

Australian Energy Market Operator's allowable revenue and forecast capital expenditure proposal for the period 2019/20 to 2021/22

Issues paper

20 March 2019

Economic Regulation Authority

WESTERN AUSTRALIA

DMS#####

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Invitation to make submissions

Submissions are due by 4:00 pm WST, Monday 15 April 2019

The ERA invites comment on this paper and encourages all interested parties to provide comment on the matters discussed in this paper and any other issues or concerns not already raised in this paper.

We would prefer to receive your comments via our online submission form <https://www.erawa.com.au/consultation>

You can also send comments through:

Email: publicsubmissions@erawa.com.au
Post: PO Box 8469, PERTH BC WA 6849
Fax: 08 6557 7999

Please note that submissions provided electronically do not need to be provided separately in hard copy.

All submissions will be made available on our website unless arrangements are made in advance between the author and the ERA. This is because it is preferable that all submissions be publicly available to facilitate an informed and transparent consultative process. Parties wishing to submit confidential information are requested to contact us at info@erawa.com.au.

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1. Introduction

The Economic Regulation Authority is responsible for determining the allowable revenue and forecast capital expenditure the Australian Energy Market Operator (AEMO) can recover through fees charged to market participants. The expenditure covers the services AEMO provides in Western Australia in both the electricity and the gas markets.

On 15 March 2019, the ERA received a submission from AEMO seeking approval for its allowable revenue and forecast capital expenditure for the fifth allowable revenue (AR5) period, from 1 July 2019 to 30 June 2022. This proposal covers AEMO's activities in the Wholesale Electricity Market (WEM) and its Gas Service Information (GSI) functions.

This issues paper summarises AEMO's proposal and the ERA's assessment process, and is intended to assist interested parties to make submissions on any aspect of the proposal. The ERA encourages stakeholders to review AEMO's submission in detail when making submissions. AEMO's submission is [available on the ERA website](#).

WEM functions

The *Wholesale Electricity Market Rules* identify the electricity services AEMO provides in the WEM. AEMO administers the reserve capacity mechanism, and operates and settles the Short Term Energy Market, the Load Following Ancillary Service Market and the real time Balancing Market. AEMO system management undertakes a long-term system planning function and the day-to-day management of the electricity system in the South West Interconnected System. AEMO also has information release and market administration functions such as proposing and changing market procedures, providing support for the Rule Change Panel and ERA, and publishing the Western Australian Electricity Statement of Opportunities report. These are referred to as 'business as usual' activities.¹

On 29 June 2018, the Minister for Energy conferred additional functions on AEMO through a rule change.² These additional functions are to prepare for and facilitate the implementation of WEM and constrained network access reform. The additional activities include designing, amending and drafting legislation to accommodate changes to the market design. AEMO will procure and test systems and tools that will be needed to implement and operate the new market design. AEMO will also undertake project and change management functions and stakeholder engagement functions for the duration of the market reform program.

The additional market reform functions cease on 1 October 2022. Therefore, AEMO's market reform functions run throughout the AR5 period.

The Minister's WEM rules changes also established an amended timeframe for reviewing AEMO's AR5 submission:

- AEMO must submit its AR5 proposal by Friday 15 March 2019.
- The ERA must make its determination on this proposal by Friday 14 June 2019.

The change to the timing of AEMO's submission of its proposal for AR5 and the deadline for the ERA's decision has cut the usual review and determination timeframe from four months to three months.

¹ Rule Change Panel, 2019, *Wholesale Electricity Market Rules*, clause 2.22A.1 ([online](#))

² Ibid, clause 1.20

GSI functions

Under the *Gas Services Information Rules*, AEMO is responsible for operating the Western Australian Gas Bulletin Board, preparing and publishing the Western Australian Gas Statements of Opportunities, and other functions in accordance with the GSI rules³ and the relevant GSI procedures.

AEMO's AR5 funding proposal includes its forecast costs to fulfil its functions under the GSI rules. While the Minister's rule change amended the AR5 timeline in the WEM rules, no changes were made to the GSI rules. The GSI rules require:

- AEMO to have submitted its GSI funding proposal for AR5 to the ERA on 30 November 2018.
- The ERA to make its determination by 31 March 2019.⁴

AEMO submitted its AR5 proposal, including the GSI component, on 15 March 2019, after the deadline required by the GSI rules.

The ERA must publish an issues paper and undertake public consultation on AEMO's funding proposal for its functions under the GSI rules prior to making its determination.⁵ The ERA will not have time to undertake these activities from 15 to 31 March and will be unable to comply with the timing requirement in the GSI rules.

Instead, the ERA will concurrently review and made a determination on AEMO's funding proposal for both its WEM and GSI functions by 14 June 2019.

1.1 Changes to the AR5 review timing and process

The ERA has decided on a two-stage consultation process for reviewing the AR5 funding proposal. Interested parties will be invited to comment on AEMO's proposal through submissions in response to this issues paper. The ERA will then release a draft determination in early May 2019 and will invite further submissions. When making its final determination, the ERA will take into account all the information received through both consultation processes.

To accommodate the shortened review process and two stages of consultation, the ERA has reduced its consultation periods from the usual six weeks to four weeks each. The review period also covers several public holidays: Good Friday on 19 April, Easter Monday on 22 April, ANZAC day on 25 April and Western Australia Day on 3 June 2019. The public holidays further reduce the number of business days in the review period.

The ERA asks market participants to familiarise themselves with the dates of the consultation periods and to plan their submissions accordingly. The limited timeframe for the review will make it difficult for the ERA to accommodate any late submissions.

The timeline and indicative dates for the review process are listed in Table 1 below.

³ Rule Change Panel, 2019, *Gas Service Information Rules*, clause 8 ([online](#))

⁴ Ibid, clause 108A

⁵ Ibid, clause 108A (3)

Table 1: AR5 timeline, activities and milestones in 2019

Date	Activity	Milestone
15 March	Submission	AEMO submitted its AR5 funding proposal
19 March	Four weeks consultation on the ERA's issues paper	ERA publishes its issues paper
15 April		Consultation on the issues paper closes
3 May	Four weeks' consultation on the ERA's draft determination	ERA publishes its draft determination
29 May		Consultation on the draft determination paper closes
14 June	Determination	ERA publishes its final determination for AR5

AEMO's AR5 funding submission comes at a time when the electricity market is transitioning to low carbon generation technologies and the market reform program to enable this change is at an early stage of development. Much of the detail of the final design of the wholesale market and the Information Technology systems required to operate such a market are yet to be identified. The current level of uncertainty complicates both AEMO's development of its funding proposal and the ERA's review of and approval of expenditure that meets the "lowest practically sustainable cost" approval requirements in the WEM market rules.

Therefore, ERA asks interested parties to review AEMO's proposal in detail and to consider the following questions when preparing submissions to this issues paper.

Questions

1. Given that much of the market design and detail of the systems needed to operate a new market design are yet to be determined, would interested parties prefer the ERA to approve funding:
 - a. for the full three years of the AR5 period
 - b. through a staged approach, such as happened in AR4, where AEMO proposes additional funding as clarity and certainty develops through the market reform program?

Please give the reasons for your preference.

2. Which, if any, aspects of AEMO's submission are of most concern to stakeholders and why?

Interested parties are also invited to provide comments on any other aspects of AEMO's funding proposal.

2. AEMO's AR5 funding proposal

Prior to lodging its submission, AEMO advised stakeholders of the high level electricity expenditure forecasts for AR5 and provided some insight on what was driving those costs.⁶ AEMO did not provide advance information on the GSI-related expenditure.

AEMO provided the ERA with a confidential draft of its submission paper on 15 February 2019. This was so the ERA could understand the structure of the final submission. There was limited detail in the draft, and no expenditure numbers.

WEM expenditure forecast

For AR5, AEMO has proposed electricity allowable revenue of \$98.348 million and forecast capital expenditure of \$77.203 million. Both the proposed allowable revenue and forecast capital expenditure for AR5 are higher than the ERA approved for AR4, as shown in Table 2.

Table 2: AR4 approved expenditure and forecast AR5 expenditure (WEM)

\$'000s (nominal)	AR4 approved	AR5 proposed	Variance	%
Total allowable revenue	93,649	98,348	4,699	5.0
Business as usual	90,795*	97,789	6,994	7.7
Market reform	2,854	559	(2,295)	(80.4)
Total forecast capital expenditure	32,113	77,203	45,090	140.4
Business as usual	14,003*	25,954	11,951	85.4
Market reform	18,110	51,249	33,139	183.0

Note: * includes expenditure for transferring system management functions from Western Power to AEMO.

Most (\$97.8 million or 99.4 per cent) of the allowable renewable expenditure is for business as usual activities. Most of the forecast capital expenditure (\$51.2 million, or 67 per cent) is for market reform projects.

GSI expenditure forecast

For AR5, AEMO has proposed gas allowable revenue of \$5.9 million and forecast capital expenditure of \$1.3 million. The expenditure is mostly for business as usual activities.

Table 3: AR4 approved expenditure and forecast AR5 expenditure (GSI)

\$'000s (nominal)	AR4 approved	AR5 proposed	Variance	%
Total allowable revenue	5,619	5,893	274	4.89
Total forecast expenditure	1,118	1,274	156	14.0

AEMO's annual funding proposal is summarised in Table 4 below.

⁶ Australian Energy Market Operator, January 2019, ([online](#)) WAE-CF (Extra – AR5 Workshop) – Minutes and Presentation

Table 4: AEMO's AR5 proposed allowable revenue and forecast capital expenditure (electricity and gas)

\$'000 (nominal)	2019/20 (proposed)	2020/21 (proposed)	2021/22 (proposed)	AR5 total (proposed)
WEM expenditure forecast				
Total proposed allowable revenue – business as usual (WEM rule 2.22A.1)*	31,562	32,704	34,082	98,348
Market operations	13,695	14,109	14,959	42,764
System management	17,866	18,594	19,123	55,584
WEM proposed allowable revenue	31,562	32,704	34,082	98,348
Total proposed capital expenditure – business as usual (WEM rule 2.22A.1)	17,090	4,895	3,969	25,954
Market operations	9,197	2,126	1,689	13,012
System management	7,893	2,769	2,280	12,942
Total proposed capital expenditure – market reform (WEM rule 1.20)	9,031	20,927	21,291	51,249
Market operations	4,516	10,463	10,646	25,624
System management	4,516	10,463	10,646	25,624
WEM proposed forecast capital expenditure	26,121	25,821	25,260	77,203
GSI expenditure forecast				
Total proposed allowable revenue – business as usual (GSI rule 8(1))	2,045	1,925	1,923	5,893
Total proposed capital expenditure – business as usual (GSI rule 8(1))	590	362	322	1,274

*Includes a small amount (\$0.559 million) for WEM rule 1.20.

Totals may not add due to rounding.

3. The ERA's review

3.1 Market rules governing the review

3.1.1 WEM rules

The ERA is responsible for determining the allowable revenue and forecast capital expenditure AEMO can recover for the services it provides in the WEM. These services currently include:

- Operating the WEM market and system management functions as set out in the market rules.⁷
- Preparing for and facilitating the implementation of WEM and constrained network access reform.⁸

The ERA's three-year allowable revenue and forecast capital expenditure determinations form the basis of AEMO's annual budgets that must be published on its website. AEMO's market fees are charged based on the expected volume of energy generated and consumed by market participants. These fees are adjusted each year to reflect AEMO's annual budget.

AEMO also makes annual adjustments to its budget to account for surpluses or deficits in the revenue it collects from market and system operation fees that arise from the differences between forecasts and actual expenditure.

The ERA must take the following factors into account when approving allowable revenue and forecast capital expenditure:

- The allowable revenue must be sufficient to cover the forward-looking costs of providing the relevant services in accordance with the following principles:
 - Recurring expenditure requirements and payments are recovered in the year of expenditure.
 - Capital expenditure is recovered through the depreciation and amortisation of the assets acquired by the capital expenditure in a manner consistent with good accounting principles.
- The allowable revenue and forecast capital expenditure must include only those costs that would be incurred by a prudent provider of the services, acting efficiently, seeking to achieve the lowest practically sustainable cost of delivering the services in accordance with the WEM rules, while effectively promoting the wholesale market objectives.
- Where possible, the ERA should benchmark the allowable revenue and forecast capital expenditure against the costs of other market operators providing similar services in other jurisdictions.

⁷ Clauses 2.1A and 2.2 of the WEM rules provide a detailed list of AEMO's functions and services.

⁸ Clause 1.20 of the WEM rules applies until 1 October 2022. WEM and constrained network access reform is defined as any proposed change to the operation of the WEM or related network access arrangements, or the regulatory regime applying to the WEM (including the Electricity Industry Act, the Regulations and these Market Rules), that has been endorsed by the Minister, whether or not legislation has been made to implement it.

- Where costs incurred by AEMO are for the performance of functions under the WEM rules and the performance of AEMO's other functions, the costs must be allocated on a fair and reasonable basis between:
 - Costs recoverable as part of AEMO's allowable revenue and forecast capital expenditure.
 - Other costs not to be recovered under the WEM rules.

3.1.2 GSI rules

Under the GSI rules, AEMO is responsible for operating the Western Australian Gas Bulletin Board, registering and exempting gas market participants and gas facilities in Western Australia, developing procedures, and preparing and publishing the Western Australian Gas Statements of Opportunities as required in the GSI rules⁹ and the relevant GSI procedures.

When approving the allowable revenue and forecast capital expenditure that AEMO can recover from Western Australian gas market participants, as governed by the GSI rules¹⁰, the ERA must follow a similar process and review AEMO's proposal by taking similar considerations into account, as when making the determination under the WEM rules.

Each financial year, AEMO must publish its annual budget, which is based on the ERA's determination for the allowable revenue period, and can recover this amount through fees (including Regulator Fees) from registered gas market participants.

3.2 The assessment and determination process

Governance, assumptions, escalation and allocations

The ERA asked AEMO to provide additional information on the governance process AEMO used to ensure that its proposed allowable revenue and forecast capital expenditure were those of "a prudent provider of the services, acting efficiently, seeking to achieve the lowest practically sustainable cost of delivering the services in accordance with the WEM rules, while effectively promoting the wholesale market objective."

The ERA will assess the reasonableness of the methods and assumptions AEMO has used to estimate its allowable revenue and forecast capital expenditure, and will test key assumptions.

As part of this exercise, the ERA will assess whether AEMO has allocated its proposed costs on a fair and reasonable basis between its market operation, system management and other functions. These other functions include AEMO's GSI services and work undertaken in Western Australia for AEMO's services to the National Electricity Market and National Gas Market. The assessment will aim to ensure that proposed expenditure is related to the Western Australian markets only.

Allowable revenue

The ERA will review the reasonableness of the methods and assumptions used to forecast the allowable revenue for the AR5 period. A comparison against the AR4 approved business

⁹ Rule Change Panel, 2019, *Gas Services Information Rules*, clause 8 ([online](#))

¹⁰ Ibid, clauses 108A to 110

as usual expenditure will allow the ERA to evaluate trends in allowable revenue over time, and to identify one-off costs and step changes resulting from changes in AEMO's functions.

The ERA aims to identify whether AEMO's proposal anticipates any economies of scale from operating both the WEM and the NEM and, if so, when these economies of scale are likely to be realised.

Forecast capital expenditure

The ERA will assess AEMO's proposed capital expenditure at an individual project level. Where projects continue from the AR4 period into the AR5 period, the ERA will review the approved capital expenditure against actual expenditure in AR4 and will assess the additional funding requested in AR5.

For business as usual forecast capital expenditure (including both WEM and GSI-related expenditure), the ERA will assess the requested project funding against AEMO's requirements to perform its day-to-day market operator, system management and GSI functions.

The ERA will assess the reasonableness of the methods used to develop the estimates for the market reform and technology projects and will test key assumptions.

- The proposed reform projects will be mapped against the work program endorsed by the Minister for Energy, as required for AEMO to fulfil its obligations under clause 1.20 of the WEM rules.
- The technology projects' review will assess to what degree the proposed projects are relevant to the WEM and will provide benefits to WEM participants.

The ERA will seek expert technical advice to assist in the review and will benchmark the proposed allowable revenue and forecast capital expenditure costs where possible.

The ERA will consider submissions received in response to the issues paper and advice from its technical consultant before making its draft determination. The ERA will publish its draft determination early in May 2019 for a four week consultation period. The ERA will consider submissions received in response to the draft determination and advice from its technical consultants before publishing its final determination on 14 June 2019.

Appendix 1 History of allowable revenue and forecast capital expenditure proposals and approvals for AR3 and AR4

AR3 – 1 July 2013 to 30 June 2016

System management was part of Western Power during AR3 and so system management and the Independent Market Operator made separate funding submissions to the ERA for approval. Submissions were made on 20 December 2012 and the final determination was published on 2 April 2013. The ERA approved all of the Independent Market Operator's proposal and most of system management's proposed funding.

AR4 – 1 July 2016 to 30 June 2019

- October 2016 - AEMO's initial AR4 submission included business-as-usual costs to provide market operation services, system planning services, market administration services, system management services and GSI services. The submission also included expenditure for the previous Government's electricity market reform program.¹¹
- December 2016 - AEMO made a second submission to the ERA.¹² This identified reform expenditures that "AEMO believes are critical to continue irrespective of the uncertainty of the reform program". This included completing the transfer of system management and associated systems out of Western Power and into a single Perth office; and expenditure associated with changes to the reserve capacity mechanism that had already been written into the WEM rules.
- December 2016 - The ERA's determination for AR4 excluded all market reform expenditure, recognising the political uncertainty at the time. The ERA also had insufficient time to consider AEMO's revised submission by the then applicable statutory deadline of 16 December 2016.
- February 2017 – Following the introduction of clause 1.20 of the WEM rules in December 2016, AEMO submitted a third application for supplementary allowable revenue and forecast capital expenditure. This was to implement market rule changes to the reserve capacity mechanism, continue with the IT works to support a single Perth office and continue with market reform development work.
- July 2017 - the ERA approved AEMO's February submission in full.¹³
- July 2018 – AEMO submitted a fourth application for supplementary forecast capital expenditure only. This was to implement market rule changes approved in 2018, to undertake market reform activities and for IT system projects.
- December 2018 – the ERA approved just under half of AEMO's proposed net forecast capital expenditure.¹⁴ The ERA's decision was due to a material underspend of previously approved capital expenditure and lack of sufficient justification for some of the projects.

¹¹ Australian Energy Market Operator, 2016, ([online](#)) *2016-19 WA Functions Allowable Revenue Proposal*

¹² AEMO, 2016, ([online](#)) *AEMO supplementary submission allowable revenue*

¹³ ERA, 2017, ([online](#)) *Application to adjust the allowable revenue and forecast capital expenditure for AEMO for 2016 – 2019 – Final determination*

¹⁴ ERA, 2018, ([online](#)) *AEMO capital expenditure funding request 2018 – Final determination*

Table 5 History of AEMO proposals and ERA approvals in AR3 and AR4

\$'000s (nominal)	AR3 proposed	AR3 approved	Variance (%)	AR4 proposed	AR4 approved	Variance (%)	AR5 proposed
Total allowable revenue	91,800	88,182	(3.9)	114,344	99,265	(13.2)	104,241
Independent Market Operator	48,776	48,776	-	53,972	44,263	(18.0)	42,764
System management	43,024	39,403	(8.4)	54,494	49,386	(9.4)	55,584
GSI	6,919	6,919	-	5,878	5,619	(4.4)	5,893
Total forecast capital expenditure	12,006	10,734	(10.6)	51,264	33,232	(35.2)	78,477
Independent Market Operator	6,274	6,274	-	31,530	16,091	(49.0)	38,637
System management	5,271	3,999	(24.1)	18,616	16,023	(13.9)	38,566
GSI	461	461	-	1,118	1,118	-	1,274

Appendix 2 AEMO's functions under the Wholesale Electricity Market rules and the Gas Service Information rules

The functions for which AEMO can recover expenditure from market participants are outlined in the Wholesale Electricity Market (WEM) rules and the Gas Service Information (GSI) rules.

WEM operation and system management

AEMO's business as usual functions are defined in clause 2.22A.1 of the WEM rules¹⁵ and cover AEMO's:

- Market operation services, including operation of the Reserve Capacity Mechanism, the Short Term Electricity Market and Balancing Market, and settlement and information release functions.
- System planning services, including the Long Term Projected Assessment of System Adequacy (PASA) function.
- Market administration services, including the Procedure Change Process, support for the Rule Change Panel, participation in the Market Advisory Committee and other consultation, support for monitoring and reviews by the ERA, audit, registration related functions and other functions under the market rules.
- System management services and functions.

Market reform

On 29 June 2018, the Minister for Energy changed clause 1.20 of the market rules¹⁶ and conferred additional functions on AEMO. These are to prepare for and facilitate the implementation of wholesale electricity market and constrained network access reform (market reform). The additional activities AEMO may undertake include:

- Procuring, developing, testing and preparing all systems, tools and procedures necessary or convenient for AEMO to continue to provide services and perform its functions and obligations on and from the commencement of the market reforms.
- Designing, developing, and consulting about, changes to the legislative regime applying to the Wholesale Electricity Market (including the Electricity Industry Act, the Regulations and these Market Rules) to accommodate Wholesale Electricity Market and Constrained Network Access Reform.
- Project management, governance, planning, change management and stakeholder management activities to facilitate implementation of the market reform program.

GSI functions

AEMO's functions under the GSI rules are defined in rule 107¹⁷ and include:

- To establish, operate and maintain the Gas Bulletin Board.
- To register or deregister Registered Participants and Registered Facilities and to grant Exemptions.

¹⁵ Rule Change Panel, 2019, *Wholesale Electricity Market Rules*, p. 85.

¹⁶ Ibid. p28

¹⁷ Rule Change Panel, 2019, *Gas Service Information Rules*, p. 69.

- To prepare and publish the Gas Statement of Opportunities,
- To make Procedures, to the extent to which the Procedures relate to its functions under the Rules.
- To support:
 - The ERA's monitoring of persons' compliance with the Rules or Procedures.
 - The ERA's investigation of breaches or possible breaches of the Rules or the Procedures (including by reporting possible breaches to the ERA).
 - Any enforcement action taken by the ERA under the GSI Regulations or the Rules.
- To manage information gathering and disclosure functions and any other services under the GSI regulations and the rules.

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