

Mumbida Wind Farm Pty Ltd

Electricity Generation Licence (EGL24)
2021 Asset Management System Review

Final report

11 January 2022



ASSURANCE
ADVISORY
GROUP

Level 11, 251 Adelaide Terrace
PERTH WA 6000

11 January 2022

Mr Hugh Webster
General Manager Mumbida Wind Farm
c/- Infrastructure Capital
PO Box 7369, Cloisters Square PO
Perth WA 6850

Dear Mr Webster

Electricity Generation Licence (EGL24) – 2021 Asset Management System review report

We have completed the Electricity Generation Licence Asset Management System Review for Mumbida Wind Farm Pty Ltd for the period 1 November 2016 to 31 October 2021 and are pleased to submit our report to you.

I confirm that this report is an accurate presentation of the findings and conclusions from our review procedures.

If you have any questions or wish to discuss anything raised in the report, please contact Andrew Baldwin at abaldwin@assuranceadvisory.com.au or myself at slinden@assuranceadvisory.com.au.

Yours sincerely

Assurance Advisory Group



Stephen Linden

Director

www.assuranceadvisory.com.au

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1. Independent assurance practitioner's report

Conclusion

We have undertaken a limited assurance engagement on the effectiveness of Mumbida Wind Farm Pty Ltd's Asset Management System (**AMS**), relating to its Electricity Generation Licence (EGL24) (the **Licence**) for the period 1 November 2016 to 31 October 2021 (**review period**).

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that Mumbida Wind Farm has not established and maintained, in all material respects, an effective AMS for assets subject to the Licence, as measured by the effectiveness criteria in the March 2019 issue of the *Audit and Review Guidelines: Electricity and Gas Licences* (**the Guidelines**) issued by the Economic Regulation Authority (the **ERA**) and that the systems have not operated effectively for the review period.

Basis for conclusion

We conducted our engagement in accordance with Standard on Assurance Engagements ASAE 3500 *Performance Engagements* (**ASAE 3500**) issued by the Auditing and Assurance Standards Board.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Mumbida Wind Farm's responsibility for the AMS

Mumbida Wind Farm is responsible for ensuring that it has:

- Complied in all material respects with the requirements of the Licence as specified by the Guidelines
- Established and maintained an effective AMS for assets subject to the Licence, as measured by the effectiveness criteria detailed in the Guidelines.

Our independence and quality control

We have complied with the independence and other relevant ethical requirements relating to assurance engagements, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour. We applied Auditing Standard ASQC 1 *Quality Control for Firms that Perform Audits and Reviews of Financial Reports and Other Financial Information, and Other Assurance Engagements* in undertaking this assurance engagement.

Our responsibilities

Our responsibility is to express a limited assurance conclusion on Mumbida Wind Farm's AMS for assets subject to the Licence, based on the procedures we have performed and the evidence we have obtained. We conducted our limited assurance engagement in accordance with ASAE 3500, in order to express a conclusion whether, based on the procedures performed and the evidence obtained, anything has come to our attention that causes us to believe that Mumbida Wind Farm's AMS for assets subject to the Licence, have not been established and maintained, in all material respects. That standard requires that we plan and perform this engagement to obtain limited assurance about whether the AMS for assets subject to the Licence is materially ineffective.

A limited assurance engagement conducted in accordance with ASAE 3500 involves identifying areas where the AMS for assets subject to a Licence is likely to be materially ineffective, addressing the areas identified and considering the process used to prepare the AMS for assets subject to the Licence. A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks.

Procedures performed

The procedures we performed were based on our professional judgement and consisted primarily of:

- Utilising the Guidelines as a guide for development of a risk assessment, which involved discussions with key staff and review of documents to perform a preliminary controls assessment
- Development of a Review Plan for approval by the ERA, and an associated work program
- Interviews with and representations from Mumbida Wind Farm representatives and key operational and administrative staff to gain an understanding of the development and maintenance of policies and procedural type documentation. A full list of staff engaged has been provided at Appendix B
- Examination of documented policies and procedures for key functional requirements and consideration of their relevance to Mumbida Wind Farm's AMS requirements and standards
- Physical visit to operations located at the Mumbida Wind Farm facility
- Consideration of reports and references evidencing activity
- Consideration of activities performed by Mumbida Wind Farm that relate to operation of the assets.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement. Accordingly, we do not express a reasonable assurance opinion on the effectiveness of Mumbida Wind Farm's AMS for assets subject to the Licence.

Inherent Limitations

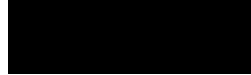
Because of the inherent limitations of an assurance engagement, together with the inherent limitation of any system of controls it is possible that fraud, error or non-compliance with the requirements of the Guidelines may occur and not be detected.

A limited assurance engagement relating to the period from 1 November 2016 to 31 October 2021 does not provide assurance on whether the effectiveness of Mumbida Wind Farm's AMS for assets subject to the Licence will continue in the future.

Restricted use

This report has been prepared for use by Mumbida Wind Farm for the purpose of satisfying its obligation under Section 14 of the Electricity Industry Act 2004. We disclaim any assumption of responsibility for any reliance on this report to any person other than Mumbida Wind Farm, or for any other purpose other than that for which it was prepared. We understand that a copy of the report will be provided to the ERA for the purpose of reporting on the effectiveness of Mumbida Wind Farm's AMS. We agree that a copy of this report will be given to the ERA in connection with this purpose, however we accept no responsibility to the ERA or to anyone who is provided with or obtains a copy of our report.

Assurance Advisory Group



Stephen Linden
Director

11 January 2022

2. Executive Summary

2.1 Introduction and Background

The Economic Regulation Authority (the **ERA**) has under the provisions of the Electricity Industry Act 2004 (the **Act**), issued to Mumbida Wind Farm Pty Ltd (**Mumbida Wind Farm**) an Electricity Generation Licence (EGL24) (the **Licence**).

The Licence relates to Mumbida Wind Farm operating a 55 MW wind farm located on farming land approximately 40km southeast of Geraldton in the mid-west of Western Australia. Mumbida Wind Farm utilises 22 x 2.5 MW General Electric wind turbines. The wind farm's electricity output is delivered into the South West Interconnected System (**SWIS**) and is purchased by the Water Corporation to offset part of the energy requirements of the Southern Seawater Desalination Plant. Mumbida Wind Farm Pty Ltd is a 100% owned operating subsidiary of Mumbida Wind Farm Holdings Pty Ltd, which was owned by Energy Infrastructure Trust which is managed by Infrastructure Capital, and Synergy until December 2016 at which time Energy Infrastructure Trust gained 100% ownership. In 2018 the Mumbida Group of companies was transferred into Australian Renewables Income Fund, which is managed by Infrastructure Capital.

Mumbida Wind Farm's assets are operated by General Electric International Pty Ltd (**GE**), in accordance with a contract to provide full operations and maintenance services. Those assets include wind turbine generators, a control room with switchboards, protection and control equipment, power supply systems, a high voltage switchyard, transformers, meteorological masts and infrastructure such as buildings, roads, drainage, water and sewerage services.

Section 14 of the Act requires Mumbida Wind Farm to provide to the ERA an asset management system review (the **review**) report conducted by an independent expert acceptable to the ERA within 24 months after the commencement date, and every 24 months thereafter, unless otherwise approved by the ERA. With the ERA's approval, Assurance Advisory Group (**AAG**) has been appointed to conduct the review for the period 1 November 2016 to 31 October 2021 (**review period**).

The review has been conducted in accordance with the ERA's March 2019 issue of the *Audit and Review Guidelines: Electricity and Gas Licences* (**Review Guidelines**), which set out 12 key processes in the asset management life cycle.

2.2 Findings

In considering Mumbida Wind Farm's internal control procedures, structure and environment, compliance arrangements and information systems specifically relevant to those effectiveness criteria subject to review, we observed that:

- Throughout the review period, Mumbida Wind Farm has maintained an appropriate suite of procedures and controls for the effective operation of the wind farm assets
- Mumbida Wind Farm and GE staff appeared to have a full working understanding of their roles, particularly displaying an understanding of the asset management processes within their area of responsibility
- There are four minor opportunities for Mumbida Wind Farm to improve elements of its asset management practices (where criteria are rated as "B" or "2"). Those opportunities support Mumbida Wind Farm's efforts to maintain a process-centric approach, with less dependence on individual people. In those instances, we raised the potential improvement opportunity with Mumbida Wind Farm staff.

This review assessed that, of the 58 elements of Mumbida Wind Farm's AMS:

- For the asset management process and policy definition ratings:
 - 37 are rated as "Adequately defined"
 - 4 are rated as "Requires some improvement"
 - 17 are not rated.
- For the asset management performance ratings:
 - 36 are rated as "Performing effectively"
 - 5 are rated as "Improvement required"
 - 17 are not rated.

Note that in comparison to the ratings reported by the 2016 AMS review, it appears that Mumbida Wind Farm's performance has deteriorated. We believe this is not the case as on-the-whole, Mumbida Wind Farm's asset management practices have continued to improve since the 2016 AMS review. We believe the additional findings and minor improvement opportunities raised by this review existed at the time of the previous review but had not been identified and raised at that time.

2.3 Mumbida Wind Farm's response to previous review recommendations

Not applicable - the previous review did not make any recommendations.

2.4 Recommendations to address current asset system deficiencies

A. Resolved during current review period

B. Unresolved at end of current review period

Not applicable - this review does not make any recommendations.

2.5 Scope and objectives

We have conducted a limited assurance engagement¹ in order to express a conclusion whether, based on the procedures performed and the evidence obtained, anything has come to our attention that causes us to believe that Mumbida Wind Farm's AMS for assets subject to the Licence, have not been established and maintained, in all material respects for the period 1 November 2016 to 31 October 2021.

Our engagement was conducted in accordance with Australian Standard on Assurance Engagements ASAE 3500 Performance Engagements, issued by the Australian Auditing and Assurance Standards Board and provides limited assurance as defined in ASAE 3500. The procedures we performed are described in more detail in section 2.6 below.

A limited assurance engagement in accordance with ASAE 3500, to report on the effectiveness of Mumbida Wind Farm's AMS for assets subject to the Licence involves performing procedures to obtain evidence about processes and controls designed and implemented within Mumbida Wind Farm's AMS for assets subject to the Licence. The procedures selected depend on our judgement, including the identification and assessment of risks of Mumbida Wind Farm's AMS for assets subject to a Licence being materially ineffective.

ASAE 3500 also requires us to comply with the relevant ethical requirements of the Australian professional accounting bodies.

¹ The Review Plan referenced the review as a reasonable assurance engagement. However, as there were no conditions warranting a reasonable level of assurance, in accordance with section 6.1.2.2 of the Review Guidelines, the review was performed as a limited assurance engagement.

In accordance with the Review Guidelines, the review considered the effectiveness of Mumbida Wind Farm's existing control procedures within the following 12 key processes in the asset management life cycle:

Key processes	Effectiveness criteria
1. Asset Planning	1.1 Asset management plan covers the processes in this table 1.2 Planning processes and objectives reflect the needs of all stakeholders and are integrated with business planning 1.3 Service levels are defined in the asset management plan 1.4 Non-asset operations (e.g. demand management) are considered 1.5 Lifecycle costs of owning and operating assets are assessed 1.6 Funding options are evaluated 1.7 Costs are justified and cost drivers identified 1.8 Likelihood and consequences of asset failure are predicted 1.9 Asset management plan is regularly reviewed and updated.
2. Asset creation and acquisition	2.1 Full project evaluations are undertaken for new assets, including comparative assessment of non-asset options 2.2 Evaluations include all life-cycle costs 2.3 Projects reflect sound engineering and business decisions 2.4 Commissioning tests are documented and completed 2.5 Ongoing legal / environmental / safety obligations of the asset owner are assigned and understood
3. Asset disposal	3.1 Under-utilised and under-performing assets are identified as part of a regular systematic review process 3.2 The reasons for under-utilisation or poor performance are critically examined and corrective action or disposal undertaken 3.3 Disposal alternatives are evaluated 3.4 There is a replacement strategy for assets
4. Environmental analysis	4.1 Opportunities and threats in the asset management system environment are assessed 4.2 Performance standards (availability of service, capacity, continuity, emergency response, etc.) are measured and achieved 4.3 Compliance with statutory and regulatory requirements 4.4 Service standard (customer service levels etc) are measured and achieved.
5. Asset operations	5.1 Operational policies and procedures are documented and linked to service levels required 5.2 Risk management is applied to prioritise operations tasks 5.3 Assets are documented in an asset register including asset type, location, material, plans of components, and an assessment of assets' physical/structural condition 5.4 Accounting data is documented for assets [new criteria] 5.5 Operational costs are measured and monitored 5.6 Staff resources are adequate and staff receive training commensurate with their responsibilities

Key processes	Effectiveness criteria
6. Asset maintenance	<p>6.1 Maintenance policies and procedures are documented and linked to service levels required</p> <p>6.2 Regular inspections are undertaken of asset performance and condition</p> <p>6.3 Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule</p> <p>6.4 Failures are analysed and operational/maintenance plans adjusted where necessary</p> <p>6.5 Risk management is applied to prioritise maintenance tasks</p> <p>6.6 Maintenance costs are measured and monitored</p>
7. Asset management information systems	<p>7.1 Adequate system documentation for users and IT operators</p> <p>7.2 Input controls include suitable verification and validation of data entered into the system</p> <p>7.3 Security access controls appear adequate, such as passwords</p> <p>7.4 Physical security access controls appear adequate</p> <p>7.5 Data backup procedures appear adequate and backups are tested</p> <p>7.6 Computations for licensee performance reporting are accurate</p> <p>7.7 Management reports appear adequate for the licensee to monitor licence obligations</p> <p>7.8 Adequate measures to protect asset management data from unauthorised access or theft by persons outside the organisation [new criteria]</p>
8. Risk management	<p>8.1 Risk management policies and procedures exist and are applied to minimise internal and external risks</p> <p>8.2 Risks are documented in a risk register and treatment plans are implemented and monitored</p> <p>8.3 Probability and consequences of asset failure are regularly assessed</p>
9. Contingency planning	<p>9.1 Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks</p>
10. Financial planning	<p>10.1 The financial plan states the financial objectives and identifies strategies and actions to achieve those</p> <p>10.2 The financial plan identifies the source of funds for capital expenditure and recurrent costs</p> <p>10.3 The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets)</p> <p>10.4 The financial plan provides firm predictions on income for the next five years and reasonable predictions beyond this period</p> <p>10.5 The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services</p> <p>10.6 Large variances in actual/budget income and expenses are identified and corrective action taken where necessary</p>

Key processes	Effectiveness criteria
11. Capital expenditure planning	11.1 There is a capital expenditure plan covering works to be undertaken, actions proposed, responsibilities and dates 11.2 The capital expenditure plan provides reasons for capital expenditure and timing of expenditure 11.3 The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan 11.4 There is an adequate process to ensure the capital expenditure plan is regularly updated and implemented
12. Review of asset management system	12.1 A review process is in place to ensure the asset management plan and the asset management system described in it remain current 12.2 Independent reviews (e.g. internal audit) are performed of the asset management system

Each key process and effectiveness criterion is applicable to Mumbida Wind Farm's Licence and as such was individually considered as part of the review. The Review Plan, set out at Appendix A, details the risk assessments made for and review priority assigned to each key process and effectiveness criterion.

2.6 Approach

Our approach for this review involved the following activities, which were undertaken during November and December 2021:

- Utilising the Guidelines, development of a risk assessment, which involved discussions with key staff and review of documents to undertake a preliminary assessment of relevant controls
- Development of a Review Plan (see Appendix A) for approval by the ERA
- Correspondence and interviews with Mumbida Wind Farm staff to gain an understanding of process controls in place (see Appendix B for staff involved)
- Physical visit to operations located at the Mumbida Wind Farm facility, with a focus on understanding the generation assets, their function, normal mode of operation, age and an assessment of the facilities against the AMS review criteria
- Examination of documented policies and procedures for key functional requirements and consideration of their relevance to Mumbida Wind Farm's AMS requirements and standards (see Appendix B for reference listing)
- Consideration of the resourcing applied to maintaining those controls and processes
- Reporting of findings to Mumbida Wind Farm for review and response.

3. Summary of Ratings

In accordance with the Guidelines, the assessment of both the process and policy definition rating (refer to Table 1) and the performance rating (refer to Table 2) for each of the key AMS processes was performed using the below ratings.

Table 1: Process and policy rating scale

Rating	Description	Criteria
A	Adequately defined	<ul style="list-style-type: none"> Processes and policies are documented Processes and policies adequately document the required performance of the assets Processes and policies are subject to regular reviews, and updated where necessary The asset management information system(s) are adequate in relation to the assets being managed
B	Requires some improvement	<ul style="list-style-type: none"> Processes and policies require improvement Processes and policies do not adequately document the required performance of the assets Reviews of processes and policies are not conducted regularly enough The asset management information system(s) requires minor improvements (taking into consideration the assets being managed)
C	Requires substantial improvement	<ul style="list-style-type: none"> Processes and policies are incomplete or require substantial improvement Processes and policies do not document the required performance of the assets Processes and policies are considerably out of date The asset management information system(s) requires substantial improvements (taking into consideration the assets being managed)
D	Inadequate	<ul style="list-style-type: none"> Processes and policies are not documented The asset management information system(s) is not fit for purpose (taking into consideration the assets being managed).

Table 2: Performance rating scale

Rating	Description	Criteria
1	Performing effectively	<ul style="list-style-type: none"> The performance of the process meets or exceeds the required levels of performance Process effectiveness is regularly assessed and corrective action taken where necessary
2	Improvement required	<ul style="list-style-type: none"> The performance of the process requires some improvement to meet the required level Process effectiveness reviews are not performed regularly enough Recommended process improvements are not implemented
3	Corrective action required	<ul style="list-style-type: none"> The performance of the process requires substantial improvement to meet the required level Process effectiveness reviews are performed irregularly, or not at all Recommended process improvements are not implemented
4	Serious action required	<ul style="list-style-type: none"> Process is not performed, or the performance is so poor the process is considered to be ineffective.

This report provides:

- A breakdown of each function of the AMS into sub-components as described in the Guidelines. This approach is taken to enable a more thorough review of key processes where individual components within a larger process can be of greater risk to the business therefore requiring different review treatment
- A summary of the ratings applied by the review (Table 3) for each of:
 - Asset management process and policy rating
 - Asset management performance rating.
- Detailed findings, including relevant observations and recommendations (Section 4). Descriptions of the effectiveness criteria can be found in section 4 and the Review Plan at Appendix A.

Table 3: AMS effectiveness summary

Ref	Asset management process and effectiveness criteria	Review priority	Ratings	
			Process and policy	Performance
1. Asset Planning			B	2
1.1	Asset management plan covers the processes in this table	Priority 4	B	2
1.2	Planning processes and objectives reflect the needs of all stakeholders and is integrated with business planning	Priority 4	A	1
1.3	Service levels are defined in the asset management plan	Priority 4	A	1
1.4	Non-asset operations (e.g. demand management) are considered	Priority 5	Not rated	Not rated
1.5	Lifecycle costs of owning and operating assets are assessed	Priority 5	Not rated	Not rated
1.6	Funding options are evaluated	Priority 5	Not rated	Not rated
1.7	Costs are justified and cost drivers identified	Priority 5	A	1
1.8	Likelihood and consequences of asset failure are predicted	Priority 4	A	1
1.9	Asset management plan is regularly reviewed and updated.	Priority 5	B	2
2. Asset creation and acquisition			Not rated	Not rated
2.1	Not rated	Not rated		
2.2	Evaluations include all life-cycle costs	Priority 4		
2.3	Projects reflect sound engineering and business decisions	Priority 4	Not rated	Not rated
2.4	Commissioning tests are documented and completed	Priority 4		
2.5	Ongoing legal / environmental / safety obligations of the asset owner are assigned and understood	Priority 2		
3. Asset disposal			Not rated	Not rated
3.1	Under-utilised and under-performing assets are identified as part of a regular systematic review process	Priority 4		
3.2	The reasons for under-utilisation or poor performance are critically examined and corrective action or disposal undertaken	Priority 5	Not rated	Not rated
3.3	Disposal alternatives are evaluated	Priority 5		
3.4	There is a replacement strategy for assets	Priority 4		
4. Environmental analysis			A	1
4.1	Opportunities and threats in the asset management system environment are assessed	Priority 4	A	1

Ref	Asset management process and effectiveness criteria	Review priority	Ratings	
			Process and policy	Performance
4.2	Performance standards (availability of service, capacity, continuity, emergency response, etc.) are measured and achieved	Priority 4	A	1
4.3	Compliance with statutory and regulatory requirements	Priority 4	A	1
4.4	Service standard (customer service levels etc) are measured and achieved.	Priority 4	A	1
5. Asset operations			A	1
5.1	Operational policies and procedures are documented and linked to service levels required	Priority 4	A	1
5.2	Risk management is applied to prioritise operations tasks	Priority 4	A	1
5.3	Assets are documented in an asset register including asset type, location, material, plans of components, and an assessment of assets' physical/structural condition	Priority 4	A	1
5.4	Accounting data is documented for assets [new criteria]	Priority 4	A	1
5.5	Operational costs are measured and monitored	Priority 4	A	1
5.6	Staff resources are adequate and staff receive training commensurate with their responsibilities	Priority 4	A	1
6. Asset maintenance			B	2
6.1	Maintenance policies and procedures are documented and linked to service levels required	Priority 4	A	1
6.2	Regular inspections are undertaken of asset performance and condition	Priority 2	A	1
6.3	Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule	Priority 2	B	2
6.4	Failures are analysed and operational/maintenance plans adjusted where necessary	Priority 4	A	1
6.5	Risk management is applied to prioritise maintenance tasks	Priority 4	A	1
6.6	Maintenance costs are measured and monitored	Priority 4	A	1
7. Asset management information systems			A	1
7.1	Adequate system documentation for users and IT operators	Priority 5	A	1
7.2	Input controls include suitable verification and validation of data entered into the system	Priority 4	A	1
7.3	Security access controls appear adequate, such as passwords	Priority 5	A	1
7.4	Physical security access controls appear adequate	Priority 5	A	1
7.5	Data backup procedures appear adequate and backups are tested	Priority 4	A	1
7.6	Computations for licensee performance reporting are accurate	Priority 5	Not rated	Not rated
7.7	Management reports appear adequate for the licensee to monitor licence obligations	Priority 5	A	1

Ref	Asset management process and effectiveness criteria	Review priority	Ratings	
			Process and policy	Performance
7.8	Adequate measures to protect asset management data from unauthorised access or theft by persons outside the organisation	Priority 4	A	1
8. Risk management			A	1
8.1	Risk management policies and procedures exist and are applied to minimise internal and external risks	Priority 2	A	1
8.2	Risks are documented in a risk register and treatment plans are implemented and monitored	Priority 4	A	1
8.3	Probability and consequences of asset failure are regularly assessed	Priority 2	A	1
9. Contingency planning			A	2
9.1	Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks	Priority 2	A	2
10. Financial planning			A	1
10.1	The financial plan states the financial objectives and identifies strategies and actions to achieve those	Priority 4	A	1
10.2	The financial plan identifies the source of funds for capital expenditure and recurrent costs	Priority 5	A	1
10.3	The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets)	Priority 5	A	1
10.4	The financial plan provides firm predictions on income for the next five years and reasonable predictions beyond this period	Priority 5	A	1
10.5	The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services	Priority 4	A	1
10.6	Large variances in actual/budget income and expenses are identified and corrective action taken where necessary	Priority 4	A	1
11. Capital expenditure planning			Not rated	Not rated
11.1	There is a capital expenditure plan covering works to be undertaken, actions proposed, responsibilities and dates	Priority 4	Not rated	Not rated
11.2	The capital expenditure plan provides reasons for capital expenditure and timing of expenditure	Priority 5		
11.3	The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan	Priority 4		
11.4	There is an adequate process to ensure the capital expenditure plan is regularly updated and implemented	Priority 5		
12. Review of asset management system			B	2
12.1	A review process is in place to ensure the asset management plan and the asset management system described in it remain current	Priority 5	A	1
12.2	Independent reviews (e.g. internal audit) are performed of the asset management system	Priority 5	B	2

4. Detailed findings and recommendations

The following tables contain:

- *Findings*: the reviewer's understanding of the process and any issues that have been identified during the review
- *Recommendations (where applicable)*: recommendations for improvement or enhancement of the process or control.

4.1 Asset Planning

Key process: Asset planning strategies are focused on meeting customer needs in the most effective and efficient manner (delivering the right service at the right price)

Expected outcome: Integration of asset strategies into operational or business plans will establish a framework for existing and new assets to be effectively utilised and their service potential optimised

Overall Process and Policy/Performance rating: [Requires some improvement \(B\) / Improvement required \(2\)](#)

Effectiveness criteria	Findings
<p>1.1 Asset management plan covers the processes in this table</p>	<p>Throughout the review period, the following references accommodated Mumbida Wind Farm’s key assets:</p> <ul style="list-style-type: none"> • Mumbida Wind Farm Service Execution Plan – developed by GE (created in 2013, last revised in August 2021) • Mumbida Wind Farm Simplified Work Plan – EHS Requirements (created in 2018, last revised in January 2021) • Mumbida Wind Farm Operations and Maintenance Manual (created in 2013) <p>Collectively, these documents make up the Mumbida Wind Farm Facility’s asset management plans. In particular, they include the following elements:</p> <ul style="list-style-type: none"> • Asset overview, including description of operations, assets and personnel • Scope of the activities to be performed by GE in accordance with the formal O&M Agreement between Mumbida Wind Farm and GE • Central reference to operating instructions and maintenance specifications • Availability performance requirements • Regulatory requirements • Weekly and monthly reporting requirements • Implementation of Environmental, Health and Safety (EHS) activities necessary to maintain regulatory conformance, achieve EHS performance and to meet GE Renewable Energy EHS management requirements.

Effectiveness criteria	Findings	
1.1 (cont.)	<p>The Mumbida Wind Farm O&M Agreement (Schedule 1 Mobilisation Services and Schedule 5 Asset Management, Documentation and Reporting Requirements) references the need for GE to prepare an asset management plan that contains comprehensive references to plans, strategies, procedures and management information systems. Such a plan has not been developed and the current versions of the Service Execution Plan, Simplified Work Plan and O&M Manual do not specifically address the following elements:</p> <ul style="list-style-type: none"> • Lifecycle overview, including milestones and end of life • Clear reference to business objectives and the needs of stakeholders • Contingency arrangements • Arrangements for review and update of asset management planning references. <p>We acknowledge that these elements are accommodated throughout Mumbida Wind Farm documentation, however they are somewhat disparate and do not provide a complete and easy to understand view of Mumbida Wind Farm's asset management plans. A single point of reference (e.g. a designated Asset Management Plan, or a higher level description of the key components of the asset management system) can provide that more complete and east to understand view.</p> <p><i>We raised this matter with Mumbida Wind Farm staff as a potential improvement opportunity.</i></p>	
	Process and Policy Rating: Requires some improvement (B)	Performance Rating: Improvement required (2)
1.2 Planning processes and objectives reflect the needs of all stakeholders and is integrated with business planning	<p>Through discussion with the General Manager Mumbida Wind Farm and consideration of relevant supporting documentation and Mumbida Wind Farm's business planning processes, we observed that:</p> <ul style="list-style-type: none"> • Mumbida Wind Farm's business model and resources specifically accommodate the operation and maintenance of the Facility in accordance with Good Operating and Maintenance Practice and OEM Instructions. 	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)
1.3 Service levels are defined in the asset management plan	<p>Through discussion with the General Manager Mumbida Wind Farm and examination of Mumbida Wind Farm's O&M Agreement with GE and the Mumbida Wind Farm Service Execution Plan, we observed that the facility's service levels are appropriately reflected in availability and performance requirements.</p>	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)
1.4 Non-asset operations (e.g. demand management) are considered	<p>As the primary purpose of the Mumbida Wind Farm Facility is to supply electricity to the South West Integrated Network, there is no requirement or opportunity for Mumbida Wind Farm to consider non-asset options.</p>	
	Process and Policy Rating: Not rated	Performance Rating: Not rated

Effectiveness criteria	Findings	
1.5 Lifecycle costs of owning and operating assets are assessed	<p>Through discussion with the General Manager Mumbida Wind Farm and consideration of business planning and budgeting processes, we observed that:</p> <ul style="list-style-type: none"> • Operating and maintenance costs are appropriately identified and built into Mumbida Wind Farm’s annual budgeting process • There is currently no requirement for capital expenditure planning • Beyond the owners execution of its asset investment strategy, there is no specific need for asset lifecycle costs to be assessed by Mumbida Wind Farm. 	
	Process and Policy Rating: Not rated	Performance Rating: Not rated
1.6 Funding options are evaluated	<p>Mumbida Wind Farm’s current operating model and budget funds all site operations and maintenance activities. There is currently no capital expenditure plan and no requirement for other funding options to be considered.</p>	
	Process and Policy Rating: Not rated	Performance Rating: Not rated
1.7 Costs are justified and cost drivers identified	<p>Through discussion with the General Manager Mumbida Wind Farm and consideration of business planning and budgeting processes, we observed that operating and maintenance costs are appropriately identified and built into Mumbida Wind Farm’s annual budgeting process.</p>	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)
1.8 Likelihood and consequences of asset failure are predicted	<p>Through discussion with the General Manager Mumbida Wind Farm and Mumbida Site Manager, consideration of Mumbida Wind Farm’s risk management practices and examination of supporting documentation, we observed that Mumbida Wind Farm has applied the following mechanisms for predicting the consequences and likelihood of the facility’s failure:</p> <ul style="list-style-type: none"> • The Facility’s risk register considers major items of equipment and provides details of the O&M strategy to be applied • Regular preventative maintenance performed by GE provides for regular assessment of asset performance • Turbine assets are monitored on a continuous basis (including condition monitoring techniques) by GE’s Australian and Global operations • A high level of priority is accorded to minimising instances of asset failure and the duration of any such failure to ensure availability targets are achieved • During scheduled outages, main components of the Facility’s plant are inspected for defects. 	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)

Effectiveness criteria	Findings	
1.9 Asset management plan is regularly reviewed and updated.	<p>The Service Execution Plan and Simplified Work Plan, which act as components of Mumbida Wind Farm's asset management plan are subject to review and are updated on a regular basis. The Operations and Maintenance Manual was last updated in 2014</p> <p>As detailed at 1.1 above, a single document has not been prepared to provide a consolidated view of Mumbida Wind Farm's asset management plans.</p> <p><i>We raised this matter with Mumbida Wind Farm staff as a potential improvement opportunity.</i></p>	
	Process and Policy Rating: Requires some improvement (B)	Performance Rating: Improvement required (2)

4.2 Asset creation and acquisition

Key process: Asset creation/acquisition is the provision or improvement of assets

Expected outcome: The asset acquisition framework is economic, efficient and cost-effective; it reduces demand for new assets, lowers service costs and improves service delivery

Overall Process and Policy/Performance rating: Not rated

Findings: For the period subject to this review, Mumbida Wind Farm had not undertaken or contemplated any material asset creation and acquisition activities. Accordingly, consideration has not yet been given to an asset creation and acquisition process relevant to the Facility's ongoing operations.

4.3 Asset disposal

Key process: Asset disposal is the consideration of alternatives for the disposal of surplus, obsolete, under-performing or unserviceable assets

Expected outcome: The asset management framework minimises holdings of surplus and underperforming assets and lowers service costs. The cost-benefits of disposal options are evaluated

Overall Process and Policy/Performance rating: Not rated

Findings: The Mumbida Wind Farm Facility remains in a phase of its life cycle where there are no plans for disposing of any of the facility's assets and there is a low likelihood of any asset disposal in the short-term.

4.4 Environmental analysis

Key process: Environmental analysis examines the asset management system environment and assesses all external factors affecting the asset management system

Expected outcome: The asset management system regularly assesses external opportunities and threats and identifies corrective action to maintain performance requirements

Overall Process and Policy/Performance rating: [Adequately defined \(A\)](#) / [Performing effectively \(1\)](#)

Effectiveness criteria	Findings	
4.1 Opportunities and threats in the asset management system environment are assessed	<p>Through discussion with the General Manager Mumbida Wind Farm and Mumbida Site Manager and examination of relevant supporting documentation, we observed that:</p> <ul style="list-style-type: none"> • In its Facility risk register, Mumbida Wind Farm has recognised and captured a range of threats to its asset management system, including fire events, weather events, other external events and emergencies, failures and incidents (internal and external [including network outages]) and resource constraints • Environmental aspects of that risk register have been informed by assessments, studies and audits that assist Mumbida Wind Farm to understand and manage environmental and other external threats to the effective operation of the facility • Mumbida Wind Farm does not have any Environmental Licence requirements and there were no specific environmental conditions attached to approvals for operation of the Mumbida Wind Farm facility • Mumbida Wind Farm participates in fortnightly HSE Services Meetings for all GE APAC wind farm facilities, where safety and environmental issues (referred to as “concerns”) are raised and tracked until closure. 	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)
4.2 Performance standards (availability of service, capacity, continuity, emergency response, etc.) are measured and achieved	<p>Through discussion with the General Manager Mumbida Wind Farm and Mumbida Site Manager, and consideration of relevant supporting documentation, we observed that:</p> <ul style="list-style-type: none"> • Mumbida Wind Farm’s performance standards relate to availability, resource utilisation, safety and environmental. Those performance standards are measured and reported on a monthly, quarterly and annual basis • Mumbida Wind Farm staff manage and monitor environmental performance in accordance with established bushfire, environmental and emergency response management plans • Mumbida Wind Farm’s business model and resources specifically accommodate the operation and maintenance of the Facility in accordance with Good Operating and Maintenance Practice and OEM Instructions. 	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)

Effectiveness criteria	Findings	
4.3 Compliance with statutory and regulatory requirements	<p>Through discussion with the General Manager Mumbida Wind Farm and Mumbida Site Manager, and review of relevant supporting information, we determined that:</p> <ul style="list-style-type: none"> • Mumbida Wind Farm has designed its processes and practices to operate and monitor its performance in accordance with the following statutory legislation and licences: <ul style="list-style-type: none"> ▪ Occupational Health and Safety Act and associated regulations ▪ Environmental Protection Act ▪ Aboriginal Heritage Act ▪ Waste Avoidance and Resource Recovery Act and subordinate legislation • Mumbida Wind Farm monitors and reports on its compliance with regulatory requirements on a weekly basis • Mumbida Wind Farm participates in scheduled audits performed by GE’s designated EHS auditors. The most recent audit conducted in September 2021 made several positive observations and identified two minor improvement opportunities • To date, no significant incidents or breaches have been recognised and reported. 	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)
4.4 Service standard (customer service levels etc) are measured and achieved	<p>Through discussion with the General Manager Mumbida Wind Farm and consideration of Mumbida Wind Farm’s business management processes, we observed that</p> <ul style="list-style-type: none"> • Control and operation of the Mumbida Wind Farm Facility is dictated by Western Power and AEMO requirements for the generation and supply of electricity into the network and market, in accordance with Mumbida Wind Farm’s contractual arrangements • Mumbida Wind Farm monitors and reports on its electricity production in accordance with its market obligations and any operational requirements of Western Power. 	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)

4.5 Asset operations

Key process: Asset operations is the day-to-day running of assets (where the asset is used for its intended purpose)

Expected outcome: The asset operation plans adequately document the processes and knowledge of staff in the operation of assets so service levels can be consistently achieved

Overall Process and Policy/Performance rating: Adequately defined (A) / Performing effectively (1)

Effectiveness criteria	Findings	
5.1 Operational policies and procedures are documented and linked to service levels required	<p>Through discussion with the General Manager Mumbida Wind Farm and Mumbida Site Manager, and consideration of relevant supporting documentation, we observed that:</p> <ul style="list-style-type: none"> • Control and operation of the Mumbida Wind Farm Facility is dictated by SWIN system requirements, in accordance with Mumbida Wind Farm’s contractual obligations • Mumbida Wind Farm has developed a comprehensive list of documented procedures, based on GE OEM documentation, to cover tasks required to operate and maintain the Facility’s wind turbine generators (WTG) and Balance of Plant (BOP) in a safe manner • Mumbida Wind Farm’s O&M Manual provides the primary reference to key operational policies and procedures, with links to performance standards (i.e. service levels). Those references include: <ul style="list-style-type: none"> ▪ Relevant operating and maintenance principles and procedures, covering elements such as safety, plant control, performance monitoring, management of alerts and faults, BOP start-up, WTG braking and restart, met mast lifting, management of work orders and maintenance strategies ▪ Operating instructions for all WTG and BOP operations ▪ Other related manuals, including WTG Operating Manual, WTG Safety Manual, WTG Maintenance Manual, Met Mast Operating Manual, Wind SCADA Operating & Maintenance Manual, BOP Supplier Manual and Motherwell Substation SCADA O&M Manual ▪ Schedules, including WTG and BOP Maintenance Schedule and Spare Parts Schedule. 	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)

Effectiveness criteria	Findings	
5.2 Risk management is applied to prioritise operations tasks	<p>Through discussion with the General Manager Mumbida Wind Farm and Mumbida Site Manager, and consideration of relevant supporting documentation, we observed that Mumbida Wind Farm’s operational processes include:</p> <ul style="list-style-type: none"> • A designated Mumbida Wind Farm Facility risk register based on Infrastructure Capital’s business-wide risk management standards • Application of a risk management approach to corrective maintenance activities, whereby the maintenance tasks addressing higher risk issues are performed first in order, followed by lower priority tasks • A designated GE team to manage all operational activity at the Mumbida Wind Farm Facility, including response to alerts, faults and incidents • Daily site-meetings to review performance and plan for upcoming tasks. 	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)
5.3 Assets are documented in an asset register including asset type, location, material, plans of components, and an assessment of assets’ physical/structural condition	<p>Through discussion with the Mumbida Site Manager and review of Mumbida Wind Farm’s Oracle RACES and supporting GE Predix, PulsePOINT and Digital Plan of the Day (DPOD) systems, we observed that:</p> <ul style="list-style-type: none"> • The Oracle RACES system acts as the Asset Register for each of Mumbida Wind Farm’s WTG and BOP assets • Details of each WTG’s condition are also documented in supporting GE systems • An appropriate level of detail is documented for each asset, including links/references to maintenance activity relevant to each asset. 	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)
5.4 Accounting data is documented for assets	<p>Through discussion with the General Manager Mumbida Wind Farm and consideration of Mumbida Wind Farm’s fixed asset register, we observed that the asset register and corporate records capture relevant accounting data, including:</p> <ul style="list-style-type: none"> • Purchase date • Acquisition cost • Depreciation rates and costs • Written down values. 	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)

Effectiveness criteria	Findings	
5.5 Operational costs are measured and monitored	Through discussion with the General Manager Mumbida Wind Farm and consideration of Mumbida Wind Farm's information systems and relevant supporting documentation such as weekly and monthly reports, we observed that Mumbida Wind Farm tracks and reports operational costs on a monthly basis. Costs measured and monitored against budget include O&M fee, BOP Maintenance expenses, land (lease) expenses, network and ancillary expenses, ICG Services costs, overhead and other costs.	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)
5.6 Staff resources are adequate and staff receive training commensurate with their responsibilities	Through discussion with the General Manager Mumbida Wind Farm and Mumbida Site Manager and consideration of relevant supporting documentation, we observed that: <ul style="list-style-type: none"> • Five designated GE staff are allocated to the operation of the Mumbida Wind Farm facility, being the Site Manager, Site Lead - Electrical, Service Technician – Mechanical and Service Technician – Electrical (x2) • GE staff also provide designated Off-site Administration, Continuous Remote Monitoring of the major assets and EHS support • GE provides corporate support from its Australian operations, plus enables sharing of information from its broader APAC Regional wind farm operations • An appropriate skills and training matrix is maintained for Mumbida Wind Farm personnel, with regular reminder notices sent for any upcoming staff training courses, in accordance with GE's O&M Agreement. 	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)

4.6 Asset maintenance

Key process: Asset maintenance is the upkeep of assets

Expected outcome: The asset maintenance plans cover the scheduling and resourcing of the maintenance tasks so work can be done on time and on cost

Overall Process and Policy/Performance rating: [Requires some improvement \(B\)](#) / [Improvement required \(2\)](#)

Effectiveness criteria	Findings	
6.1 Maintenance policies and procedures are documented and linked to service levels required	<p>Through discussion with the General Manager Mumbida Wind Farm and Mumbida Site Manager, and consideration of relevant supporting documentation, we observed that:</p> <ul style="list-style-type: none"> • Mumbida Wind Farm has a comprehensive suite of documented procedures and work instructions in place to cover tasks required to maintain the Facility's WTGs and BOP assets in a safe manner • Mumbida Wind Farm's O&M Manual provides the primary reference to key policies and procedures, with links to performance standards (i.e. service levels). Those references include: <ul style="list-style-type: none"> ▪ Relevant operating and maintenance principles and procedures, covering elements such as safety, performance monitoring, management of alerts and faults, management of work orders and maintenance strategies ▪ Other related manuals, including WTG Safety Manual, WTG Maintenance Manual, Wind SCADA Operating & Maintenance Manual and Motherwell Substation SCADA O&M Manual ▪ Schedules, including WTG and BOP Maintenance Schedule and Spare Parts Schedule. • Procedures for the scope and frequency of routine maintenance of equipment have been developed based on OEM documentation • Checklists and sign-off sheets are completed by GE staff upon completion of any work-order that aligns with the work instruction for that task • Weekly, monthly and quarterly checklists are maintained to document completion of work-orders. 	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)

Effectiveness criteria	Findings	
6.2 Regular inspections are undertaken of asset performance and condition	<p>Through discussion with the General Manager Mumbida Wind Farm and Mumbida Site Manager; consideration of relevant supporting documentation and sample testing of evidence of inspections and maintenance activity, we determined that:</p> <ul style="list-style-type: none"> • Mumbida Wind Farm performs a combination of scheduled six-monthly inspections and other site inspections (on an as needed basis) with maintenance work orders identified either through GE’s continuous monitoring (performed remotely) to provide full coverage of asset/equipment operations, performance and condition, or through the local SCADA Control System monitoring of alarms and faults • Site inspections generate corrective maintenance requirements, which are captured and monitored within the supporting GE systems: <ul style="list-style-type: none"> ▪ When attending a WTG for planned or unplanned work, technicians may identify items for repair or replacement. Details can be captured on a Smartsheet Form (via an app on the technician’s phone) and photos attached if necessary ▪ All defects observed are captured in a Defects Mastersheet, plus registered in the Predix DPOD system ▪ Service requests are then raised through DPOD and tracked until completion ▪ Upon completion of service requests, a final debriefing is captured in Oracle RACES, enabling a final report to be generated • Appropriate prioritisation regimes are built into GE systems. <p>We examined several examples of site inspections, defects identified and service requests completed.</p>	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)

Effectiveness criteria	Findings	
<p>6.3 Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule</p>	<p>Through discussion with the General Manager Mumbida Wind Farm and Mumbida Site Manager and consideration of relevant supporting documentation, we observed that:</p> <ul style="list-style-type: none"> • GE's Oracle RACES and DPOD systems are used to record all work schedules and service requests for the facility. Schedules and service requests are tracked on a daily basis and used to guide maintenance tasks • Daily meetings are held on site for all GE staff on duty, to discuss production and execution of maintenance work, and to determine priorities • Completion of maintenance service requests are managed by the Mumbida Site Manager • Overdue service requests are flagged and a listing of outstanding service requests can be extracted from the Oracle RACES and DPOD systems. <p>In our testing of Mumbida Wind Farm's management of outstanding service requests, we observed that tasks identified in fortnightly EHS Services Meetings are listed as either closed or open but there is no reference made of these items in the DPOD register. Also, the DPOD register showed numerous work orders as pending and/or overdue for unplanned maintenance tasks, however routine and planned maintenance tasks appear to have been completed on schedule. It was unclear if these pending and overdue tasks were in fact completed but not updated to reflect their status in the DPOD register. Mumbida Wind Farm has an opportunity to further improve its monitoring of open and pending maintenance tasks through a single source of truth being maintained in DPOD. These tasks could be categorised to be either EHS or non-EHS items. An extract of EHS items can be then used for tracking progress at fortnightly EHS meetings.</p> <p><i>We raised this matter with Mumbida Wind Farm staff as a potential improvement opportunity.</i></p>	
	<p>Process and Policy Rating: Requires some improvement (B)</p>	<p>Performance Rating: Improvement required (2)</p>
<p>6.4 Failures are analysed and operational/maintenance plans adjusted where necessary</p>	<p>Through discussion with General Manager Mumbida Wind Farm and Mumbida Site Manager, and consideration of relevant supporting documentation, we observed that:</p> <ul style="list-style-type: none"> • Defects identified through GE's continuous monitoring are logged for investigation, root cause analysis and action by GE staff on site in accordance with their criticality to achieve asset protection, performance guarantees and performance availability • Unplanned faults that result in loss of production require formal investigation to determine the cause. Depending on the nature of the root cause, a more detailed report and investigation may be undertaken including detailed technical reports • It is one of Mumbida Wind Farm's primary interests to ensure the Facility is operating efficiently (for potentially increased electricity production) and at target availability levels and to ensure any failures are investigated, with actions taken appropriately to prevent reoccurrence. 	
	<p>Process and Policy Rating: Adequately defined (A)</p>	<p>Performance Rating: Performing effectively (1)</p>

Effectiveness criteria	Findings	
6.5 Risk management is applied to prioritise maintenance tasks	<p>Through discussion with the General Manager Mumbida Wind Farm and Mumbida Site Manager, and consideration of relevant supporting documentation, we observed that Mumbida Wind Farm's operational processes include:</p> <ul style="list-style-type: none"> • A designated Mumbida Wind Farm Facility risk register based on Infrastructure Capital's business-wide risk management standards • Application of a risk management approach to corrective maintenance activities, whereby the maintenance tasks addressing higher risk issues are performed first in order, followed by lower priority tasks • A designated GE team to manage all operational and maintenance activity at the Mumbida Wind Farm Facility, including response to alerts, faults and incidents • Daily site-meetings to review performance and plan for upcoming tasks. 	
	Process and Policy Rating: Requires some improvement (B)	Performance Rating: Improvement required (2)
6.6 Maintenance costs are measured and monitored	<p>Through discussion with the General Manager Mumbida Wind Farm and consideration of Mumbida Wind Farm's information systems and relevant supporting documentation such as weekly and monthly reports, we observed that Mumbida Wind Farm tracks and reports maintenance costs on a monthly basis. Costs measured and monitored against budget include BOP Maintenance expenses and the O&M fee payable to GE for undertaking scheduled and unplanned maintenance.</p>	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)

4.7 Asset management information systems

Key process: An asset management information system is a combination of processes, data and software supporting the asset management functions

Expected outcome: The asset management information system provides authorised, complete and accurate information for the day-to-day running of the asset management system. The focus of the review is the accuracy of performance information used by the licensee to monitor and report on service standards

Overall Process and Policy/Performance rating: [Adequately defined \(A\)](#) / [Performing effectively \(1\)](#)

Effectiveness criteria	Findings	
7.1 Adequate system documentation for users and IT operators	<p>Through discussion with Mumbida Wind Farm staff and consideration of relevant system documentation, we observed that Mumbida Wind Farm maintains an appropriate suite of system documentation for its key control systems, network and infrastructure. That documentation includes:</p> <ul style="list-style-type: none"> • Motherwell Substation SCADA and WindSCADA Operations and Maintenance Manuals • Technical documentation for GE's application of the Oracle RACES, Predix, DPOD and other supporting systems, which is maintained and updated in accordance with GE IT standards. 	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)
7.2 Input controls include suitable verification and validation of data entered into the system	<p>Through discussion with Mumbida Wind Farm staff, consideration of relevant system documentation and walkthrough of a sample of functions managed by the Oracle RACES and GE SCADA systems, we observed that Mumbida Wind Farm's core systems maintained appropriate data verification and validation controls and techniques.</p>	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)
7.3 Security access controls appear adequate, such as passwords	<p>Through discussions with Mumbida Wind Farm staff and consideration of relevant supporting documentation, we observed that Mumbida Wind Farm has established and maintained procedures and controls which enable all key system access and permissions (including remote access) to be managed in accordance with each of GE and Infrastructure Capital IT standards, policies and procedures.</p>	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)
7.4 Physical security access controls appear adequate	<p>Through discussions with Mumbida Wind Farm staff and consideration of relevant supporting documentation, we observed that Mumbida Wind Farm has established and maintained appropriate processes and procedures relating to the access of facilities and the physical protection of information assets and systems.</p> <p>Specifically in the context of access to computer server rooms and other control systems on site, we observed that:</p> <ul style="list-style-type: none"> • Access to the site operations building, main control room and key plant control facilities is via locked door, with all keys managed by designated GE duty personnel • All visitors and contractors are required to report to and be accompanied by designated GE duty personnel. 	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)

Effectiveness criteria	Findings	
7.5 Data backup procedures appear adequate and backups are tested	<p>Through discussions with Mumbida Wind Farm staff and consideration of relevant supporting documentation, we observed that:</p> <ul style="list-style-type: none"> • Procedures for managing data backup and data restore of Mumbida Wind Farm servers have been established and maintained in accordance with GE IT standards • GE's procedures provide for regular backups of all key data in accordance with accepted industry practice, with regular testing of back-ups recommended • GE IT staff provide full support for Mumbida Wind Farm staff, including management of backups for data maintained on GE's central servers or cloud-based facilities. 	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)
7.6 Computations for licensee performance reporting are accurate	<p>Mumbida Wind Farm's asset management information systems do not directly provide data used in any computation related to Mumbida Wind Farm's licensee performance reporting.</p>	
	Process and Policy Rating: Not rated	Performance Rating: Not rated
7.7 Management reports appear adequate for the licensee to monitor licence obligations	<p>Through discussions with Mumbida Wind Farm staff and consideration of relevant supporting documentation and management reporting procedures, we determined that:</p> <ul style="list-style-type: none"> • Mumbida Wind Farm's Oracle RACES and GE SCADA (including GE WindSCADA and GE WindCONTROL systems) are capable of generating a substantial variety of reports • Throughout the review period, management reports relating to the operation and performance of the facility were produced on a scheduled basis and can also be produced on request. 	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)
7.8 Adequate measures to protect asset management data from unauthorised access or theft by persons outside the organisation	<p>Through discussions with Mumbida Wind Farm staff and consideration of relevant supporting documentation, we observed that with the full support of GE staff and resources, Mumbida Wind Farm has established and maintained appropriate processes and procedures relating to the protection of information assets and systems, including:</p> <ul style="list-style-type: none"> • Comprehensive user access controls, including user permissions and remote access • Contemporary cyber security processes and procedures. In particular, GE has developed a professional Wind Farm Secure Deployment Guide to assist its customers to combat evolving threats on digital wind farms. 	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)

4.8 Risk management

Key process: Risk management involves the identification of risks and their management within an acceptable level of risk

Expected outcome: The risk management framework effectively manages the risk that the licensee does not maintain effective service standards

Overall Process and Policy/Performance rating: Adequately defined (A) / Performing effectively (1)

Effectiveness criteria	Findings	
<p>8.1 Risk management policies and procedures exist and are applied to minimise internal and external risks</p> <p>8.2 Risks are documented in a risk register and treatment plans are implemented and monitored</p>	<p><i>8.1 and 8.2</i></p> <p>Through discussion with General Manager Mumbida Wind Farm and Mumbida Site Manager; consideration of Mumbida Wind Farm’s risk management practices and examination of supporting documentation, we observed that:</p> <ul style="list-style-type: none"> • Mumbida Wind Farm maintains a combination of the Infrastructure Capital business-wide risk management approach and GE operational risk management processes • From an operational perspective, Mumbida Wind Farm incorporates risk management as a fundamental aspect of its decision making process to support and enhance its business activities. In particular: <ul style="list-style-type: none"> ▪ Risk-based policies and procedures are applied to Mumbida Wind Farm’s operational and maintenance activities performed by GE, including asset condition assessments. We sighted several examples of risk based practices being applied to Mumbida Wind Farm’s monitoring of WTG and BOP operations, and in its responses to alerts, alarms, defects and incidents/concerns. Mumbida Wind Farm maintains appropriate records of those activities ▪ Mumbida Wind Farm maintains a facility specific risk register in accordance with the Infrastructure Capital risk management framework. We observed that the underlying risk matrix used in the risk register differs slightly from the risk management framework risk matrix. We raised this matter with Mumbida Wind Farm staff as a housekeeping matter ▪ Risk registers are reviewed on at least an annual basis. We observed evidence of reviews performed and reported to the Mumbida Wind Farm Board during the review period, including resulting amendments to asset planning. <p>Based on our examination of the risk management processes in place, we determined that Mumbida Wind Farm uses a well-established and consistent system for identifying and managing risks, including formal supporting procedural documentation.</p>	
	<p>Process and Policy Rating: Adequately defined (A)</p>	<p>Performance Rating: Performing effectively (1)</p>

Effectiveness criteria	Findings	
<p>8.3 Probability and consequences of asset failure are regularly assessed</p>	<p>Through discussion with the General Manager Mumbida Wind Farm and Mumbida Site Manager; consideration of Mumbida Wind Farm's risk management practices and examination of supporting documentation, we observed that Mumbida Wind Farm has applied the following mechanism for identifying and assessing the consequence and likelihood of the facility's failure:</p> <ul style="list-style-type: none"> • Fixed maintenance schedules performed on a rotating six-monthly basis provide for regular assessment and maintenance of asset performance: <ul style="list-style-type: none"> ▪ Any issues, including defects are identified during routine assessments are raised in resulting reports that identify any additional maintenance requirements ▪ Maintenance frequencies and activities are based on OEM recommendations, guided by GE experience and analysis where relevant • Condition monitoring techniques are frequently applied to identify defects and to assist in assessing the probity and consequence of failure. We sighted examples of services requests raised as a result of condition monitoring reports • The Mumbida Wind Farm risk register considers several major items of equipment and provides specific details of its operation and maintenance strategy and key life cycle issues and remedial plans • A detailed maintenance program is maintained in accordance with OEM guidelines and is reviewed on a daily basis. <p>The management structures, skills and resources assigned to Mumbida Wind Farm's asset management processes appear to be appropriate for enabling the regular assessment of the probability and consequences of asset failure.</p>	
	<p>Process and Policy Rating: Adequately defined (A)</p>	<p>Performance Rating: Performing effectively (1)</p>

4.9 Contingency planning

Key process: Contingency plans document the steps to deal with the unexpected failure of an asset

Expected outcome: Contingency plans have been developed and tested to minimise any major disruptions to service standards

Overall Process and Policy/Performance rating: [Adequately defined \(A\)](#) / [Improvement required \(2\)](#)

Effectiveness criteria	Findings
<p>9.1 Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks</p>	<p>Through discussion with the General Manager Mumbida Wind Farm and Mumbida Site Manager, examination of Mumbida Wind Farm’s emergency response and contingency planning mechanisms, and testing of a sample of emergency response activities, we determined that:</p> <ul style="list-style-type: none"> • Mumbida Wind Farm has developed a suite of emergency response procedures and management plans, such as: <ul style="list-style-type: none"> ▪ Emergency Response Plan ▪ WTG Safety Manual, which addresses Conduct in an Emergency Situation, including conduct in case of fire, oil spills, escape routes and information for rescue and emergency personnel. We sighted evidence of drills to test staff responsiveness to oil spills ▪ EHS Simplified Work Plan • Spares are managed to minimise the exposure to disruption and unavailability of WTGs or BOP equipment • Mumbida Wind Farm’s risk register captures higher risks relating to potential major disruption to operations: <ul style="list-style-type: none"> ▪ The register provides a starting point, however we consider more work is required to provide an ongoing measure of the effectiveness of contingencies in place to effectively minimise any major disruption to asset operations ▪ Further, not all contingency plans in place have been tested for effectiveness as Mumbida Wind Farm has not yet developed a process or schedule for doing so ▪ An example of an opportunity to further improve Mumbida Wind Farm’s contingency planning relates to its response to the unexpected threat (including related disruption to the network and communications) from Cyclone Seroja in April 2021. In this scenario, Mumbida Wind Farm enacted its Emergency Response Plan to undertake the required action and communications for initially securing the safety of the site and personnel, then managing a return to full operations. Although the response appeared to be appropriately managed, it was managed through normal operations and monthly reporting, meaning the results of the exercise were not formally fed back into Mumbida Wind Farm’s risk management and contingency planning arrangements to ensure any process changes or improvements were captured and resolved. <p><i>We raised this matter with Mumbida Wind Farm staff as a potential improvement opportunity.</i></p>

Effectiveness criteria	Findings	
9.1 (cont.)	<ul style="list-style-type: none"> Lone worker risk has been identified by Mumbida Wind Farm as an improvement opportunity, with GE currently trialling a SAP type Pager to provide coverage during incidents such as cyclones, etc. when no mobile reception and/or no radio reception is available to the worker. We support the expedited implementation of improved practices to more effectively manage lone worker risks. 	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Improvement required (2)

4.10 Financial planning

Key process: Financial brings together the financial elements of the service delivery to ensure its financial viability over the long term

Expected outcome: The financial plan is reliable and provides for the long-term financial viability of the services

Overall Process and Policy/Performance rating: Adequately defined (A) / Performing effectively (1)

Effectiveness criteria	Findings	
10.1 The financial plan states the financial objectives and identifies strategies and actions to achieve those	Through discussion with the General Manager Mumbida Wind Farm and consideration of Mumbida Wind Farm's financial planning mechanisms, we observed that the Mumbida Wind Farm Facility's financial plan takes the form of an annual budget, prepared to reflect its financial objectives and contractual agreements.	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)
10.2 The financial plan identifies the source of funds for capital expenditure and recurrent costs	Through discussion with the General Manager Mumbida Wind Farm and consideration of Mumbida Wind Farm's financial planning mechanisms, we observed that the Mumbida Wind Farm annual budget is aligned with Mumbida Wind Farm's overall business plans and is expected to be fully funded through its operational revenue.	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)
10.3 The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets)	Through discussion with the General Manager Mumbida Wind Farm and consideration of Mumbida Wind Farm's financial planning mechanisms, we determined that the Mumbida Wind Farm annual budget: <ul style="list-style-type: none"> • Is comprised of a summary of forecast revenue and expenses relating to the production and dispatch of electricity in accordance with contractual agreements • Provides projections of operating profit and loss, and the financial position attributable to the Facility • Contains projections that are sufficient to cover future operating costs. 	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)
10.4 The financial plan provides firm predictions on income for the next five years and reasonable predictions beyond this period	Through discussion with the General Manager Mumbida Wind Farm and consideration of Mumbida Wind Farm's financial planning mechanisms, we determined that the Mumbida Wind Farm annual budget provides projections of income over a five-year period, which can be extended for the duration of the Facility's life and relevant contractual agreements.	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)
10.5 The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services	Through discussion with the General Manager Mumbida Wind Farm and examination of the General Manager Mumbida Wind Farm annual budget, we determined that the budget provides a sufficient level of detail relating to forecast operational, maintenance and administrative costs. There are currently no expectations for capital expenditure.	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)

Effectiveness criteria	Findings	
10.6 Large variances in actual/budget income and expenses are identified and corrective action taken where necessary	Through discussion with the General Manager Mumbida Wind Farm and consideration of Mumbida Wind Farm's financial planning mechanisms, we determined that actual versus budgeted expenditure is monitored on a monthly basis, with variances identified and investigated where required to determine whether corrective action is required.	
	Process and Policy Rating: Adequately defined (A)	Performance Rating: Performing effectively (1)

4.11 Capital expenditure planning

Key process: The capital expenditure plan provides a schedule of new works, rehabilitation and replacement works, together with estimated annual expenditure for these works over the next five or more years. Since capital investments tend to be large and lumpy, projections would normally be expected to cover at least 10 years, preferably longer. Projections over the next five years would usually be based on firm estimates

Expected outcome: The capital expenditure plan provides reliable forward estimates of capital expenditure and asset disposal income. Reasons for the decisions and for the evaluation of alternatives and options are documented

Overall Process and Policy/Performance rating: [Not rated](#)

Findings

All costs associated with the operations and maintenance of the Facility are and will be treated as operational costs. That is, there is currently no provision for capital items in the Mumbida Wind Farm Facility Operations and Maintenance Budget.

4.12 Review of asset management system

Key process: The asset management system is regularly reviewed and updated

Expected outcome: The asset management system is regularly reviewed and updated

Overall Process and Policy/Performance rating: Requires some improvement (B) / Improvement required (2)

Effectiveness criteria	Findings	
<p>12.1 A review process is in place to ensure the asset management plan and the asset management system described in it remain current</p>	<p>Through discussion with the General Manager Mumbida Wind Farm and Mumbida Site Manager, and examination of relevant documentation and correspondence, we determined that:</p> <ul style="list-style-type: none"> • The AMS applicable to the Mumbida Wind Farm Facility had not been amended during the review period • The General Manager Mumbida Wind Farm oversees the AMS applicable to the Mumbida Wind Farm Facility, with designated GE staff responsible for relevant components of the system • Internal reviews are performed by Mumbida Wind Farm to assess the currency of the AMS, including: <ul style="list-style-type: none"> ▪ Ongoing review of Mumbida Wind Farm Service Execution Plan and Mumbida Wind Farm Simplified Work Plan, which make up a key component of Mumbida Wind Farm’s asset management planning arrangements ▪ Regular review of emergency management and response plans ▪ Regular review of GE procedures and practices in accordance with GE’s continuous improvement approach ▪ Review of risk registers by the Mumbida Wind Farm Board. 	
	<p>Process and Policy Rating: Adequately defined (A)</p>	<p>Performance Rating: Performing effectively (1)</p>
<p>12.2 Independent reviews (e.g. internal audit) are performed of the asset management system</p>	<p>Although the AMS applicable to the Mumbida Wind Farm Facility, including those elements managed by GE in accordance with the O&M Agreement, has been subject to internal review and update, during the review period an independent party had not been assigned to assess the effectiveness and performance of the AMS.</p> <p>Notwithstanding GE’s robust internal practices for reviewing and updating its asset management systems, there remains some value in obtaining independent advice on the effectiveness and performance of those systems as they apply to Mumbida Wind Farm.</p> <p><i>We raised this matter with Mumbida Wind Farm staff as a potential improvement opportunity.</i></p>	
	<p>Process and Policy Rating: Requires some improvement (B)</p>	<p>Performance Rating: Improvement required (2)</p>

5. Status of recommendations addressing asset system deficiencies from the previous review

Reference (no./year)	Process and policy deficiency / Performance deficiency (Rating / Reference number, Asset management process & effectiveness criterion / Details of deficiency)	Reviewer's recommendation or action planned	Date resolved	Details of further action required (including current recommendation Further action required (Yes/No/Not Applicable) reference, if applicable)
A. Resolved during current review period				
B. Unresolved at end of current review period				
Not applicable – there were no recommendations addressing asset system deficiencies from the previous 2016 review.				

Appendix A - Review Plan



ASSURANCE
ADVISORY
GROUP

Mumbida Wind Farm Pty Ltd

Electricity Generation Licence (EGL24)

2021 Asset Management System Review

Review Plan

15 October 2021

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Introduction

Overview

The Economic Regulation Authority (the **ERA**) has under the provisions of the Electricity Industry Act 2004 (the **Act**), issued to Mumbida Wind Farm Pty Ltd (Mumbida Wind Farm) an Electricity Generation Licence (EGL 24) (the **Licence**).

Section 14 of the Act requires Mumbida Wind Farm to provide to the ERA an asset management system review (the review) report conducted by an independent expert acceptable to the ERA not less than once in every 24-month period unless otherwise approved by the ERA. With the ERA's approval, Assurance Advisory Group (**AAG**) has been appointed to conduct the review for the period 1 November 2016 to 31 October 2021 (**review period**).

The Licence relates to Mumbida Wind Farm operating a 55 MW wind farm located on farming land approximately 40km southeast of Geraldton in the mid-west of Western Australia. Mumbida Wind Farm utilises 22 x 2.5 MW General Electric wind turbines. The wind farm's electricity output is delivered into the South West Interconnected System (SWIS) and is purchased by the Water Corporation to offset part of the energy requirements of the Southern Seawater Desalination Plant.

The review will be conducted in accordance with the ERA's March 2019 issue of the *Audit and Review Guidelines: Electricity and Gas Licences* (**Review Guidelines**). In accordance with the Review Guidelines this document represents the Review Plan (the **Plan**) that is to be agreed upon by AAG and Mumbida Wind Farm and presented to the ERA for approval.

Objective

The objective of the review is to independently examine the effectiveness and performance of the asset management system established for the assets subject to Mumbida Wind Farm's Licence during the review period.

Scope

In accordance with the Review Guidelines, the review will consider the effectiveness of Mumbida Wind Farm's existing control procedures within the 12 key processes in the asset management life cycle as outlined below at Table 1. Each key process and effectiveness criteria is applicable to Mumbida Wind Farm's Licence and as such will be individually considered in this review.

Table 1 – Asset management system key processes and effectiveness criteria

Key processes	Effectiveness criteria
1. Asset Planning	<ul style="list-style-type: none">1.1 Asset management plan covers the processes in this table1.2 Planning processes and objectives reflect the needs of all stakeholders and is integrated with business planning1.3 Service levels are defined in the asset management plan1.4 Non-asset operations (e.g. demand management) are considered1.5 Lifecycle costs of owning and operating assets are assessed1.6 Funding options are evaluated1.7 Costs are justified and cost drivers identified1.8 Likelihood and consequences of asset failure are predicted1.9 Asset management plan is regularly reviewed and updated.

Key processes	Effectiveness criteria
2. Asset creation and acquisition	2.1 Full project evaluations are undertaken for new assets, including comparative assessment of non-asset options 2.2 Evaluations include all life-cycle costs 2.3 Projects reflect sound engineering and business decisions 2.4 Commissioning tests are documented and completed 2.5 Ongoing legal / environmental / safety obligations of the asset owner are assigned and understood
3. Asset disposal	3.1 Under-utilised and under-performing assets are identified as part of a regular systematic review process 3.2 The reasons for under-utilisation or poor performance are critically examined and corrective action or disposal undertaken 3.3 Disposal alternatives are evaluated 3.4 There is a replacement strategy for assets
4. Environmental analysis	4.1 Opportunities and threats in the asset management system environment are assessed 4.2 Performance standards (availability of service, capacity, continuity, emergency response, etc.) are measured and achieved 4.3 Compliance with statutory and regulatory requirements 4.4 Service standard (customer service levels etc) are measured and achieved.
5. Asset operations	5.1 Operational policies and procedures are documented and linked to service levels required 5.2 Risk management is applied to prioritise operations tasks 5.3 Assets are documented in an asset register including asset type, location, material, plans of components, and an assessment of assets' physical/structural condition 5.4 Accounting data is documented for assets [new criteria] 5.5 Operational costs are measured and monitored 5.6 Staff resources are adequate and staff receive training commensurate with their responsibilities
6. Asset maintenance	6.1 Maintenance policies and procedures are documented and linked to service levels required 6.2 Regular inspections are undertaken of asset performance and condition 6.3 Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule 6.4 Failures are analysed and operational/maintenance plans adjusted where necessary 6.5 Risk management is applied to prioritise maintenance tasks 6.6 Maintenance costs are measured and monitored
7. Asset management information systems	7.1 Adequate system documentation for users and IT operators 7.2 Input controls include suitable verification and validation of data entered into the system 7.3 Security access controls appear adequate, such as passwords 7.4 Physical security access controls appear adequate 7.5 Data backup procedures appear adequate and backups are tested 7.6 Computations for licensee performance reporting are accurate 7.7 Management reports appear adequate for the licensee to monitor licence obligations 7.8 Adequate measures to protect asset management data from unauthorised access or theft by persons outside the organisation [new criteria]

Key processes	Effectiveness criteria
8. Risk management	<p>8.1 Risk management policies and procedures exist and are applied to minimise internal and external risks</p> <p>8.2 Risks are documented in a risk register and treatment plans are implemented and monitored</p> <p>8.3 Probability and consequences of asset failure are regularly assessed</p>
9. Contingency planning	9.1 Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks
10. Financial planning	<p>10.1 The financial plan states the financial objectives and identifies strategies and actions to achieve those</p> <p>10.2 The financial plan identifies the source of funds for capital expenditure and recurrent costs</p> <p>10.3 The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets)</p> <p>10.4 The financial plan provides firm predictions on income for the next five years and reasonable predictions beyond this period</p> <p>10.5 The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services</p> <p>10.6 Large variances in actual/budget income and expenses are identified and corrective action taken where necessary</p>
11. Capital expenditure planning	<p>11.1 There is a capital expenditure plan covering works to be undertaken, actions proposed, responsibilities and dates</p> <p>11.2 The capital expenditure plan provides reasons for capital expenditure and timing of expenditure</p> <p>11.3 The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan</p> <p>11.4 There is an adequate process to ensure the capital expenditure plan is regularly updated and implemented</p>
12. Review of asset management system	<p>12.1 A review process is in place to ensure the asset management plan and the asset management system described in it remain current</p> <p>12.2 Independent reviews (e.g. internal audit) are performed of the asset management system</p>

Mumbida Wind Farm’s responsibility for maintaining an effective asset management system

Mumbida Wind Farm is responsible for putting in place policies, procedures and controls, which are designed to provide for an effective asset management system for assets subject to the Licence.

AAG's responsibility

Our responsibility is to express a reasonable assurance conclusion on whether, based on the procedures performed and the evidence obtained, we believe that Mumbida Wind Farm's AMS for assets subject to its Licence have been established and maintained, in all material respects, in accordance with the Licence as measured by the effectiveness criteria in the Guidelines for the period from 1 November 2016 to 31 October 2021. The review will be conducted in accordance with Australian Standard on Assurance Engagements ASAE 3500 Performance Engagements (**ASAE 3500**), issued by the Australian Auditing and Assurance Standards Board.

ASAE 3500 requires that we plan and perform the review to obtain assurance about whether the AMS for assets subject to the Licence is materially ineffective. A reasonable assurance engagement conducted in accordance with ASAE 3500 involves identifying areas where the AMS for assets subject to a Licence is likely to be materially ineffective, addressing the areas identified and considering the process used to prepare the AMS for assets subject to the Licence.

Limitations of use

Our report will be produced solely for the information and internal use of Mumbida Wind Farm and is not intended to be and should not be used by any other person or entity. No other person or entity is entitled to rely, in any manner or for any purpose, on our report.

We understand that a copy of our report will be provided to the ERA for the purpose of meeting Mumbida Wind Farm's reporting requirements of section 14 of the Act. We agree that a copy of our report may be provided to the ERA for its information in connection with this purpose, however we accept no responsibility to the ERA or to anyone who is provided with or obtains a copy of our report.

This plan is intended solely for the use of Mumbida Wind Farm for the purpose of its reporting requirements under section 14 of the Act.

Inherent limitations

Reasonable assurance means a high but not absolute level of assurance. Absolute assurance is very rarely attainable as a result of factors such as: the use of selective testing, the inherent limitations of internal control, the fact that much of the evidence available to us is persuasive rather than conclusive and the use of judgement in gathering and evaluating evidence and forming conclusions based on that evidence.

We cannot, in practice, examine every activity and procedure, nor can we be a substitute for management's responsibility to maintain adequate controls over all levels of operations and their responsibility to prevent and detect irregularities, including fraud.

Accordingly, readers of our report should not rely on the report to identify all potential instances of non-compliance or performance issues which may occur.

An assurance engagement relating to the period from 1 November 2016 to 31 October 2021 will not provide assurance on whether the AMS for assets subject to the Licence will remain effective in the future.

Independence

In conducting our engagement, we will comply with the independence requirements of the Australian professional accounting bodies.

Approach

The review will be conducted in three distinct phases, being a risk assessment, system analysis/policy and procedure review and examination of performance. From the review results, a report will be produced to outline findings, overall assessments and recommendations for improvement in line with the Review Guidelines. Each step of the review is discussed in detail below.

Risk assessment

The review will focus on identifying or assessing those activities and management control systems to be examined and the matters subject to review. Therefore, the purpose of conducting the risk assessment as a preliminary phase enables the reviewer to focus on pertinent/high risk areas of Mumbida Wind Farm’s asset management systems established for the assets subject to Mumbida Wind Farm’s licence. The risk assessment considers changes to Mumbida Wind Farm’s relevant systems and processes and any matters of significance raised by the ERA and/or Mumbida Wind Farm. The level of risk and materiality of the process determine the level of review required i.e. the greater the materiality and the higher the risk, the more effort will be applied.

The first step of the risk assessment is the rating of the potential consequences of Mumbida Wind Farm not effectively maintaining an asset management system for the assets subject to its licence, in the absence of mitigating controls. The consequence classification descriptions listed at Table 1 of the Reporting Manual, provides the risk assessment with context to enable the appropriate consequence rating to be applied to each component of the asset management system subject to review.

Once the consequence has been determined, the likelihood of Mumbida Wind Farm not effectively maintaining an asset management system for the assets subject to its licence (with reference to the defined effectiveness criteria) is assessed using the likelihood rating listed at Table 17 of the Review Guidelines (refer to Appendix 1). The assessment of likelihood is based on the expected frequency of non-performance against the defined criteria, over a period of time.

Table 2 below (sourced from the Review Guidelines) outlines the combination of consequence and likelihood ratings to determine the level of inherent risk associated with each individual effectiveness criteria

Table 2: Inherent risk rating

	Consequence		
Likelihood	Minor	Moderate	Major
Likely	Medium	High	High
Probable	Low	Medium	High
Unlikely	Low	Medium	High

Once the level of inherent risk has been determined, the adequacy of existing controls is assessed in order to determine the level of control risk. Controls are assessed and prioritised as weak, moderate or strong dependant on their suitability to mitigate the risks identified. The control adequacy ratings used by this risk assessment are aligned to the ratings specified in the Review Guidelines (refer to Appendix 1-3). Once inherent risks and control risks are established, the audit priority can then be determined using the matrix specified in the Review Guidelines (refer to Table 3 below). Essentially, the higher the level of risk the more substantive testing is required.

Table 3: Assessment of Review Priority

	Preliminary adequacy of existing controls		
Inherent Risk	Weak	Moderate	Strong
High	Review priority 1	Review Priority 2	
Medium	Review priority 3	Review Priority 4	
Low	Review Priority 5		

The following table outlines the review requirement for each level of review priority. Testing can range from extensive substantive testing around the controls and activities of particular processes (including physical inspection of asset infrastructure, which will be given greater attention for those processes with a review priority of 1, 2 or 3) to confirming the existence of controls through discussions with relevant staff.

Table 4: Review Priority Table

Priority rating	Review requirement
Review Priority 1	<ul style="list-style-type: none"> • Via interview and walkthrough, understand relevant processes and controls • Examine relevant documents, registers and reports • Obtain evidence of policies, procedures and controls being in place and working effectively • Controls testing and extensive substantive testing of activities and/or transactions • Follow-up and if necessary, re-test matters previously reported.
Review Priority 2	<ul style="list-style-type: none"> • Via interview and walkthrough, understand relevant processes and controls • Examine relevant documents, registers and reports • Obtain evidence of policies, procedures and controls being in place and working effectively • Controls testing and moderate substantive testing of activities and/or transactions • Follow-up and if necessary, re-test matters previously reported.
Review Priority 3	<ul style="list-style-type: none"> • Via interview and walkthrough, understand relevant processes and controls • Examine relevant documents, registers and reports • Limited controls testing (moderate sample size). Only substantively test transactions if further control weakness found • Follow-up of matters previously reported.
Review Priority 4	<ul style="list-style-type: none"> • Confirmation of existing controls via observation and walkthrough testing • Follow-up of matters previously reported.
Review Priority 5	<ul style="list-style-type: none"> • Confirmation of existing controls via observation, discussions with key staff and/or reliance on key references (“desktop review”).

The risk assessment has been discussed with Mumbida Wind Farm representatives to gain their input as to the appropriateness and factual accuracy of risk and control ratings and associated explanations. The key sources considered in reaching our preliminary assessment of the risk and control ratings were based on:

- Our understanding of Mumbida Wind Farm Pty Ltd's assets and internal processes.
- Any other factors that may influence the level or strength of controls.
- Consideration of relevant circumstances and activity that trigger specific performance issues.

Note that the previous review did not make any recommendations for improvement or corrective action.

At this stage, the risk assessment can only be a preliminary assessment based on reading of documentation and interviews by the auditors. It is possible that the ratings and risk assessment comments may be revised as we conduct our work and new evidence comes to light. The risk assessment is attached at Appendix 2.

System analysis / policy and procedure review

The level of policy and procedure review required will be determined utilising the priority scale. Once the priority level has been defined, the review will consist of:

- Interviewing Mumbida Wind Farm representatives and key operational and administrative staff responsible for the development and maintenance of policies and procedural type documentation
- Examination of documented policies and procedures for key functional requirements and consideration of their relevance to Mumbida Wind Farm's asset management system requirements and standards.

The policy and procedure element of the asset management system review will be performed to provide a rating as defined under Table 5 (refer below).

Key documents which may be subject to review are not specifically disclosed in this plan. A list of documents examined will be included in the review report.

Examination of performance

The actual performance of the relevant controls and processes in place will then be examined via:

- Consideration of reports and references evidencing activity
- Interviews with Mumbida Wind Farm representatives and key staff
- Physical visit to the facility's site
- Consideration of the facility's function, normal modes of operation and age.

A full work program will be completed to record the specific aspects of our review and examination of the performance of each asset management system key process. This work program will be based on:

- The review priority determined by the risk assessment to be applicable to each effectiveness criteria
- The results of the policy and procedure review, as described above
- The location of personnel and activity to be tested.

The performance effectiveness element of the asset management system review will be performed to provide a rating as defined under Table 6 (refer below).

Reporting

The review report will also be structured to address all of the minimum contents specified in section 5 of the Review Guidelines.

In accordance with the Review Guidelines, the reviewer must provide an assessment of both the process and policy rating (refer to Table 5 below and Table 8 of the Guidelines) and the performance rating (refer to Table 6 below and Table 9 of the Guidelines) for each of the key processes in Mumbida Wind Farm’s asset management system.

Mumbida Wind Farm is responsible for providing a separate post review implementation plan, if required.

Table 5: Process and policy rating scale

Rating	Description	Criteria
A	Adequately defined	<ul style="list-style-type: none"> Processes and policies are documented Processes and policies adequately document the required performance of the assets Processes and policies are subject to regular reviews, and updated where necessary The asset management information system(s) are adequate in relation to the assets being managed
B	Requires some improvement	<ul style="list-style-type: none"> Processes and policies require improvement Processes and policies do not adequately document the required performance of the assets Reviews of processes and policies are not conducted regularly enough The asset management information system(s) requires minor improvements (taking into consideration the assets being managed)
C	Requires substantial improvement	<ul style="list-style-type: none"> Processes and policies are incomplete or require substantial improvement Processes and policies do not document the required performance of the assets Processes and policies are considerably out of date The asset management information system(s) requires substantial improvements (taking into consideration the assets being managed)
D	Inadequate	<ul style="list-style-type: none"> Processes and policies are not documented The asset management information system(s) is not fit for purpose (taking into consideration the assets being managed).

Table 6: Performance rating scale

Rating	Description	Criteria
1	Performing effectively	<ul style="list-style-type: none"> The performance of the process meets or exceeds the required levels of performance Process effectiveness is regularly assessed and corrective action taken where necessary
2	Improvement required	<ul style="list-style-type: none"> The performance of the process requires some improvement to meet the required level Process effectiveness reviews are not performed regularly enough Recommended process improvements are not implemented
3	Corrective action required	<ul style="list-style-type: none"> The performance of the process requires substantial improvement to meet the required level Process effectiveness reviews are performed irregularly, or not at all Recommended process improvements are not implemented
4	Serious action required	<ul style="list-style-type: none"> Process is not performed, or the performance is so poor the process is considered to be ineffective.

Appendix 1 - Risk assessment key

1-1 Criteria for classification of consequence of ineffective performance

Source: Modified from Electricity Compliance Reporting Manual June 2020

Classification	Criteria for classification
Major	Classified on the bases that: <ul style="list-style-type: none"> • The consequences of ineffective performance would cause major damage, loss or disruption to customers; or • The consequences of ineffective performance would endanger or threaten to endanger the safety or health of a person.
Moderate	Classified on the basis that the consequences of ineffective performance affect the efficiency and effectiveness of the licensee’s operations or service provision, but do not cause major damage, loss or disruption to customers.
Minor	Classified on the basis that: <ul style="list-style-type: none"> • The consequences of ineffective performance are relatively minor – i.e. ineffective performance will have minimal effect on the licensee’s operations or service provision and do not cause damage, loss or disruption to customers; • Assessment of performance against the obligation is immeasurable; • The matter of ineffective performance is identified by a party other than the licensee; or • The licensee only needs to use its reasonable or best endeavours to demonstrate effective performance, or where the obligation does not otherwise impose a firm obligation on the licensee.

1-2 Likelihood ratings

Source: Review Guidelines: Electricity and Gas Licences March 2019

	Level	Criteria
A	Likely	Ineffective process or performance is expected to occur at least once or twice a year
B	Probable	Ineffective process or performance is expected to occur every three years
C	Unlikely	Ineffective process or performance is expected to occur at least once every 10 years or longer

1-3 Preliminary adequacy ratings for existing controls

Source: Review Guidelines: Electricity and Gas Licences March 2019

Level	Description
Strong	Controls mitigate the identified risks to a suitable level
Moderate	Controls only cover significant risks; improvement required
Weak	Controls are weak or non-existent and do little to mitigate the risks

Appendix 2 - Risk assessment

1. Asset Planning						
Key process	Asset planning strategies focus on meeting customer needs in the most effective and efficient manner (delivering the right service at the right price)					
Outcome	Asset planning is integrated into operational or business plans, providing a framework for existing and new assets to be effectively utilised and their service optimised					
Ref	Effectiveness criteria	Consequence	Likelihood	Inherent risk rating	Controls assessment	Review priority
1.1	Asset management plan covers the processes in this table	Moderate	Probable	Medium	Moderate	Priority 4
1.2	Planning process and objectives reflect the needs of all stakeholders and are integrated with business planning	Moderate	Unlikely	Medium	Moderate	Priority 4
1.3	Service levels are defined in the asset management plan	Moderate	Probable	Medium	Moderate	Priority 4
1.4	Non-asset options (e.g. demand management) are considered	Minor	Unlikely	Low	Moderate	Priority 5
1.5	Lifecycle costs of owning and operating assets are assessed	Minor	Probable	Low	Moderate	Priority 5
1.6	Funding options are evaluated	Minor	Unlikely	Low	Moderate	Priority 5
1.7	Costs are justified and cost drivers identified	Minor	Probable	Low	Moderate	Priority 5
1.8	Likelihood and consequences of asset failure are predicted	Moderate	Probable	Medium	Moderate	Priority 4
1.9	Asset management plan is regularly reviewed and updated	Minor	Probable	Low	Moderate	Priority 5

2. Asset creation and acquisition						
Key process	Asset creation/acquisition is the provision or improvement of assets					
Outcome	The asset acquisition framework is economic, efficient and cost-effective; it reduces demand for new assets, lowers service costs and improves service delivery					
Ref	Effectiveness criteria	Consequence	Likelihood	Inherent risk rating	Controls assessment	Review priority
2.1	Full project evaluations are undertaken for new assets, including comparative assessment of non-asset options	Moderate	Unlikely	Medium	Moderate	Priority 4
2.2	Evaluations include all life-cycle costs	Moderate	Unlikely	Medium	Moderate	Priority 4
2.3	Projects reflect sound engineering and business decisions	Moderate	Unlikely	Medium	Moderate	Priority 4
2.4	Commissioning tests are documented and completed	Moderate	Unlikely	Medium	Moderate	Priority 4
2.5	Ongoing legal / environmental / safety obligations of the asset owner are assigned and understood	Major	Unlikely	High	Moderate	Priority 2

3. Asset disposal						
Key process	Asset disposal is the consideration of alternatives for the disposal of surplus, obsolete, under-performing or unserviceable assets					
Outcome	The asset management framework minimises holdings of surplus and underperforming assets and lowers service costs. The cost-benefits of disposal options are evaluated					
Ref	Effectiveness criteria	Consequence	Likelihood	Inherent risk rating	Controls assessment	Review priority
3.1	Under-utilised and under-performing assets are identified as part of a regular systematic review process	Moderate	Unlikely	Medium	Moderate	Priority 4
3.2	The reasons for under-utilisation or poor performance are critically examined and corrective action or disposal undertaken	Minor	Unlikely	Low	Moderate	Priority 5
3.3	Disposal alternatives are evaluated	Minor	Unlikely	Low	Moderate	Priority 5
3.4	There is a replacement strategy for assets	Moderate	Unlikely	Medium	Moderate	Priority 4

4. Environmental analysis						
Key process	Environmental analysis examines the asset management system environment and assesses all external factors affecting the asset management system					
Outcome	The asset management system regularly assesses external opportunities and threats and identifies corrective action to maintain performance requirements					
Ref	Effectiveness criteria	Consequence	Likelihood	Inherent risk rating	Controls assessment	Review priority
4.1	Opportunities and threats in the asset management system environment are assessed	Moderate	Probable	Medium	Strong	Priority 4
4.2	Performance standards (availability of service, capacity, continuity, emergency response, etc.) are measured and achieved	Moderate	Probable	Medium	Moderate	Priority 4
4.3	Compliance with statutory and regulatory requirements	Moderate	Probable	Medium	Strong	Priority 4
4.4	Service standard (customer service levels etc) are measured and achieved.	Moderate	Unlikely	Medium	Moderate	Priority 4

5. Asset operations						
Key process	Asset operations is the day-today running of assets (where the asset is used for its intended purpose)					
Outcome	The asset operation plans adequately document the processes and knowledge of staff in the operation of assets so service levels can be consistently achieved					
Ref	Effectiveness criteria	Consequence	Likelihood	Inherent risk rating	Controls assessment	Review priority
5.1	Operational policies and procedures are documented and linked to service levels required	Moderate	Probable	Medium	Strong	Priority 4
5.2	Risk management is applied to prioritise operations tasks	Moderate	Probable	Medium	Strong	Priority 4
5.3	Assets are documented in an asset register including asset type, location, material, plans of components, and an assessment of assets' physical/structural condition	Moderate	Probable	Medium	Strong	Priority 4
5.4	Accounting data is documented for assets	Moderate	Probable	Medium	Moderate	Priority 4
5.5	Operational costs are measured and monitored	Moderate	Probable	Medium	Moderate	Priority 4
5.6	Staff resources are adequate and staff receive training commensurate with their responsibilities	Moderate	Probable	Medium	Moderate	Priority 4

6. Asset maintenance						
Key process		Asset maintenance is the upkeep of assets				
Outcome		The asset maintenance plans cover the scheduling and resourcing of the maintenance tasks so work can be done on time and on cost				
Ref	Effectiveness criteria	Consequence	Likelihood	Inherent risk rating	Controls assessment	Review priority
6.1	Maintenance policies and procedures are documented and linked to service levels required	Moderate	Probable	Medium	Strong	Priority 4
6.2	Regular inspections are undertaken of asset performance and condition	Major	Probable	High	Strong	Priority 2
6.3	Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule	Major	Probable	High	Moderate	Priority 2
6.4	Failures are analysed and operational/maintenance plans adjusted where necessary	Moderate	Probable	Medium	Moderate	Priority 4
6.5	Risk management is applied to prioritise maintenance tasks	Moderate	Probable	Medium	Strong	Priority 4
6.6	Maintenance costs are measured and monitored	Moderate	Probable	Medium	Moderate	Priority 4

7. Asset management information systems						
Key process	An asset management information system is a combination of processes, data and software supporting the asset management functions					
Outcome	The asset management information system provides authorised, complete and accurate information for the day-to-day running of the asset management system. The focus of the review is the accuracy of performance information used by the licensee to monitor and report on service standards					
Ref	Effectiveness criteria	Consequence	Likelihood	Inherent risk rating	Controls assessment	Review priority
7.1	Adequate system documentation for users and IT operators	Minor	Probable	Low	Moderate	Priority 5
7.2	Input controls include suitable verification and validation of data entered into the system	Moderate	Probable	Medium	Moderate	Priority 4
7.3	Security access controls appear adequate, such as passwords	Minor	Probable	Low	Moderate	Priority 5
7.4	Physical security access controls appear adequate	Minor	Probable	Low	Moderate	Priority 5
7.5	Data backup procedures appear adequate and backups are tested	Moderate	Probable	Medium	Moderate	Priority 4
7.6	Computations for licensee performance reporting are accurate	Minor	Probable	Low	Moderate	Priority 5
7.7	Management reports appear adequate for the licensee to monitor licence obligations	Minor	Probable	Low	Moderate	Priority 5
7.8	Adequate measures to protect asset management data from unauthorised access or theft by persons outside the organisation	Moderate	Probable	Medium	Moderate	Priority 4

8. Risk management						
Key process	Risk management involves the identification of risks and their management within an acceptable level of risk					
Outcome	The risk management framework effectively manages the risk that the licensee does not maintain effective service standards					
Ref	Effectiveness criteria	Consequence	Likelihood	Inherent risk rating	Controls assessment	Review priority
8.1	Risk management policies and procedures exist and are applied to minimise internal and external risks	Major	Probable	High	Moderate	Priority 2
8.2	Risks are documented in a risk register and treatment plans are implemented and monitored	Moderate	Probable	Medium	Moderate	Priority 4
8.3	Probability and consequences of asset failure are regularly assessed	Major	Probable	High	Moderate	Priority 2

9. Contingency planning						
Key process	Contingency plans document the steps to deal with the unexpected failure of an asset.					
Outcome	Contingency plans have been developed and tested to minimise any major disruptions to service standards.					
Ref	Effectiveness criteria	Consequence	Likelihood	Inherent risk rating	Controls assessment	Review priority
9.1	Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks	Major	Probable	High	Moderate	Priority 2

10. Financial planning						
Key process		Financial brings together the financial elements of the service delivery to ensure its financial viability over the long term				
Outcome		The financial plan is reliable and provides for the long-term financial viability of the services				
Ref	Effectiveness criteria	Consequence	Likelihood	Inherent risk rating	Controls assessment	Review priority
10.1	The financial plan states the financial objectives and identifies strategies and actions to achieve those	Moderate	Probable	Medium	Moderate	Priority 4
10.2	The financial plan identifies the source of funds for capital expenditure and recurrent costs	Minor	Probable	Low	Moderate	Priority 5
10.3	The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets)	Minor	Probable	Low	Moderate	Priority 5
10.4	The financial plan provides firm predictions on income for the next five years and reasonable predictions beyond this period	Minor	Probable	Low	Moderate	Priority 5
10.5	The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services	Moderate	Probable	Medium	Moderate	Priority 4
10.6	Large variances in actual/budget income and expenses are identified and corrective action taken where necessary	Moderate	Probable	Medium	Moderate	Priority 4

11. Capital expenditure planning						
Key process	The capital expenditure plan provides a schedule of new works, rehabilitation and replacement works, together with estimated annual expenditure for these works over the next five or more years. Since capital investments tend to be large and lumpy, projections would normally be expected to cover at least 10 years, preferably longer. Projections over the next five years would usually be based on firm estimates					
Outcome	The capital expenditure plan provides reliable forward estimates of capital expenditure and asset disposal income. Reasons for the decisions and for the evaluation of alternatives and options are documented					
Ref	Effectiveness criteria	Consequence	Likelihood	Inherent risk rating	Controls assessment	Review priority
11.1	There is a capital expenditure plan covering works to be undertaken, actions proposed, responsibilities and dates	Moderate	Probable	Medium	Moderate	Priority 4
11.2	The capital expenditure plan provides reasons for capital expenditure and timing of expenditure	Minor	Probable	Low	Moderate	Priority 5
11.3	The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan	Moderate	Probable	Medium	Moderate	Priority 4
11.4	There is an adequate process to ensure the capital expenditure plan is regularly updated and implemented	Minor	Probable	Low	Moderate	Priority 5

12. Review of asset management system						
Key process	The asset management system is regularly reviewed and updated					
Outcome	The asset management system is regularly reviewed and updated					
Ref	Effectiveness criteria	Consequence	Likelihood	Inherent risk rating	Controls assessment	Review priority
12.1	A review process is in place to ensure the asset management plan and the asset management system described in it remain current	Minor	Probable	Low	Moderate	Priority 5
12.2	Independent reviews (e.g. internal audit) are performed of the asset management system	Minor	Probable	Low	Moderate	Priority 5

Appendix B - References

Mumbida Wind Farm representatives participating in the audit

- General Manager Mumbida Wind Farm
- Mumbida Site Manager
- Mumbida Site Lead.

AAG staff participating in the audit

		Hrs
• Andrew Baldwin	Executive Director	54
• Tanuja Sanders	Senior Engineer	30
• Margaret-Mary Gauci	Consultant	12
• Stephen Linden	Director (QA review)	1

Key documents and other information sources examined

- Mumbida Wind Farm Service Execution Plan (August 2021)
- Mumbida Wind Farm Simplified Work Plan – EHS Requirements (January 2021)
- Mumbida Wind Farm Operations and Maintenance Manual (2013)
- Operations and Maintenance Agreement between Mumbida Wind Farm and GE
- Mumbida Wind Farm ETAC
- Listing of network outages and curtailments since April 2019
- Examples of fortnightly HSE Services Meeting minutes
- Mumbida Wind Farm Fixed Assets Register (September 2021)
- List of outstanding Service Requests (November 2021)
- Examples of daily team briefing records
- Examples of completed Service Request reports
- DPOD extract – jobs planned, pending, completed (November 2021)
- Examples of defect investigation documentation (inc. Smartsheets, LOTO, Tailboard DOPD and Oracle RACES records)
- Example of inspection records
- Screenshots of key operational monitoring applications (WindSCADA and VisuPro)
- VT Fuse Solution Proposal (July 2020)
- Record of oil spill training drill (October 2021)
- Examples of monthly reports to management and the owner (prepared by GE)
- Examples of quarterly reports to the Mumbida Wind Farm Board
- Mumbida Wind Farm Training register
- Example reminder of CIP training due
- SQL Backup register
- GE Wind Farm Secure Deployment Guide (March 2021)
- Emergency response plans
- Mumbida Wind Farm Key Risk Register (May 2021)
- Infrastructure Capital Risk Management Framework
- Risk reports to Mumbida Wind Farm Board (May 2021)

- Mumbida Wind Farm Safety Framework gap analysis and audit report (prepared by ERM, April 2021)
- Mumbida Wind Farm budget FY20, FY21, FY22
- Mumbida Wind Farm 5year summary of revenue and expenses
- Representations from General Manager Mumbida Wind Farm, Mumbida Site Manager and Mumbida Site Lead.