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AEMO's budget framework – analysis and options for change

Australian Energy Council (AEC)
10 December 2024

This report provides potential options to change the Allowable Revenue process for AEMO, to address observable challenges

Scope and approach

- With concerns around AEMO's increasing costs to operate the Wholesale Electricity Market (WEM) and challenges in forecasting market fees, the Australian Energy Council (AEC) engaged Rennie Advisory (Rennie) to:

1. Flesh out the range of potential root causes for the concerns, using an issues tree
2. Conduct a validation exercise to identify which causes are potentially significant
3. Examine the extent to which the potentially significant root causes are addressed by the rule change proposals
4. Put forward a range of potential solutions that may assist in addressing the potentially significant root causes

Limitations

- This work commenced after AEMO had lodged rule change proposals to amend the WEM Rules and Gas Services Information (GSI) Rules (RC_2024_01 and GRC_2024_01 respectively)
- Validation of potential root causes was substantively based on published reports with analysis undertaken over a limited period of time
- Aside from minor updates, this report was prepared prior to publication of the Draft Rule Change Reports by the Coordinator, and does not reflect the draft decision
- Potential options for change are high-level in nature and have been subject to an initial assessment of advantages and disadvantages only, supported by consultation with AEC members
- Further work would be necessary to fulsomely consider and assess the potential options for change

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Background

AEMO operates on a not-for-profit basis, with its costs funded by electricity and gas market participants

Context for this report

- The three-yearly cycle for regulating AEMO's costs is facing challenges due to an operating environment characterised by "*rapid change with little long-term certainty*"[1]
- AEMO has submitted two in-period funding proposals during the current AR6 period[2] in response to regulatory reforms, scope changes and cost over-runs
- For the second in-period determination (June 2024), the ERA approved an increase of $58.3 million in Allowable Revenue and $37.9 million in Forecast Capital Expenditure, representing increases of 41% and 35% respectively over previously approved AR6 funding
- **Market participants have expressed concern with the fast growth of AEMO's costs and the frequent changes within the three-yearly review cycle that make it difficult for market participants to predict and recover costs, with flow-on effects for consumers**

Summary of AEMO's WEM functions[3]

AEMO – Australian Energy Market Operator → Economic Regulation Authority

AEMO must have its budgets approved by the ERA in order to recover costs through market fees

Under the WEM Regulations and WEM Rules, AEMO is assigned the function of ensuring the secure and reliable operation of the SWIS

Additional functions

- Operating and settling the market mechanisms: Reserve Capacity Mechanism, Short Term Energy Market, and Real-Time Market
- Conducting Long Term Power System Adequacy Studies and publishing relevant reports
- Processing applications for market participation and managing registrations and accreditations
- Procuring and dispatching Essential System Services to meet standards.
- Supporting the ERA in compliance monitoring and market surveillance.
- Contributing to market development through rule change proposals, market procedures and providing information for regulatory reviews.

Notes: [1] ERA – Final determination for AEMO's AR6 second in-period proposal, p3 [2] AR6 refers to AEMO's sixth Allowable Revenue Review Period, which runs from 1 July 2022 to 30 June 2025. [3] AEMO's costs are dominated by its WEM functions, as set out in section 2.1A of the WEM Rules.

Sources: ERA – Allowable Revenue and Forecast Capital Expenditure Determinations (2024); WA Government – Wholesale Electricity Market Rules (2024).

The ERA must consider five criteria when determining submissions relating to AEMO's Allowable Revenue and Forecast Capex

Summary of WEM Rules - Budgets and Fees (clause 2.22A.5)

(a) The submission **must be sufficient to cover forward looking costs** of performing AEMO's functions

(i) Recurring expenditure requirements and payments are recovered within the year of the expenditure

(ii) Capital expenditure is to be recovered through the depreciation and amortisation of the assets

(b) The submission must achieve the lowest practicably sustainable cost as **a prudent provider** of the services provided by AEMO

(c) The ERA should **benchmark** AEMO's budget against the costs of similar functions and/or projects in other jurisdictions

(d) Where costs relate to both performance of functions in relation to the WEM Rules, and the performance of other functions, **cost must be split between**:

(i) Costs recoverable as part of AEMO's Allowable Revenue and Forecast Capital Expenditure; and

(ii) Other costs not to be recovered under the WEM Rules

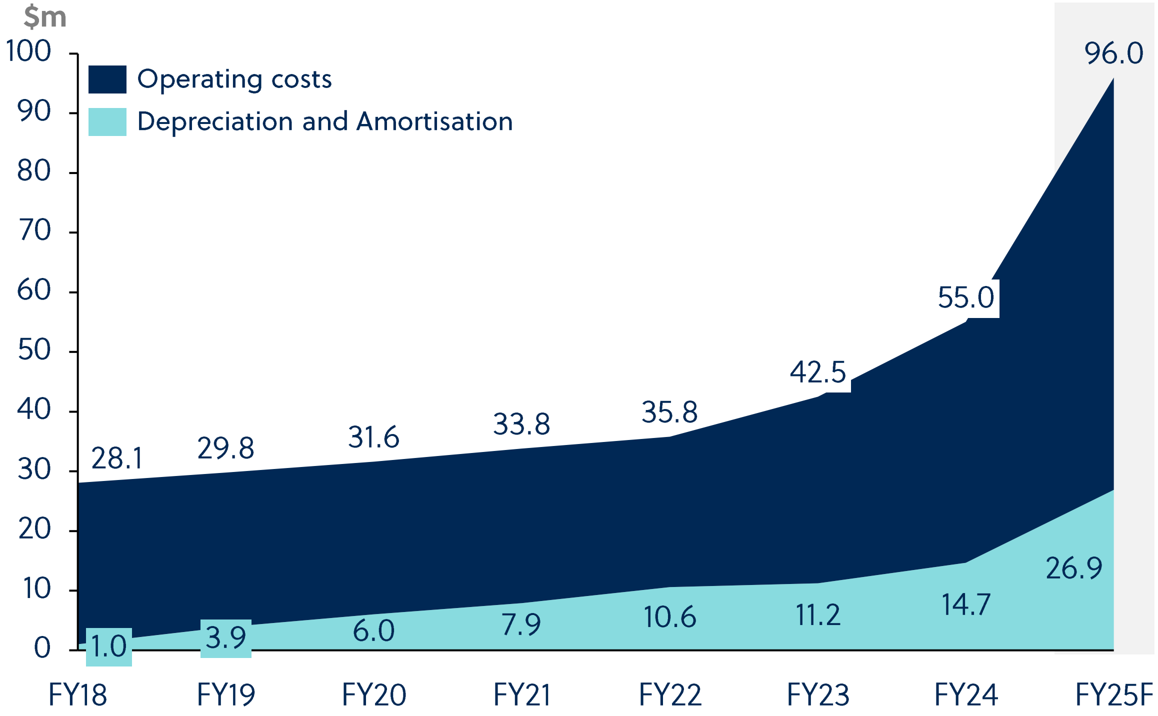
(e) **Any other matters** the Economic Regulation Authority considers relevant to its determination

The ERA determines a single figure for each of the Allowable Revenue and the Forecast Capital Expenditure for each 3-year Review Period

Sources: WA Government – Wholesale Electricity Market Rules (2024)..

The cost of operating the WEM has increased by 126% in two years after a period of slow growth

Total costs of operating the WEM[1]



Commentary on the rate of increase

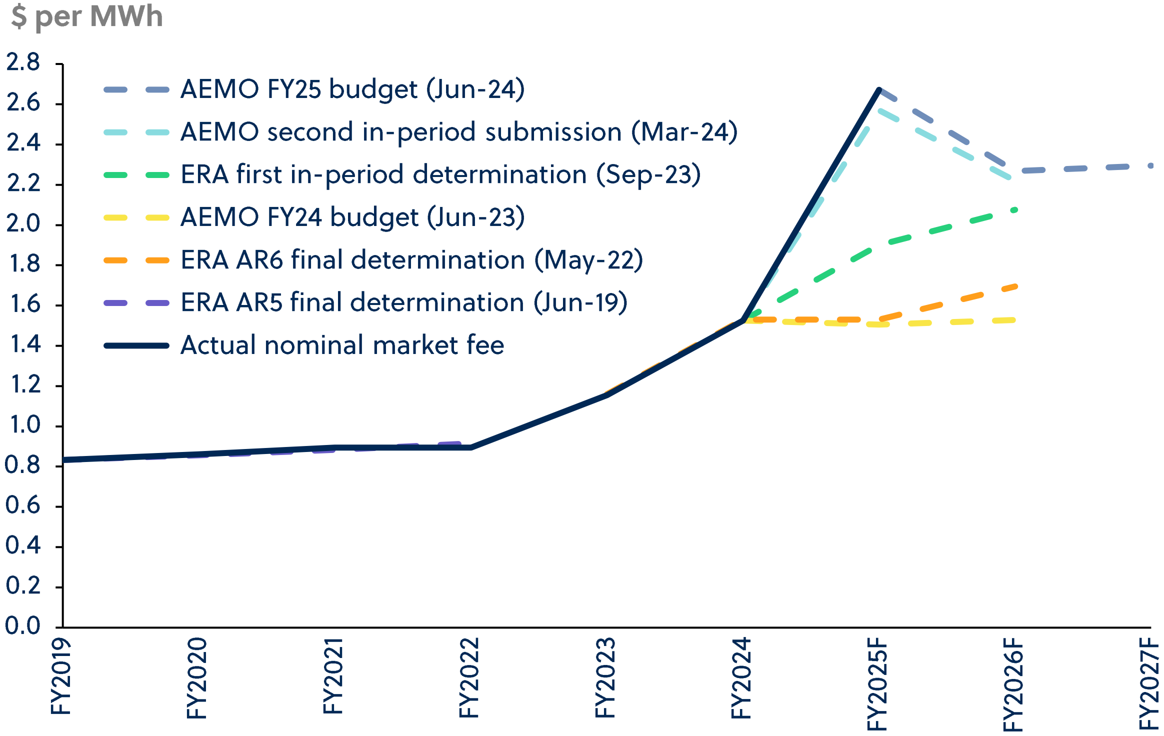
- The sharp increases in costs have been primarily driven by the WEM Reform program, with a total estimated capital cost of $128 million and higher operational costs to operate and manage a more complex market design
- This has occurred concurrently with cost increases driven by:
  - Adjustment for external cost pressures (e.g. inflation)
  - AEMO enterprise-wide capability uplifts (e.g. cybersecurity)
  - Continued reform and energy transition activities
- The current sharp cost increase follows a period of relatively stable growth in costs, during which minimal regulatory reform took place and AEMO's capital expenditure and depreciation and amortisation (D&A) costs were significantly lower
- AEMO has projected that its operating costs will reduce by 15% for FY26[2]

Notes: [1] Financial years from FY18 to FY23 are from AEMO's budget figures, the FY24F financial year is a forecast based on AEMO's ESOO and market fees with an estimate based on the approval of the first in-period submission, the FY25F financial year uses AEMO's market fee estimate of $2.57/MWh as per its second in period proposal which assumes all spending is approved, and ESOO forecasts of energy consumption. [2] However, AEMO cautions against relying on this forecast as it would be subject to the AR7 process.

Sources: ERA – AR6 second in-period allowable revenue and forecast capital expenditure proposal (2024); AEMO – AR6 second in-period allowable revenue and forecast capital expenditure submission (2024); ERA – AR6 first in-period allowable revenue and forecast capital expenditure proposal (2023); AEMO – AR6 first in-period allowable revenue and forecast capital expenditure submission (2023); AEMO – AR6 allowable revenue and forecast capital expenditure final decision (2022); AEMO – AR6 initial allowable revenue and forecast capital expenditure proposal (2022); AEMO – WA Budget and Fees 2024-25 (2024).

Market fee forecasts have been particularly volatile during AR6 due to regulatory changes and in-period Allowable Revenue revisions

Fee projections from submissions



AEMO has applied for two AR6 in-period submissions

2021
AEMO AR6 initial submission

2022
ERA AR6 final determination

2023
AEMO 1st in-period submission & ERA determination

2024
AEMO 2nd in-period submission & ERA determination

2025
ERA AR7 final determination

"In the absence of changes to the current regulatory framework or the ERA's Guidelines, **we anticipate in-period adjustments will become a regular occurrence** as the reform program, the market, and the power system evolves over the course of the coming allowable revenue periods."

– AEMO, second in-period submission

"Under current application of the WEM Rules, **the ERA is not able to approve a revenue amount or capex forecast with sufficient flexibility** to accommodate significant changes in costs, specification and project timings. Unfortunately, these types of changes are commonplace during periods of rapid industry transformation and associated fast-paced policy development such as we have experienced over recent years and expect into the future."

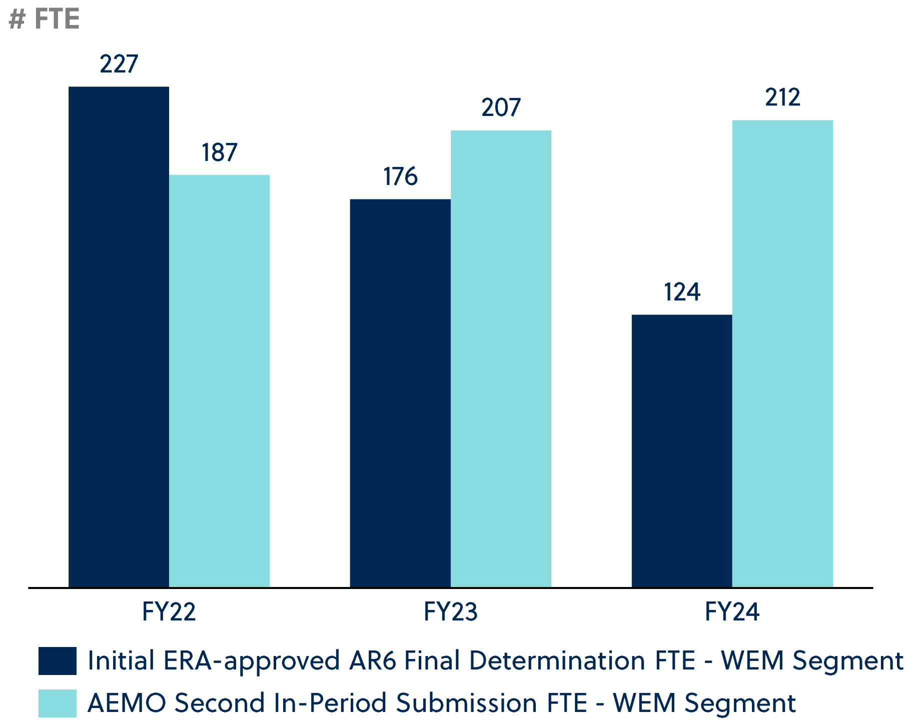
– AEMO, second in-period submission

Notes: [1] Financial years from FY18 to FY23 are from AEMO's budget figures, the FY24F financial year is a forecast based on AEMO's ESOO and market fees with an estimate based on the approval of the first in-period submission, the FY25F financial year uses AEMO's market fee estimate of $2.57/MWh as per their second in period proposal which assumes all spending is approved, and ESOO forecasts of energy consumption.

Sources: ERA – AR6 second in-period allowable revenue and forecast capital expenditure Final Determination (2024); AEMO – AR6 second in-period allowable revenue and forecast capital expenditure submission (2024); ERA – AR6 first in-period allowable revenue and forecast capital expenditure proposal (2023); AEMO – AR6 first in-period allowable revenue and forecast capital expenditure submission (2023); ERA – AR6 allowable revenue and forecast capital expenditure final decision (2022); AEMO – AR6 initial allowable revenue and forecast capital expenditure proposal (2022); AEMO – WEM Budget and Fees.

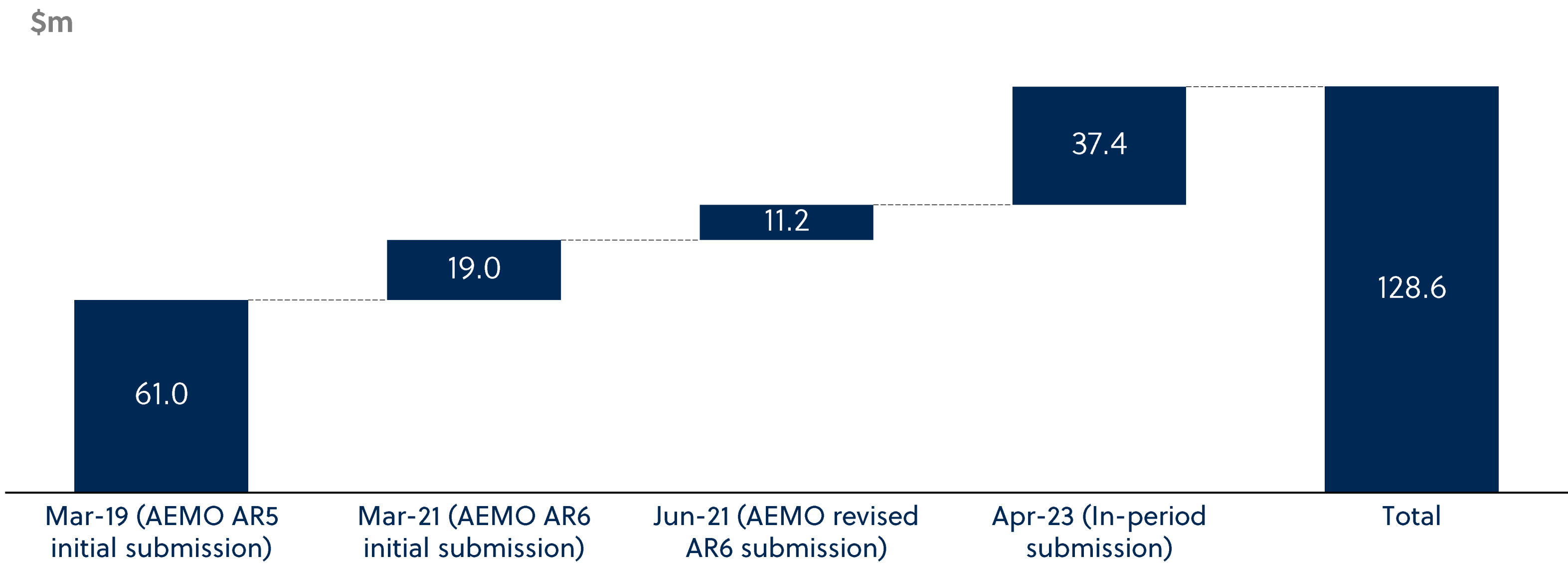
AEMO's staff and capex requirements have evolved well beyond initial expectations at the start of the AR6 period

FTE forecasts for the AR6 period



WEM Reform capex forecast over time

- Cost estimates for WEM Reform capex began at $61m in 2019 and increased to $128.6m total in April 2023



Notes: [1] This increase occurred in April 2023, but has been categorised in the March Quarter on the graph.

Sources: ERA – AR6 second in-period allowable revenue and forecast capital expenditure proposal (2024); ERA – Allowable revenue and forecast capital expenditure 2022-23 to 2024-25 (2024); AEMO – AR6 second in-period submission (2024); AEMO – Submission to ERA's Draft Determination, second in-period submission (2024).

Around half of AEMO's operational expenditure is driven by labour costs, followed by D&A which is being driven by WEM Reform

Drivers of costs in FY24

Upwards pressure on labour costs

Labour associated with reform and operational activities drove up costs, compounded by upwards pressure on wages for new starters and AEMO enterprise agreement fixed salary increases.

Reliance on external contractors and consultants

AEMO relied on external advisors for the development and delivery of reform projects to manage additional complexity and requirements, driving up costs. These costs were categorised under "other expenditure" in FY23.

Required uplifts of IT and telecommunications systems

Critical cyber security and uplift of enterprise systems largely drive increases in costs

AEMO's cost operating profile in WA

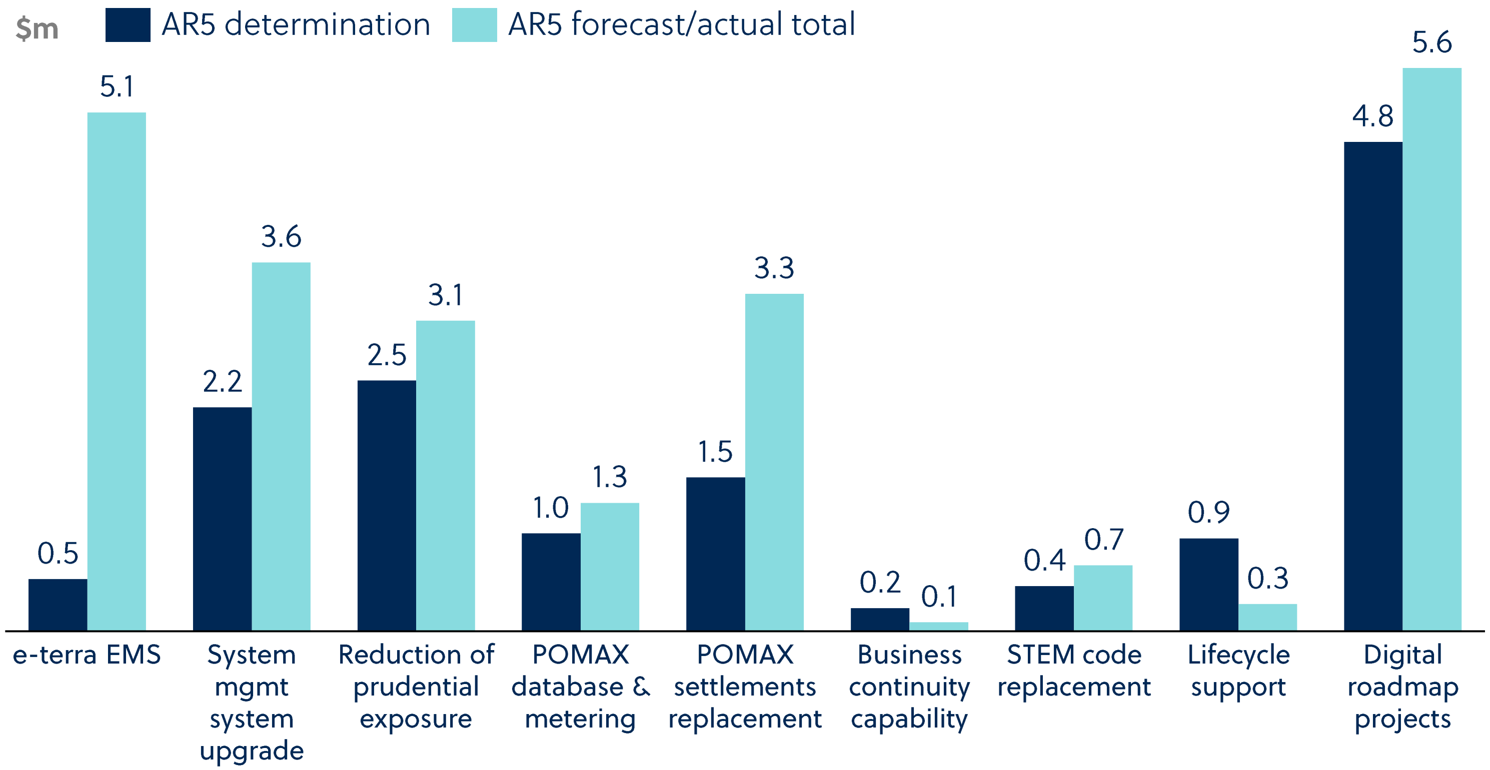
$m

Category	FY24 ($m)	FY24 (% of total)	FY23 ($m)	FY23 (% of total)
Labour	27.3	*50%*	22.9	*54%*
External contractors	0.03	*0%*		
Consultants	3.7	*7%*		
Depreciation and amortisation	14.7	*27%*	11.2	*26%*
Finance costs	2.5	*5%*	1.7	*4%*
IT and telecommunications	4.0	*7%*	2.1	*5%*
Other expenditure	2.9	*5%*	4.7	*11%*
Total expenditure	55.0		42.5	

Sources: Annual Reporting – AEMO (2024); WA Budget and Fees 2024-25 (2024); WA Budget and Fees 2023-24 (2024);

Of 18 projects that were approved in the AR5 determination, nine exceeded budgets and five were not started during AR5

Project costs (selected), Forecast v actuals, AR5 component only[1,2]



Commentary

- The ERA compared AEMO's AR5 project expenditure to its actual expenditure when making its AR6 determination, finding that:
  - 9 projects exceeded budget (including contingency) by $10.1 million in total
  - 5 projects were not started during AR5, with a combined budget of $1.3 million
  - $5 million was spent on projects that were not assessed by the ERA for prudency or efficiency
  - The WEM Reform and DER Roadmap programs were underspent by a total of $16.5 million compared to the approved AR5 budget, largely due to timeline delays
- The graph to the left shows forecast and actual AR5 costs for AEMO's larger internally-initiated projects for the AR5 period, most of which exceeded budget
- Underestimation of project complexity and scheduling challenges are cited as reasons for underestimation of project costs in some cases

Notes: [1] Data from Table 46 of the ERA's final determination for the initial AR6 proposal, with projects selected where there were approved and actual costs shown; WEM Reform and DER Roadmap were excluded as these were subject to significant shifting of costs between Allowable Revenue periods. [2] Some projects straddled multiple Allowable Revenue periods; only the AR5 forecasts and costs are shown here. This may accentuate the cost variance, particularly with the e-terra project where some of the cost was incurred during AR4.

Sources: ERA – AR6 Final determination (2022); AEMO – AR6 initial proposal (2021).

AEMO has proposed rule changes to address challenges with the Allowable Revenue framework

Case for change

- AEMO's current operational environment is one of rapid change with long-term uncertainty. AEMO is required to deliver its day-to-day functions and ongoing reform programs to deadlines established in regulation and rules.
- AEMO is not incentivised to reduce costs in the same way a profit-driven network service provider, which is allowed to retain the benefits of any efficiency gains it achieves.
- Delivering and costing IT projects is challenging in the WEM given the bespoke nature of the WEM's systems and the scope of changes required.

The proposal

Current approach

Three-yearly Allowable Revenue framework under the WEM & GSI Rules in which the ERA determines AEMO's budget

Proposed approach

Annual budget determined through consultation with Market Participants and interested stakeholders, with focus on:

- **Early engagement on AEMO's priorities and activities** for the forthcoming financial year, publication of draft annual budget and fees, followed by final annual budget and responses to feedback by 30 June each year;
- **Major project delivery reporting**, with the ability for stakeholders to provide input into the scope, sequence and prioritisation of projects;
- **Transparency around AEMO's performance** through annual reporting; and
- **Review and oversight of the effectiveness of this new framework** by the Coordinator of Energy as part of regular WEM effectiveness reporting.

Timeline

- 25/09/2024 Notice published
- 6/11/2024 End of first submission period
- 4/12/2024 Draft Rule Change Report published
- 6/01/2025 End of second submission period
- 4/02/2025 Final Rule Change Report published
- 5/03/2025 Ministerial approval

AEMO's next Allowable Revenue period (AR7) extends from 1 July 2025 to 30 June 2028.

Under the WEM Rules, AEMO's obligation to submit its AR7 proposal to the ERA has been deferred to 31 March 2025[1]. This is to allow adequate time to consider an alternative framework under the progression of this Rule Change Proposal.

Notes: [1] The transitional timeframe is set out in section 1.65 of the WEM Rules; ordinarily, the AEMO proposal must be submitted by 31 October of the year prior to the start of the relevant three-year period, as per clause 2.22A.2A of the WEM Rules.

Source: Rule Change Proposals RC_2014_01 and GRC_2024_01; ERA – AR6 second in-period allowable revenue and forecast capital expenditure Final Determination (2024).

Root cause analysis

The central issue was broken into constituent parts and a range of potential causes for validation and further investigation

Central issue | Issue breakdown | Potential causes – Level 1 | Potential causes – Level 2

Central issue: AEMO's costs are growing at a rate faster than market participants consider reasonable, and in a manner that is difficult for market participants to predict and recover costs

- **1 Cost quantum**
  AEMO's costs are growing at a rate faster than market participants consider reasonable
  - a. Is AEMO's role/scope too broad?
    - Do the rules/regulations confer more obligations on AEMO than necessary/reasonable?
    - Is AEMO interpreting its role more broadly than intended/expected?
    - Are other agencies pushing responsibility onto AEMO beyond what is expected/reasonable?
  - b. Is EPWA's and AEMO's reform implementation program failing to reflect the 'right projects at the right time'?
    - Are policy decisions made without robust cost-benefit analysis or consideration of market fee impacts?
    - Are policy decisions made without proper consideration of stakeholder views?
    - Is there insufficient flexibility to amend/reverse/reschedule policy decisions if circumstances change?
  - c. Is AEMO inefficient in performing functions and implementing projects?
    - Is the framework ineffective at incentivising AEMO to operate efficiently?
    - Does AEMO face structural barriers to efficient operation?
  - d. Is the ERA approving too much Allowable Revenue/Forecast Capex?
    - Are the submission and assessment processes not being structured/followed as intended?
    - Are there barriers to the ERA providing effective scrutiny of AEMO's costs?
    - Does AEMO's flexibility to reallocate approved funding reduce the effectiveness of the assessment process?
    - Is the prudent/efficient test in the rules ineffective in setting fees at an efficient level?
    - Do asset depreciation schedules result in unnecessary/unreasonable price shocks?
- **2 Cost predictability**
  Market participants are finding it difficult to predict and recover market fee costs
  - a. Is the 3-yearly Allowable Revenue process hindering predictability?
    - Does uncertainty of policy and project requirements make it unrealistic to develop accurate 3-yearly forecasts?
    - Is the prudent/efficient test in the rules unnecessarily triggering in-period submissions?
  - b. Is AEMO routinely underestimating its operating and project costs?
    - Are there barriers to AEMO accurately forecasting its operating and project costs, including project scoping?
    - Does the Allowable Revenue process incentivise under-forecasting of AEMO's costs?
  - c. Do market participants lack sufficient visibility of AEMO's costs?
    - Should AEMO provide greater visibility/involvement for market participants during forecast development?
    - Does the Allowable Revenue process lack sufficient transparency for market participants?

Legend: Recommended for deeper exploration | Considered unlikely

1a The ERA tests all forecast expenditure against AEMO's prescribed functions, limiting potential for scope creep

Further, AEMO's liability protections are limited to its functions prescribed under the WEM Regulations or WEM Rules

Is AEMO's role/scope too broad?

- Is AEMO interpreting its role more broadly than intended/expected?
- Are other agencies pushing responsibility onto AEMO beyond what is expected/reasonable?

- The ERA states, in its *Guideline to inform the Australian Energy Market Operator's funding proposal*, that its test of the prudency of proposed expenditure must establish whether "There is a clear connection between the forecast costs and AEMO function(s) and that the scope of the project provides the functions as described in the Rules and no more"
- Market participants have previously submitted that government-led reform initiatives should not be funded through market fees, though the WA Government has not accepted this view, including by enacting transitional amendments to the WEM Rules requiring AEMO to contribute to, and implement, market reforms[1]
- The current WEM Rules prescribe functions for AEMO to contribute to the development and improve the effectiveness of the WEM through participation in rule change processes, and provide support to the Coordinator of Energy and ERA[2]
- Section 126 of the *Electricity Industry Act* 2004, in combination with the WEM Regulations, specifies limits of liability for market governance participants, noting that these limits apply only to "the performance, or purported performance, of a function under the regulations or the market rules"

Not considered significant

- The ERA is unable to approve proposed expenditure that is beyond AEMO's prescribed functions
- The limit to AEMO's liability protections provides a disincentive to acting beyond its prescribed functions
- Given its role and independence, it is considered appropriate that AEMO should have a role in reviews and reform processes, and should be funded to perform this role
- However, the scope of this role can vary considerably based on external drivers, particularly policy development and rule changes
    - This is considered at 1b

Notes: [1] For example, the previous section 1.20 of the WEM Rules required AEMO to prepare for, and facilitate the implementation of, the WEM Reforms; similarly, section 1.64 confers on AEMO the function of advising on the implementation and operation of the Capacity Investment Scheme as it relates to the WEM. [2] Specifically, see clauses 2.1A.2(IA) and 2.1A.2(II) of the WEM Rules.

Sources: ERA – Guideline to inform the Australian Energy Market Operator's funding proposal, version 3 (2022); AEC – Submission to ERA on AEMO AR5 in-period submission (2020); Wholesale Electricity Market Rules; *Electricity Industry Act 2004*; *Electricity Industry (Wholesale Electricity Market) Regulations 2004*.

1b Cost-benefit assessments have not been published for the largest recent reforms

However, mechanisms exist to update or reverse policy decisions if circumstances have demonstrably changed

Is EPWA's and AEMO's reform implementation program failing to reflect the 'right projects at the right time'?

- Are policy decisions made without robust cost-benefit analysis or consideration of market fee impacts?
- Is there insufficient flexibility to amend/reverse/reschedule policy decisions if circumstances change?

- Recent history suggests costs and benefits are generally considered by EPWA for smaller reforms, but such assessments have not been published for more fundamental reforms; examples include:
  - Informed by consideration of costs and benefits[1]: Cost Allocation Review – no change to Market Fees allocation[A], change to Frequency Regulation cost allocation[B]; Demand Side Response Review – no change to STEM or Real-Time Market participation[C]; WEM Reform – retention of current settlement model[D]; Reserve Capacity Mechanism Review[E]
  - No published consideration of costs and benefits: WEM Reform, Five-Minute Settlement (5MS)[2], WEM Investment Certainty Review (initiatives 1 and 2)[3], Planning Criterion changes
- Where costs and benefits have been considered, it is common that only indicative commentary is provided on the likely scale of implementation, with no specific cost estimates or market fee implications published
- The modelling of the benefits of market reforms can be impractical in some cases due to over-reliance on unreliable assumptions, particularly when seeking to predict behavioural change that may result from a reform
  - For example, the AEMC explained its decision not to perform detailed market modelling to quantify the benefits of Five-Minute Settlement, though it did compile stakeholder submissions on implementation costs, including estimates provided by AEMO and consultant analysis commissioned by the AEC
- Processes exist to amend, reverse or reschedule previous policy decisions, either through non-gazettal or rules pending gazettal, the making of amending rules by the Minister[4], or through the standard rule change process; however, there is no track record of this having occurred beyond timeline changes

Potentially significant

- Among recent policy initiatives, assessments of costs and benefits have not been published for some of the largest reform projects, particularly WEM Reform and 5MS, which contrasts with practice in the NEM[6]
- Modelling of benefits from market design changes can be difficult, especially if reliant on unreliable assumptions
- It is reasonable that the accuracy of implementation cost estimates will improve as scope certainty increases; however, in the absence of prior CBA it can be difficult to know when to amend previous decisions if the cost estimate increases
  - This is considered further in Appendix 1
- However, mechanisms exist to amend a previous decision if the basis of the that decision no longer holds

Notes: [1] In some cases, only high-level qualitative assessment is performed. [2] Commentary on this reform merely indicates that a move to five-minute settlement will be necessary to realise the full benefits of the WEM Reforms. [3] EPWA has released a Consultation Paper for these initiatives but has yet to publish its final policy position. [4] The Minister's power to make amending rules under regulation 7(5) of the WEM Regulations is currently due to end on 31 October 2025. [6] For example, the Wholesale Demand Response Mechanism provided the outcome of benefits modelling and estimates of implementation costs.

Sources: [A] EPWA – Cost Allocation Review Information Paper (2023); [B] EPWA – Cost Allocation Review Working Group, meeting papers 2 May 2023; [C] EPWA – Demand Side Response Review Information Paper (2024); [D] Energy Transformation Taskforce – Foundation settings for market settlement Information Paper (2019); [E] EPWA – Reserve Capacity Mechanism Review Information Paper (Stage 2) (2023); AEMC – Final Determination, Five Minute Settlement (2017); Wholesale Electricity Market Rules; *Electricity Industry Act 2004*; *Electricity Industry (Wholesale Electricity Market) Regulations 2004*; AEMC – Final Determination, Wholesale Demand Response Mechanism (2020).

1c AEMO's obligation to deliver policy and reform initiatives can compete with the requirement to operate efficiently

AEMO's not-for-profit status would potentially hinder the effective implementation of financial incentives

Is AEMO inefficient in performing functions and implementing projects?

Is the framework ineffective at incentivising AEMO to operate efficiently?

- There are similarities between the current regulation of AEMO WA and the incentive-based regulatory framework applicable to network service providers across Australia, with two central differences:
  - As a not-for-profit entity, AEMO does not benefit from any cost savings or efficiency gains[1], whereas its penalties for any cost over-runs are administrative[2] or reputational[3]
  - AEMO does not have a regulated asset base (RAB), and is not subject to ex-post review of capital projects
- The ERA has commented extensively on the incentives for AEMO under the current framework, noting that:
  - As a non-profit entity, "AEMO is not incentivised in the same way as a typical profit-driven network service provider to seek out gains in efficiency"
  - AEMO "must prioritise delivery of reform and transition activities to deadlines set in the WEM Rules and by the State Government and Energy Policy WA. As a result, AEMO is incentivised to prioritise the timely delivery and full scope of reform work, over limiting cost pressures"
  - In relation to AEMO having already spent most of its previously approved Allowable Revenue with a year remaining of the review period, "Once funds have been spent, the benefit of conducting an ex-post assessment of the efficiency and prudency of the expenditure is limited as the regime's ability to incentivise better performance is constrained by the need for AEMO to recover its forward-looking costs"

Potentially significant

- As per stated ERA and industry views, the current framework provides limited, non-financial incentives for AEMO to operate efficiently
- Organisation-level financial incentives or penalties would likely be ineffective for AEMO given that it would be obliged to pass these through to Market Participants via Market Fees
- There is potential for AEMO's obligation to comply with regulatory requirements, including new reform initiatives, to take precedence over operational efficiency
- The ability for AEMO to reallocate funding within a 3-year period, potentially towards projects that the ERA had previously not approved, then apply for additional funding in-period, could be considered a loophole

Notes: [1] When setting the market fee rate for an upcoming financial year, AEMO must include an adjustment for any operating surplus or shortfall in the most recently completed financial year. [2] For example, if it was required to lodge an additional Allowable Revenue submission, though it would likely receive approval for the associated administrative cost of preparing the submission. [3] While AEMO could theoretically have its WA functions transferred to an alternative agency, this is considered highly unlikely given the high transition cost.

Sources: ERA – AR6 second in-period allowable revenue and forecast capital expenditure Final Determination (2024); Wholesale Electricity Market Rules; Various – First round submissions to Rule Change Proposal RC_2024_01 (2024).

1d There are some inherent impracticalities with the in-period review process, reducing the effectiveness of the framework

There is a trade-off between the degree of project scope certainty and the number of in-period reviews required

Is the ERA approving too much Allowable Revenue/Forecast Capex?

- Are the submission and assessment processes not being structured/followed as intended?
- Are there barriers to the ERA providing effective scrutiny of AEMO's costs?
- Does AEMO's flexibility to reallocate approved funding reduce the effectiveness of the assessment process?

- The ERA and AEMO seemingly have differing views on aspects of the AEMO Funding Proposal Guideline[1], with the ERA stating that aspects of AEMO's funding proposal did not meet the standard set out in the Guideline, and AEMO suggesting the potential need for amendments to provide flexibility for changes to project scopes and timings[2]
- The ERA has observed that benchmarking against similar bodies in other jurisdictions is difficult given that "AEMO's roles and functions are bespoke to the WEM and are changing in line with energy transition objectives (requiring the development of new critical IT infrastructure)"
- The ERA suggested that the lack of reliable benchmarking, the incomplete adherence to the AEMO Funding Proposal Guideline and shortcomings in AEMO's project management processes have meant that "AEMO cannot demonstrate, nor can the ERA fully determine, that the level of funding requested reflects that needed by a prudent and efficient market operator in the current market reform landscape"
- In relation to AEMO having already spent most of its previously approved Allowable Revenue with a year remaining of the review period, the ERA noted that "Once funds have been spent, the benefit of conducting an ex-post assessment of the efficiency and prudency of the expenditure is limited as the regime's ability to incentivise better performance is constrained by the need for AEMO to recover its forward-looking costs"
  - AEMO's ability to reallocate approved funding between projects/priorities creates the potential that it reallocates funding for an approved project, then must seek additional funding if it exceeds the previously approved budget

Potentially significant

- While noting differing views on the evidentiary standard set out in the AEMO Funding Proposal Guideline[3], the ERA and AEMO appear to be generally following the current submission and assessment processes as intended
- However, rigid requirements in the AEMO Funding Proposal Guideline may be setting a difficult standard for AEMO to meet, contributing to the need for in-period submissions (see 2a)
- In addition, AEMO's WEM functions and the characteristics of the market are unique, making it difficult to benchmark AEMO's proposed expenditure forecasts to assess efficiency
- An in-period review process technically requires a reassessment of the entire Allowable Revenue, which may be impractical given AEMO's ability to reallocate funding between priorities, and the inability to 'claw back' spent funds[4]

Notes: [1] The AR6 period is the first in which the ERA's AEMO Funding Proposal Guideline and AEMO Regulatory Reporting Guideline have been in effect. [2] AEMO has suggested that the rigidity of requirements in the Guideline is incompatible with the pace of change, preventing the ERA approving proposed project expenditure until project requirements are highly certain and hence and is contributing to the need for in-period submissions. [3] Such differences occur regularly between regulators and regulated entities. [4] This challenge exists even between Allowable Revenue periods, for example if AEMO had funding approved for a particular project in one period but did not proceed, only to seek funding for the same project in a subsequent period.

Sources: ERA – AR6 second in-period allowable revenue and forecast capital expenditure Final Determination (2024); AEMO – AR6 second in-period submission (2024); ERA – AR6 final determination (2022).

2a Features of the Allowable Revenue process make it difficult to develop prudent budgetary forecasts

Budget predictability is hindered by a reliance on external inputs, lengthy forecast periods and prudency clauses

Is the 3-yearly Allowable Revenue process hindering predictability?

- Does uncertainty of policy and project requirements make it unrealistic to develop accurate 3-yearly forecasts?
- Is the prudent/efficient test in the rules unnecessarily triggering in-period submissions?

- Much of AEMO's expenditure can be broadly categorised into that which is:
  - 'Business as usual' to sustain the ongoing performance of existing functions (relatively high level of cost certainty)
  - Internally-initiated change, where the scope of a change project is largely driven by AEMO business requirements (e.g., projects for business improvement projects or life cycle replacement) (reasonable level of cost certainty)
  - Externally-initiated change, where the scope is largely driven by external requirements (e.g., implementation of reforms/rule changes) (forecast certainty depends on the status of policy development at the time of the Allowable Revenue proposal)
- While AEMO exceeded budgets for many of its internally-initiated projects during AR5 (see slide 10), this impact was small compared to the escalation of costs for the externally-initiated WEM Reform (see slide 8)
  - Contributing factors for the escalation of WEM Reform costs are the underestimation of project complexity, due in part to early cost estimates being made before or during rule drafting, and increased costs associated with delays in project delivery
- The ERA's application of the test in clause 2.22A.5 of the WEM Rules[1] requires high degrees of certainty that AEMO must incur the expenditure (prudent) and confidence that AEMO's budget proposal represents the lowest practicably sustainable cost (efficient)
  - This rigidity can hinder AEMO's ability to adapt to changes in project scope or emerging needs within the energy sector
  - The ERA has typically considered that the enactment of rule amendments, followed by a robust scoping and estimation exercise, is necessary to satisfy the prudency and efficiency tests
- At the time of an Allowable Revenue submission, it could be considered unrealistic to expect that rules will be made and projects scoped for the full program of reform implementation that AEMO will be required to undertake in the 3-year period; it would be undesirable to impose delays on potentially necessary or beneficial projects to align with the 3-yearly cycle and delay benefits for consumers

Potentially significant

- It may be considered unrealistic for AEMO to forecast its reform-driven project costs under a 3-yearly Allowable Revenue cycle, with scopes driven by external policy/rules processes that do not align with the cycle, as discussed in Appendix 1
- The stringent application of the prudent/efficient test provides for robust assessment of budgets, but only enables approval of costs for near-term projects for which the scope is known at the time of the Allowable Revenue process
- These factors, in combination with the current fast pace of policy development (with implementation implications for AEMO) has resulted in the need for additional projects to be assessed via in-period processes, hindering predictability of Market Fees for Market Participants

Notes: [1] As articulated through the AEMO Funding Proposal Guideline.

Sources: ERA – AR6 second in-period allowable revenue and forecast capital expenditure Final Determination (2024); AEMO – AR6 first in-period submission (2023).

2b There is an observed underestimation of costs related to major projects, contributing to uncertainty for participants

More proactive project governance could help, but policy/rule changes remain a challenge for the budget cycle

Is AEMO routinely underestimating its operating and project costs?

Are there barriers to AEMO accurately forecasting its operating and project costs, including project scoping?

- Assessment of AR5 project actual costs indicates that AEMO underestimated the scope of many of its internally-initiated projects (see slide 10), citing underestimation of project complexity and scheduling challenges in some cases
- Similarly, cost estimates for WEM Reform continually increased over time, with underestimation of complexity and the one-year implementation delay cited as significant factors
- The relative timing of policy/rules development processes (which set scope), the Allowable Revenue process (which sets approved funding levels) and project estimation processes (which develop and refine project cost estimates) hinders the ability to develop accurate project cost estimates at the time of key policy and funding decisions – see Appendix 1 for further discussion
    - Bottom-up business requirement scoping may not take place until after the funding approval process, or may be performed to a different level of definition and certainty[1]
    - AEMO and the ERA have recognised the need to incur costs for planning and scoping, with AEMO receiving approval of planning budget for major projects, including for five-minute settlement (5MS) during AR6
- AEMO acknowledges that the costs of major projects need to be considered earlier than has been the case in recent years, and that stakeholders could provide input into the timing, prioritisation and (in some cases) scope
- The ERA has regularly called for improvements in AEMO's project governance, and to the timing of governance processes, to support project planning, scoping and coordination, noting improvements but calling for "greater emphasis on proactive rather than reactive governance engagement with future substantial work programs"

Potentially significant

- Project data show that there has been an underestimation of costs associated with significant projects, both internally-initiated and externally-initiated, and including both project capex and opex requirements post-implementation
- The ERA is of the view that more proactive governance processes could support improved cost estimation and has encouraged AEMO to continue improvements in this area
- However, the relative timing of policy/rules design, project scoping and the Allowable Revenue process present a barrier to accurate and certain forecasts of AEMO's costs for the full 3-year cycle

Notes: [1] For example, see the iteration of WEM Reform implementation costs as set out in Table 25 of AEMO's AR6 initial proposal.

Source: AEMO – AR6 initial proposal (2021); ERA – AR6 final determination (2022); ERA – AR6 first in-period final determination (2023); ERA – second in-period final determination (2024).

2c Existing processes provide overall visibility for stakeholders, and the greater access afforded to the ERA is valuable

Market participants will not be able to view commercial-in-confidence data; only the ERA can scrutinise this

Do market participants lack sufficient visibility of AEMO's costs?

- Should AEMO provide greater visibility/involvement for market participants during forecast development?
- Does the Allowable Revenue process lack sufficient transparency for market participants?

- The formal submission and determination process provides reasonable visibility for market participant feedback, employing a fairly typical two-round consultation process
- In addition, AEMO has provided updates to stakeholders on the development of its Allowable Revenue proposals through its Western Australia Electricity Consultative Forum (WAECF)
  - AEMO held a dedicated AR6 industry engagement session in October 2021[A], prior to lodging its initial AR6 proposal that included cost estimates and the estimated impact on market fees of its upcoming proposal
  - It provided a similar level of detail to the WAECF ahead of the second AR6 in-period submission[B], though provided only qualitative information ahead of the first AR6 in-period submission[C]
- However, stakeholders have highlighted that involvement and collaboration with market participants during forecast development could be improved, with several expressing support for the transparency and consultation measures included in AEMO's Rule Change Proposal[1], and noting that these can be implemented under the current framework
- The ERA has powers to request and view commercial-in-confidence information, such as contracts, that provide it with the ability to review and scrutinise AEMO's budget forecasts in far greater depth than market participants
  - Every 1st round submission to the AEMO Rule Change Proposals advocates for continued ERA review of AEMO's Allowable Revenue due to this superior data access, as well as the ERA's expertise and resourcing

Potentially significant

- The existing framework set out in the WEM Rules and the AEMO Funding Proposal Guideline provides market participants and other stakeholders with high-level visibility of AEMO's cost forecasts
- In practice, AEMO has gone beyond its rule obligations and consulted with stakeholders ahead of its AR6 submissions, to varying degrees – codifying such consultation in the WEM Rules (as suggested in the Rule Change Proposal) or the AEMO Funding Proposal Guideline would ensure a more consistent approach
- The ERA is better placed than market participants to scrutinise AEMO's budget forecasts due to its greater powers to scrutinise commercial-in-confidence information

Notes: [1] See submissions by Alinta, Bluewaters Power/Summit Southern Cross Power, Perth Energy and Shell Energy.

Sources: [A] AEMO – 13/10/2021 AR6 Industry Engagement Session; [B] AEMO – 06/03/24 WA Electricity Consultative Forum; [C] 22/02/23 WA Electricity Consultative Forum, AEMO (2023); Various – 1st round submissions to Rule Change Proposal RC_2024_01 (2024).

The validation process informs the assessment of AEMO's Rule Change Proposals and guides consideration of alternative/additional improvements

Central issue

AEMO's costs are growing at a rate faster than market participants consider reasonable, and in a manner that is difficult for market participants to predict and recover costs

Issue breakdown	Potential causes – Level 1	Potential causes – Level 2	Legend
1 Cost quantum – *AEMO's costs are growing at a rate faster than market participants consider reasonable*	a Is AEMO's role/scope too broad?	Do the rules/regulations confer more obligations on AEMO than necessary/reasonable?	Considered unlikely
		Is AEMO interpreting its role more broadly than intended/expected?	Not considered significant
		Are other agencies pushing responsibility onto AEMO beyond what is expected/reasonable?	Not considered significant
	b Is EPWA's and AEMO's reform implementation program failing to reflect the 'right projects at the right time'?	Are policy decisions made without robust cost-benefit analysis or consideration of market fee impacts?	Potentially significant
		Are policy decisions made without proper consideration of stakeholder views?	Considered unlikely
		Is there insufficient flexibility to amend/reverse/reschedule policy decisions if circumstances change?	Not considered significant
	c Is AEMO inefficient in performing functions and implementing projects?	Is the framework ineffective at incentivising AEMO to operate efficiently?	Potentially significant
		Does AEMO face structural barriers to efficient operation?	Considered unlikely
	d Is the ERA approving too much Allowable Revenue/Forecast Capex?	Are the submission and assessment processes not being structured/followed as intended?	Not considered significant
		Are there barriers to the ERA providing effective scrutiny of AEMO's costs?	Potentially significant
		Does AEMO's flexibility to reallocate approved funding reduce the effectiveness of the assessment process?	Potentially significant
		Is the prudent/efficient test in the rules ineffective in setting fees at an efficient level?	Considered unlikely
		Do asset depreciation schedules result in unnecessary/unreasonable price shocks?	Considered unlikely
2 Cost predictability – *Market participants are finding it difficult to predict and recover market fee costs*	a Is the 3-yearly Allowable Revenue process hindering predictability?	Does uncertainty of policy and project requirements make it unrealistic to develop accurate 3-yearly forecasts?	Potentially significant
		Is the prudent/efficient test in the rules unnecessarily triggering in-period submissions?	Potentially significant
	b Is AEMO routinely underestimating its operating and project costs?	Are there barriers to AEMO accurately forecasting its operating and project costs, including project scoping?	Potentially significant
		Does the Allowable Revenue process incentivise under-forecasting of AEMO's costs?	Considered unlikely
	c Do market participants lack sufficient visibility of AEMO's costs?	Should AEMO provide greater visibility/involvement for market participants during forecast development?	Potentially significant
		Does the Allowable Revenue process lack sufficient transparency for market participants?	Not considered significant

Legend: Potentially significant | Not considered significant | Considered unlikely

Comparison with AEMO rule change proposals

To assess AEMO's rule change proposals, a view on how well the proposals would address the validated root causes is provided below

Guide to the assessment of the rule change proposals

Do the proposals …	Commentary	Effectiveness	Potential impacts
Address the validated root cause?	• xxxx		• xxxx

This box includes a question related to how the proposal addresses one of the potentially significant root causes from the previous section

This box contains the main considerations that have informed the effectiveness rating

The effectiveness rating provides a directional view of the extent to which the measures contained in the rule change proposals will address the potentially significant root cause that is the subject of the question to the left

6-10 = Likely to address the issue (higher number = higher effectiveness)

5 = Neutral impact

0-4 = Likely to exacerbate the issue (lower number = lower effectiveness)

This box summarises the effectiveness of the proposal at addressing the potentially significant root cause

The rule change proposals may, on balance, reduce transparency and accountability and incentives to operate efficiently

The proposed framework prioritises increased flexibility to adjust priorities in response to changing conditions

Does the proposal ...	Commentary	Effectiveness	Potential impacts
Improve the consideration of cost-benefit analysis or market fee impacts in policy development?	• AEMO has not proposed changes to policy development or rule change processes	5	• *No impact*
Increase incentives for AEMO to operate efficiently?	• AEMO's proposed measures to provide increased transparency for market participants are welcome; though many of these could be delivered under the existing framework • However, the removal of the ERA role would decrease accountability and transparency (as market participants cannot see confidential data), and dilute the (already weak) incentives for AEMO to operate efficiently	2	• On balance, the (already weak) incentives for AEMO to operate efficiently would be reduced
Improve the effectiveness of scrutiny of AEMO's costs?	• Market participants are unlikely to be able to provide the same level of scrutiny of AEMO's costs as they lack the ERA's resourcing, expertise and access to commercial-in-confidence information	1	• The proposal significantly reduces effective scrutiny of AEMO's costs
Improve the balance between effective scrutiny of AEMO's costs and flexibility for AEMO to respond to evolving circumstances and requirements?	• Priorities and requirements will change over time, and AEMO's proposed framework would maximise its flexibility to respond to such change without requiring costly feedback loops to the ERA • However, this is considered to be at the expense of effective scrutiny, as noted above	3	• On balance, the significant loss of scrutiny is considered to outweigh the flexibility benefits and any administrative cost savings

Sources: WEM Rules; Rule Change Proposals RC_2024_01 and GRC_2024_01 (2024).

The proposals offer some improvements to forecasting accuracy and administrative costs, but at the expense of the ERA's scrutiny

The transparency measures in the proposals can be implemented voluntarily under the existing framework

Does the proposal …	Commentary	Effectiveness	Potential impacts
Support improved forecasting/approval processes through greater certainty of policy and project requirements for the forecast period?	• AEMO's costs for BAU activities should be able to be forecast reasonably accurately under the current 3-year cycle[1] • AEMO's work program and project scopes should be more certain under a shorter, annual review cycle, which should theoretically result in improved forecasting accuracy compared with the current three-year cycle • However, little improvement in certainty for market participants due to removal of accountability measures to ensure spending remains in line with budgets[2]	6	• On balance, there appears to be a small net positive impact due to shorter time horizons, offset by reduced confidence in adherence to budget due to reduced scrutiny and removal of overspend triggers
Avoid or reduce the need for costly in-period submissions and reviews?	• By removing the ERA approval role, AEMO's proposals would also avoid the need for the current process for in-period submissions	6	• Some cost saving should result from the removal of formal ERA processes, offset somewhat through formalised annual consultation processes
Mitigate the tendency for AEMO to under-forecast its AEMO's project costs, including project scoping?	• AEMO's proposals do not, in itself, address the observed tendency to under-estimate project complexity and costs, which has the potential to skew policy decision-making	5	• *No impact*
Support greater visibility/involvement for market participants during forecast development?	• The transparency measures within AEMO's proposals (consultation on priorities and activities, major project reporting, reporting against budget[2]) are welcome, though these could be undertaken under the current framework, and AEMO already provides some of these through its WAECF	5	• There appears to be minimal net change to market participant involvement, substituting engagement via the ERA with the mandating of early market participant engagement that can already be implemented

Notes: [1] Network businesses are a useful reference point in this regard, which forecast their budgets for a five-year regulatory cycle. [2] The reassessment triggers in section 2.22A of the WEM Rules provide a level of accountability, with AEMO obliged to monitor and act if . [3] AEMO's proposal also includes a review of the effectiveness of the budget/fees framework in the Coordinator of Energy's review of the effectiveness of the WEM.

Sources: WEM Rules; Rule Change Proposals RC_2024_01 and GRC_2024_01 (2024).

Options for reform of AEMO budget framework

The root cause analysis and assessment of AEMO's proposals assist in identifying features of an improved budget and fees framework

Potential options in this section are classified as to how they contribute to meeting these goals

Stage	Features
Defining a clear work program	• Considered and informed policy development to ensure focus on the 'right activities at the right time' that deliver net benefit for consumers • Flexibility in policy development and decision processes to adjust to changing circumstances or new information • Opportunities for market participants to contribute to policy development and AEMO's priority-setting processes
Preparing accurate budget forecasts	• Forecast horizon (or horizons) chosen such that it is feasible to develop forecasts at the expected level of accuracy • Ex-post assessment of budgets to support continuous improvement
Scrutinising and approving budget forecasts	• Independent review and approval of AEMO's budget forecasts to assess prudence and efficiency, by the body (or bodies) best placed to undertake the review • Review triggers that incentivise efficiency and impose cost discipline without triggering spurious reviews • Ex-post assessment of budgets to support continuous improvement

A range of potential options were identified that target the desired features, followed by an initial, high-level assessment

Options assessed and alignment with process stages

Option	Defining a clear work program	Preparing accurate budget forecasts	Scrutinising & approving budget forecasts
Reform Implementation Roadmap	✓		✓
Shorter AR frequency		✓	
Removing timing restriction for AR proposals		✓	
Contingent project framework		✓	✗
Coordinator approval of major project costs	✓	✓	✗
Database of past project costs	✓	✓	
Formalised KPIs and financial incentives			–

Description of approach

- Using the desired features for the budget framework on the previous page, a range of potential options for reform of the Allowable Revenue (AR) framework have been considered
- An <u>initial</u> assessment of advantages and disadvantages was then performed for each of the options, as well as potential variations or specific considerations related to that option
- The options considered here are not mutually exclusive, meaning that a combination of options could be implemented
- Some additional options were not assessed, based on the view that they were unlikely to address the potentially significant root causes
  - Such options include relaxation of the over-spend allowance in the WEM Rules and changes to consultation processes

1 A Reform Implementation Roadmap is a no-regrets option, particularly given the current pace and scale of reform

How it might work

- Elements of the NEM Reform Implementation Roadmap process, which is developed by AEMO, could be used
- EPWA, with support from AEMO and Western Power, could compile a consolidated view of current and upcoming reform initiatives, as well as other major projects that could impact on policy implementation timeframes[1]
- The roadmap could take the form of an integrated timeline, showing the various stages and the status of each identified initiative, and could include implementation cost forecasts
- The roadmap could be updated according to a set frequency or following significant change (e.g., major new initiative, material change to scope or timing of an initiative)
- Governance of change could include industry input, through a dedicated working group or an existing committee (e.g., Market Advisory Committee (MAC), WA Electricity Consultative Forum)
- The roadmap need not be a mandatory requirement under the WEM Rules, but could be formalised in more flexible ways, such as through terms of reference for a MAC Working Group

Advantages and disadvantages

Advantages

- Policy development can more readily and transparently consider the entirety of the industry work program
- Improved reform scheduling can support identification of efficiency opportunities, inform budget forecasting processes and reduce rework
- Evolution of the roadmap can indicate where previous policy decisions require reconsideration
- Participants have greater visibility and formalised input into the work program

Disadvantages

- Minor incremental administrative cost, though this is likely to be more than offset through clearer and earlier identification of scheduling dependencies and challenges

Potential variations / considerations

- AEMO could lead development of the roadmap; however, EPWA may be better-placed to gather and compile information from both AEMO and Western Power on relevant initiatives
- Development of a roadmap could be mandated under the WEM Rules, though this may constrain evolution of the roadmap development process

Notes: [1] For example, AEMO's recent implementation of the e-terra Energy Management System under its Power System Operations (PSO) project was, in part, a prerequisite to WEM Reform implementation.

Sources: AEMO – NEM Reform Implementation Roadmap (2024).

Work program development	Forecast development	Budget scrutiny

2 A shorter Allowable Revenue review frequency is likely, all else being equal, to result in more accurate forecasts

How it might work

- The Review Period for the Allowable Revenue process could be shortened to two years

Advantages and disadvantages

Advantages	Disadvantages
• The reduced forecast horizon should lead to improved budget accuracy, partially due to greater certainty of the forward work program • May reduce administrative costs, given the recent increased reliance on in-period submissions	• Given the current pace and scale of reform development, may not eliminate the need for in-period submissions • Reduces medium-term certainty of market fees when compared to a 3-year cycle[1]

Potential variations / considerations	
	• The Review Period could be shortened further to one year • Formal consultation could be reduced to one round, if this is supplemented by mandatory transparency measures as per AEMO's rule change proposal

Notes: [1] The increased number of in-period submissions during AR5 and AR6 has already reduced the medium-term certainty of market fees.

3 The timing restriction for in-period Allowable Revenue proposals may cause more problems than it solves

How it might work

- The timing restriction in clause 2.22A.16 of the WEM Rules could be removed, or softened to 'best endeavours'
  - This clause seeks to avoid mid-year changes to market fees by requiring AEMO to submit an in-period Allowable Revenue submission to the ERA by 31 March to allow the ERA to make its decision before the commencement of the relevant Financial Year
  - It does not apply to a proposal to modify only the Forecast Capital Expenditure[1]
- Recovery of any additional approved costs could begin through a mid-year change in the market fee rate
- AEMO could be prevented from submitting an in-period proposal within 6 months of the most recent approval, to reduce the potential for spurious or repeat proposals

Advantages and disadvantages

Advantages

- Removes a potential cause of delay in policy implementation, enabling earlier funding approval for beneficial projects
- May incentivise AEMO to submit in-period proposals when it has greater project/budget certainty, rather than the current incentive to meet the deadline
- May reduce the number of in-period submissions by making it easier to submit a proposal covering multiple projects, or covering both Allowable Revenue and Forecast Capital Expenditure impacts

Disadvantages

- Certainty for market participants would be reduced due to the potential for mid-year changes to market fees

Potential variations / considerations

- Recovery of any additional approved costs could instead be deferred to the following Financial Year so as to retain a single market fee rate per financial year, however this may lead to a large step increase for the subsequent financial year

Notes: [1] AEMO's first in-period submission did not meet the timeline and hence only included a proposed adjustment to the Forecast Capital Expenditure; it was unable to include the depreciation impacts of this capex on the Allowable Revenue. This impact then formed part of AEMO's 2nd in-period submission.

Sources: WEM Rules, AEMO – AR6 1st in-period submission (2023); AEMO – AR6 2nd in-period submission (2024).

Work program development | Forecast development | Budget scrutiny

4 A contingent project framework could decouple major project cost approval from the periodic Allowable Revenue cycle

How it might work

- This option borrows heavily from the contingent project framework used for networks in the National Electricity Rules
- At the time of the periodic Allowable Revenue determination, the ERA could 'pre-approve' contingent projects that:
  - it reasonably considers will be required within the Review Period;
  - are additional to AEMO's approved Allowable Revenue and Forecast Capex; and
  - are anticipated to exceed a specified cost threshold
- Pre-approval would enable an in-period contingent project application, for which the ERA would only need to assess the incremental budget for that project[1]
- This pre-approval could also include nomination of a trigger event, at which point AEMO would be expected to have greater certainty on project scope and cost
  - Contingent project applications need not be limited by the current timing restriction for in-period submissions
  - However, AEMO could be required to use best endeavours to combine contingent project applications where feasible

Advantages and disadvantages

Advantages

- More closely aligns budget approval with policy development timeframes
- Provides simpler in-period assessment limited to the incremental adjustment, rather than requiring reassessment of the full budget for the Review Period

Disadvantages

- ERA pre-approval may add little value for projects driven by new rule requirements, as AEMO must undertake the project irrespective of the ERA's pre-approval
- The existing in-period mechanism would likely still be needed for large projects that emerge within a Review Period that were not known at the time of the original determination
- By limiting the contingent project assessment to only the incremental project cost, it may disincentivise the use of available budget from cost savings and cancelled projects, freeing AEMO to reallocate those savings to other, unscrutinised purposes

Potential variations / considerations

- To overcome the issue of ERA pre-approval adding little value, this could be replaced by empowering the Coordinator to determine, at the time of making a policy or rule change, whether a project is eligible for, or should be subject to, incremental assessment

Notes: [1] Under section 2.22A of the Market Rules, in-period assessments currently require a decision on the total Allowable Revenue and Forecast Capital Expenditure, whereas the potential option on this page would involve assessment of the incremental project budget only. The ERA currently has the ability to limit its assessment to only the new project under clause 2.22A.17 of the WEM Rules.

Sources: AEMC – Consultation Paper, Application period for contingent project revenue (2019).

Work program development | Forecast development | Budget scrutiny

5 Coordinator approval of major project costs could strengthen consideration of those costs during policy development

How it might work

- The Coordinator could be empowered to make adjustments to the ERA-approved Allowable Revenue and Forecast Capex at the time of making amending rules, either through:
  - an explicit power in the WEM Rules enabling the Coordinator to make adjustment and specifying the process and timing for doing so (e.g., within a Final Rule Change Report)[1]; or
  - transitional rules that specify the increment to the Allowable Revenue and/or Forecast Capital Expenditure[2]
- The conditions for a contingent project application (see previous slide) could form part of the Coordinator's consideration, particularly ensuring additionality to previously approved costs
- The Coordinator could also specify cost recovery requirements, though the benefits will likely outweigh the costs of doing so[3]
- If the approval formed part of a rule change approval, this may require time extensions to the current rule change process to provide time for development of cost estimates

Advantages and disadvantages

Advantages

- Ties approval of costs to policy development processes and timeframes, which would:
  - require cost estimates to be developed prior to final policy decisions
  - likely improve the consideration of implementation costs at the policy decision stage
  - reduce administrative costs associated with the current in-period assessment process

Disadvantages

- Checks and balances would be reduced by removing the ERA's role in scrutinising major project expenditure
- Budget forecasts would need to be developed at the same time as, or earlier than, occurs under the current process for in-period submissions, so forecast accuracy is unlikely to be improved
- By allowing the approval of incremental project costs, it may disincentivise the use of available budget from cost savings and cancelled projects, freeing AEMO to reallocate those savings to other, unscrutinised purposes

Potential variations / considerations

- Consideration would need to be given to policy/rule changes made outside the standard rule change processes, such as through gazettal by the Minister
- The Coordinator's approval could cover the entirety of an implementation project, or be limited to the costs that are to be incurred in the current Review Period at the time of making the amending rules[4]
- The ERA could assess the major project costs, though cost estimates at the time of policy decisions are unlikely to meet the ERA's required level of certainty

Notes: [1] This would potentially involve changes to the sections of the WEM Rules covering the Allowable Revenue process (section 2.22A) and the rule change process (sections 2.7 and 2.8). [2] This practice has been used in sections 6.5A to 6.5J of the *Electricity Networks Access Code 2004*, specifying costs for inclusion in Western Power's target revenue. [3] For comparison, the Cost Allocation Review found that the allocation of market fees could be made more equitable, but that the costs to implement changes would outweigh the benefits of doing so. [4] The ERA could then be responsible for scrutinising the project budget for the subsequent Review Period(s).

Sources: WEM Rules, *Electricity Networks Access Code 2004*; EPWA – Cost Allocation Review, Information Paper (2023).

Work program development	Forecast development	Budget scrutiny

6 A database of past project costs, informed by ex-post project reviews, could support early-stage cost forecasting processes

How it might work

- The ERA could maintain a database of past project costs, including WEM projects and similar projects from other jurisdictions
- The inclusion of past WEM projects in the database could be subject to ex-post review of project performance, to ensure only efficient costs are included
- Early-stage project budget forecasts could be determined and/or validated against the projects in the database, supporting policy development processes
- The database need not be a mandatory requirement under the WEM Rules[1]
- (See Appendix 1 for further details on typical timing and accuracy of project cost estimation processes)

Advantages and disadvantages

Advantages	Disadvantages
• Provides a stronger evidence base to support early-stage project cost estimation during policy/rules development, through selection of the most similar previous projects for benchmarking purposes • Supports continuous improvement in projects through standardised ex-post review	• Minor incremental administrative cost to develop and maintain the database, and conduct ex-post project reviews

Potential variations / considerations	-

Notes: [1] Development of a project database would support, and be part of, the ERA's existing functions to assess AEMO's budgets.

Sources: WEM Rules.

Work program development | Forecast development | Budget scrutiny

7

Formalised KPIs may duplicate the WEM Effectiveness Review, and financial incentives are likely to be impractical

How it might work

- The ERA could establish KPIs for AEMO as part of its Allowable Revenue decision, informed by past performance and benchmarks from other jurisdictions
- AEMO could be required to establish financial incentives for senior executives, tied to satisfaction of the KPIs
  - This approach is being utilised for the newly established, non-profit National Energy System Operator (NESO) in the UK
- No organisation-level incentive payments or penalties would apply, as AEMO would be required to pass this to market participants, and would hence not be incentivised by such payments or penalties

Advantages and disadvantages

Advantages

- If implementable, could strengthen incentives on AEMO to operate efficiently

Disadvantages

- Formalised KPIs may duplicate the review of AEMO's performance of its functions under the WEM Effectiveness Review[1]
- Given that AEMO is a national body, with its WA functions representing a small portion of its operations, it may be impractical to identify which senior executives should be incentivised and to provide them with differentiated remuneration structures

Potential variations / considerations

- The process of setting KPIs could be formalised to occur in either the WEM Effectiveness Review or the Allowable Revenue process, to avoid duplication

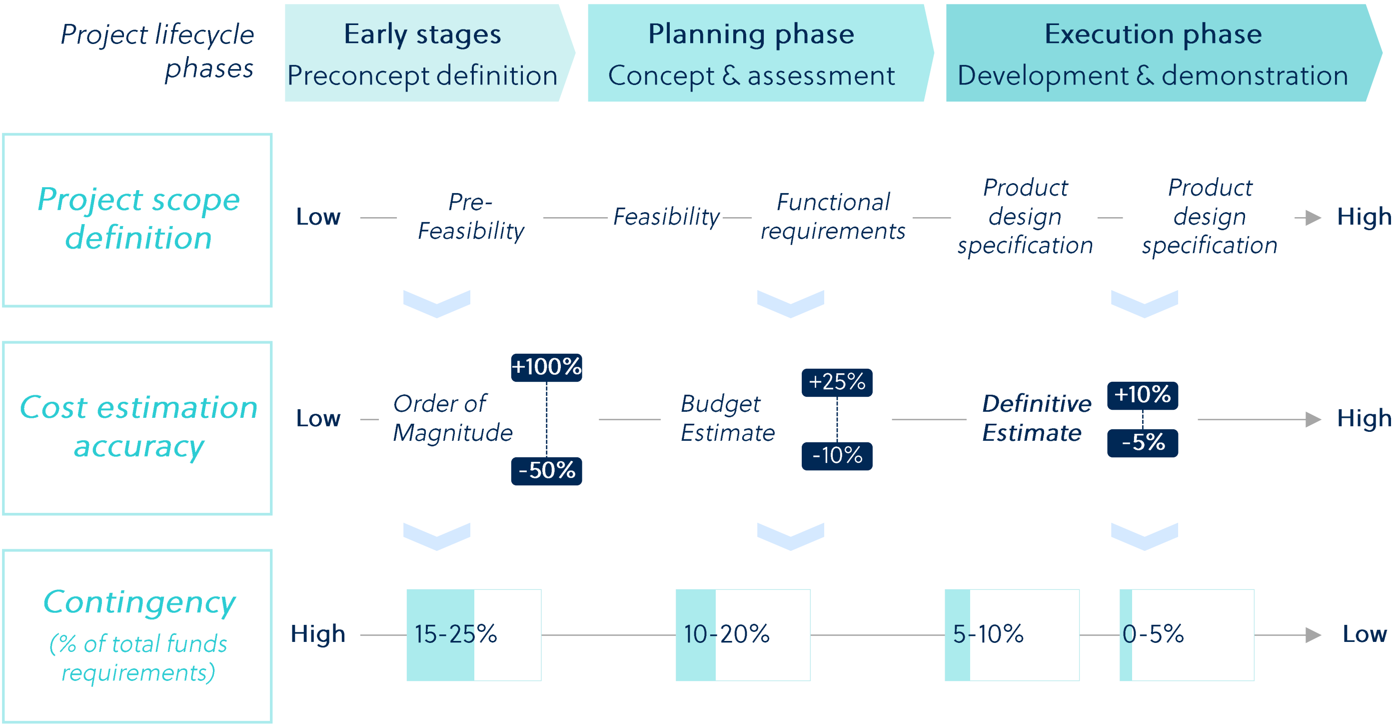
Notes: [1] See section 2.22A of the WEM Rules.

Sources: WEM Rules; Ofgem – Decision on National Energy System Operator's performance incentives framework for BP3 (2024).

Appendix 1: Project cost estimation

Project estimations are linked to the evolving understanding of the work required and therefore refined throughout the project life

Project scope, costs & funds estimations evolution over project lifecycle



Sources: Prince 2 Project Management methodology; Rennie analysis and frameworks

- According to project management best practices, project scoping, cost estimation and funding requirements are strongly interlinked throughout the project lifecycle
- Initial estimates of the project costs have typically low accuracy and invoke higher contingency funds as a financial buffer to address project risks
- As the project scope is detailed more over the project lifecycle, through feasibility assessment and functional requirements gathering, the project costs can be better predicted, determining a more accurate budget estimate
- Project cost estimates are reviewed throughout the project duration: at the various project stages, after major milestones, when new information arises and at key decision points
- Alignment on the timing of scope definition, estimation of costs and determination of fund requirements is key to ensure success of the project delivery

Timing of scope definition, estimation of costs and approval of funding is key to the success of AEMO's project delivery

High level view of interdependencies across key project phases

Project lifecycle phases	**Early stages** Preconcept definition	**Planning phase** Concept & assessment	**Execution phase** Development & demonstration
Policy/rule development process led by EPWA *Setting project scope*	Rule change proposal & decision	Market rule design	
Project estimation process led by AEMO *Developing & refining cost estimates*	Order of magnitude estimation	Budget estimation	Definitive estimation
Allowable Revenue process led by AEMO, influenced by ERA *Approving funding*	AEMO proposal submission & ERA final determination	AEMO in-period submission/s & reporting	

Sources: Rennie analysis and frameworks

← Feedback loops
← Information flows

Key considerations on areas for alignment

- The timing of the information flows between EPWA, AEMO and ERA is important and presents opportunities for alignment.
- The overarching policy/rules development processes should cascade the information regarding the project scoping in sync with project lifecycle stages to ensure effective project and resource planning.
- The Allowable Revenue process should then reflect the project cost estimates, and contingency levels determined by AEMO on the basis of the scope defined by EPWA and detailed by AEMO.
- To ensure the projects maintain its objectives, feedback loop from dawn stream analysis, detailed design and budget decisions into the initial decision on the policy/rule change aligns with best practice.

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