters, including requests for information and specific matters that the ERA must and may have regard to when determining and approving an adjustment, but is otherwise consistent with the standard framework for adjustments in clause 2.22A. Clause

[23] ERA, AEMO AR5 Final Determination, p. 31.
[24] ERA Draft Report, page 17.
[25] AEMO 2019, AR5 Draft Determination Submission to ERA, p. 18.
[26] Energy Transformation Taskforce, DER Roadmap Implementation Rule Change, May 2020, p. 2.

2.22A relevantly provides a framework under which AEMO must [clauses 2.22A.8 and 2.22A.9) and may [clause 2.22A.14] apply for an adjustment to Allowable Revenue and Forecast Capital Expenditure that the ERA has previously approved. In AEMO's view, the purpose of the adjustment process is to provide certainty for AEMO (and, in turn, for Market Participants) regarding whether proposed additional expenditure satisfies the criteria in clause 2.22A.11. It follows, in AEMO's view, that a decision by the ERA not to approve any contingency amount, or to approve an insufficient contingency amount, would create uncertainty for AEMO if proposed additional expenditure will, or is considered likely to, exceed the 15% and 10% thresholds.

In the previous Section 1.2.2 AEMO proposed an adjustment to its forecast resource labour costs and corresponding adjustments to the project contingencies, leading to a reduced forecast contingency amount of $2.25 million. AEMO also makes the point that changes to its forecast noted here have not changed its risk profile – resourcing risk remains unchanged, as the project scope and associated risks remain unchanged.

AEMO again notes that the contingency amounts allowed for in its capital adjustment submission are consistent with that expected of a prudent provider seeking to achieve the lowest practicably sustainable costs of delivering services, while anticipating reasonable risks. For the reasons above AEMO submits that even under the ERA's proposed approach a transparent contingency allocation above the provision of clause 2.22A.9 is required, up to the revised amount AEMO has provided in Table 2.1.

1.5 Capitalisation policy, intangible assets and future benefit

In its Draft Report and in information requests to AEMO, the ERA has raised two *separate* issues regarding capitalisation:

- Cross charging within AEMO between the NEM and the WEM for intellectual property gained from the WA DER Roadmap program of work; and
- AEMO's accounting treatment for the DER Roadmap investments.

AEMO's observations and responses on each of these issues is summarised below.

1.5.1 Cross-charging value of intellectual property

In its Draft Report, the ERA highlights intellectual property developed through DER activities is an intangible asset from which future economic benefits are expected to flow to AEMO.[27] The ERA comments that intellectual property can be separated and shared with or sold to third parties if desired.[28]

The ERA observes that:

> *The benefit of linking or harmonising systems and knowledge between the NEM and the WEM is the value of intellectual property that can be spread and recovered across both markets and a wider cost base. It is reasonable for AEMO to use the intellectual property gained from conducting WEM-based DER activities in the NEM. If some of the benefit from AEMO's involvement in the DER roadmap actions is to be transferred out of the state and used in other Australian jurisdictions, then these jurisdictions could bear some of the costs incurred in acquiring the intellectual property. Electricity customers in the SWIS should not be funding benefits that are realised by NEM customers. However, AEMO's proposal did not discuss how the value from the intangible assets created through DER activities would be captured, commercialised, or transferred in the interest of market participants.*[29]

The ERA also observes that NEM staff appointed to work on the WEM DER Roadmap activities will return to work in the NEM once the program is over, and that this transfers the knowledge, experience and intellectual property gained in the DER Roadmap activities from the WEM to the NEM.[30]

[27] ERA Draft Report, page 19.
[28] Ibid.
[29] Ibid, page 20.
[30] Ibid.

For these reasons, the ERA considers AEMO should reconsider how much of the costs for NEM employees involved in DER Roadmap actions should be allocated to the WEM.[31]

AEMO's responseThe first point to highlight is that AEMO has not placed a value on intellectual property. This is because AEMO does not intend to sell the intellectual property or make any profit from it. AEMO submits that it has not provided the ERA with any indication that it would do so in its submission or first RFI response, and this point has now been clarified further in its second RFI response.

The focus of the WEM DER Roadmap program is to address risks to power system security and market efficiency brought about by DER presently connected and expected to connect to the South West Interconnected System (SWIS). Any future economic benefits that may flow to AEMO will come in the form of cost savings associated with not having to manage higher risk operating conditions or inefficient market outcomes. It is extremely difficult to identify and quantify intellectual property associated with these cost savings.

AEMO is not seeking to generate additional revenue from the DER Roadmap implementation activities. As detailed in its submission, AEMO's priority is to deliver these actions in the required timeframe as requested by the Minister for Energy. The value brought about by the DER Roadmap actions is dedicated to the SWIS with customers being the ultimate beneficiaries.

The second point to highlight is that the sharing of knowledge and intellectual property between the WEM and the NEM occurs in both directions. As the ERA highlights, many of the resources who will work on the DER Roadmap actions also work in the NEM and apply knowledge gained in the NEM. Similarly, AEMO's investments in the NEM are or will be leveraged to deliver the elements of the DER Roadmap actions.

The DER Register (Action 15) is a good example of this. As detailed in AEMO's initial submission and the subsequent responses under clauses 1.20A.2 and 1.20A.3, work conducted in the NEM DER Register will provide benefits to the WEM in terms of enabling the WEM DER Register to be delivered more efficiently. Whilst the solution still requires local customisation for the WEM conditions and regulatory environment, a standalone solution would have come at a higher cost to the WEM.

A further example can be found in the extensive research and collaboration applied to develop the Open Energy Networks proposal for the 'Hybrid Model' for DER Orchestration. This conceptual model was developed for the NEM by AEMO and Energy Networks Australia over two years and has been leveraged as the conceptual architecture for DER Orchestration in the WEM.

The WEM Rules expressly address market cross-subsidisation in clause 2.22A.11(d) with respect to AEMO's functions. Moreover, AEMO does not consider cross-charging between AEMO's jurisdictions for intellectual property is an efficient process, and believes it would only serve to inhibit knowledge sharing and innovation. Given the criticality of the DER-related issues affecting power systems and markets across Australia, AEMO considers that the potential benefits of being able to share information between jurisdictions freely outweighs what are likely to be minor cross-subsidies.

In the case of the current forecast capital expenditure adjustment submission AEMO submits that a speculative valuation of future benefits derived from intellectual property is not relevant, and refers the ERA to clause 1.20A.1 which provides that AEMO may

> …*apply to the ERA for an adjustment to AEMO's Allowable Revenue and Forecast Capital Expenditure in respect of DER Roadmap Implementation* <u>*Costs*</u> *incurred by AEMO* in the Review Period 1 July 2019 to 1 July 2022.

AEMO submits that any prospective future benefits that may be derived from intellectual property gained from the ERA's approved expenditure are not DER Roadmap Implementation <u>Costs</u> as defined by the WEM Rules. It follows that such future benefits are not relevant matters that the ERA may take into account when assessing and determining AEMO's application with respect to DER Roadmap Implementation Costs and

[31] Ibid.

therefore cannot feature in the ERA's decision-making processes for this forecast capital expenditure adjustment.

AEMO considers that the WEM Rules require the ERA to assess the efficiency of the *forecast costs* to deliver the DER Roadmap actions during the current Review Period. Any prospective future benefit derived as a result of undertaking the DER Roadmap actions, particularly unquantifiable benefits likely to flow to AEMO after the Review Period, are therefore not relevant to the ERA's assessment.

1.5.2 Accounting treatment for the DER Roadmap investments

AEMO proposes the costs in the DER Roadmap funding submission be treated as capex and recovered via amortisation and depreciation in accordance with generally accepted accounting principles. The costs deemed to be operational in nature will be expensed and absorbed within the current AR5 Allowable Revenue amount.

However, the ERA has concerns about whether all the DER activities can or should be capitalised. The ERA considers that "*[u]nless AEMO can demonstrate how and where the future value of these intangible assets will be realised, the ERA's initial view is to treat some or all of the costs as operational expenditure*".[32]

AEMO's response

In response to the ERA's first information request, AEMO provided the ERA an accounting position paper that detailed specific assessment of the WA DER program against AASB 138 Intangible Assets and how the specific costs meet the 'Definition' and 'Recognition' criteria of the standard. Based on its assessments when developing its forecast, AEMO considered the majority of the forecast costs to be capital in nature. Further, these costs are not recurring and should be categorised as per clause 2.22A.11(a)(ii).

AEMO also provided evidence in the form of independent auditor findings in response to the ERA's first RFI. These findings confirm AEMO's capital accounting practices are in line with generally accepted accounting principles as expected by clause 2.22A.11(a)(ii). As with AEMO's standard practice this will be continually assessed as the program progresses, with consideration to market and technological updates.

The ERA states that its "*initial view is to treat some or all of the costs as operational expenditure*". The ERA has not clarified which costs it is proposing be treated as operational expenditure. Alternatively, the ERA has not clarified which costs it proposes are recurring and therefore should be categorised under clause 2.22A.11(a)(i).

Regarding general treatment of costs, AEMO would like to highlight that it does not earn a return on a regulated asset base (RAB), and receives no additional benefit if costs are capitalised or otherwise. As a result, consideration of accounting treatment by the ERA is not related to the efficiency of AEMO's forecast costs for the purposes of the test applied under clause 2.22A.11(b).

In addition, capitalising the DER Roadmap implementation cost means that:

- actual costs of the program are recovered ex-post via depreciation and amortisation;
- it ensures Market Fees are only adjusted for costs actually incurred (rather than forecast costs);
- it allows the fee impact to be spread over a longer timeframe, therefore reducing the potential for price shock that may arise with an immediate expensing of costs; and
- it provides greater transparency of the actual fee impact of discrete investments required.

If some or all of these costs are treated as opex, then they would need to be recovered via an immediate adjustment to Allowable Revenue in the period they are incurred. AEMO therefore submits that treating these costs as capex is not only in line with generally accepted accounting principles, it also ensures costs to market participants is spread over the period of time upon which benefits from the DER program is expected to eventuate (via depreciation and amortisation).

[32] Ibid, page 20.

With regard to accounting principles and the WEM Rules, AEMO considers that the proposed DER Roadmap expenditure also better satisfies the tests under the WEM Rules if it is treated as capex. Clause 2.22A.11(a)(i) provides that recurring costs should be expensed in the year incurred. However, the proposed expenditure on the DER Roadmap implementation activities is not planned to be recurring. Clause 2.22A.11(a)(ii) requires that capital expenditure is to be recovered through the depreciation and amortisation of the assets acquired by the capital expenditures in a manner that is consistent with generally accepted accounting principles.

AEMO further highlights that this capital adjustment submission is a *forecast*, actual accounting for the WA DER program will only take place upon project commencement (post the ERA's determination). AEMO is audited by independent auditors annually, and as of the last external audit conducted in 2019/20, AEMO's policies and controls around capitalisation are deemed reasonable and the auditors are satisfied that intangible assets have been accounted for in accordance with the generally accepted accounting principles. AEMO has already submitted the auditor's determination to the ERA prior to the Draft Report publication, and notes that the ERA must have regard to this under clause 1.20A.7(b).

AEMO ensures compliance with policies and accounting standards on an ongoing basis and undertakes annual independent audits as part of its ongoing diligence.

1.6 Other issues

1.6.1 ERA's comparison to preliminary estimates is not justified

On page 19 of the Draft Report the ERA cites AEMO's original *preliminary* cost estimate and accounting treatment developed in May 2020, four weeks following the release of the DER Roadmap. In response to the ERA's second RFI AEMO provided further context around this estimate, including that it was developed in the early initiation stage of the forecast development prior to detailed scope development and planning being undertaken. This preliminary estimate was developed at the request of EPWA at this early stage and had not been subject to AEMO's rigid planning approach and governance arrangements. It was not provided for the ERA's assessment as part of the capital adjustment submission on 25 September 2020, and therefore is immaterial to the ERA's deliberations.

1.6.2 Update to forecast financing rate

AEMO's 3.3 per cent financing capitalisation rate for this project was forecast at the time of establishing the approved project expenditure. Subsequent to that time, AEMO has established new financing arrangements and market-based interest rates have fallen. As a result, the actual financing capitalisation rate that will be applied to project actual costs incurred will be lower than the 3.3 per cent rate. As the actual rate will vary over the life of the project an assumed average capitalisation rate for the remainder of AR5 period of 2 per cent has been applied in the revised forecast – this assumes a 0.5 per cent market based variable interest rate over the period in addition to total amortised financing arrangement charges. This results in an estimated total financing charge to the WA DER program of $300,113 as opposed to $498,803. Note that this is a forecast only and actual financing charge applied to the project will be based on actual costs incurred.

Please refer to Section 2 for the revised forecast.

2. Revised in-period adjustment to Forecast Capital Expenditure

Table 2.1 shows the revised capital expenditure forecast for the DER Roadmap implementation activities. The forecast reflects the changes to financing costs, and the labour cost and contingency adjustment as a result of the revised Project Symphony technical scope. AEMO notes that Table 2.1 must be read in the context of the financial details provided in the original DER Roadmap Forecast Capital Adjustment submission.

Table 2.1: DER Roadmap Implementation – adjustment to capital forecast by workstream ($'000 nominal)

Workstreams	Roadmap Action #	Original Forecast	Labour Forecast Adjustment	Financing Charges Adjustment	Contingency Adjustment	Updated Forecast
Technology Integration	1,3,10,12,13	3,277	0	-30	-3	3,244
DER Register	15	1,277	0	-7	-2	1,269
DER Orchestration Pilot	22, 23	9,486	-584	-113	-139	8,649
DER Participation	24,25,26, 27,29, DER Orchestration Implementation Planning	2,205	0	-12	-1	2,192
Program services		2,606	0	-36	-2	2,568
Total		18,851	-584	-199	-147	17,922

Glossary

Term	Definition
AR5	The fifth allowable revenue period – 1 July 2019 to 30 June 2022
Capex	Capital expenditure
Draft Report	The ERA's Draft Findings Report on AEMO's in-period capex adjustment proposal, published on 9 November 2020
DER	Distributed Energy Resources
EPWA	Energy Policy Western Australia
ERA	Economic Regulation Authority
NEM	National Electricity Market
Opex	Operating expenditure
RFI	Request for information
SWIS	South West Interconnected System
WEM	Wholesale Electricity Market

A1. Information provided to support the ERA determination

AEMO acknowledges that the objectives of the DER Roadmap are novel in the context of regulatory assessment. It is important that regulators, market and network operators respect the need for information sharing to enable full and proper assessment while the respective entities gain comfort in managing these investments.

During the review process, AEMO has provided detailed information to the ERA, as outlined below, in addition to the initial submission. AEMO expects that market or network operators facing similar challenges in different jurisdictions may benefit from understanding this information, including:

- A breakdown of the number and type of personnel required to deliver the DER Roadmap implementation activities, and a forecast of the number of days per month required from each individual for each DER Roadmap action (i.e. AEMO's entire scope of work).
- A detailed description of each of the sub-tasks associated with delivering each action, and the requisite competencies of the resources required to deliver each sub-task.
- A description of the responsibilities, expected competencies, and essential skills required for each position AEMO is seeking to utilise to deliver the DER Roadmap implementation activities.
- Redacted salary and contractual details of the existing employees (engaged via AEMO Enterprise Agreement or Common Law Contract) AEMO expects to work on the DER Roadmap implementation activities, including oncost details such as incentive benefits, payroll tax and leave entitlements.
- Details of AEMO employment and remuneration practices.
- Redacted invoices for contractors/consultants already engaged to deliver any early planning or implementation activities.
- A step-by-step description of the forecasting process and the governance applied at each stage of developing the capex forecast. This includes:
  - Detailed description of process undertaken to develop scope and deliverables in conjunction with Western Power, Synergy and EPWA, to ensure no duplication and conflict of interest;
  - Provision of all AEMO Committee charters and member details;
  - Qualification of Committee members ability to review and approve the forecast;
  - Integrity of forecast/financial models and access security;
  - Evidence of the business' assessment of the quality of the forecast at each governance approval stage gate;
  - Review of AEMO Delegation of Authority and application; and
  - Evidence of independence of the DER Roadmap implementation activities from other AEMO projects.
- AEMO accounting policies and detailed reports on proposed accounting treatment for the WA DER roadmap forecast and compliance with Generally Accepted Accounting Principles.