

# **Collgar Wind Farm Pty Ltd**

Electricity Generation Licence (EGL22)  
2021 Asset Management System Review

Final report

2 March 2022



ASSURANCE  
ADVISORY  
GROUP

Level 11, 251 Adelaide Terrace  
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2 March 2022

Ms Rebecca White  
Regulatory and Trading Manager  
Collgar Wind Farm  
PO Box 7522  
Cloisters Square PO, Perth WA 6850

Dear Ms White

**Electricity Generation Licence (EGL22) – 2021 Asset Management System review report**

We have completed the Electricity Generation Licence Asset Management System Review for Collgar 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](mailto:abaldwin@assuranceadvisory.com.au) or myself at [slinden@assuranceadvisory.com.au](mailto:slinden@assuranceadvisory.com.au).

Yours sincerely

**Assurance Advisory Group**



**Stephen Linden**

**Director**

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# 1. Independent assurance practitioner's report

## Conclusion

We have undertaken a limited assurance engagement on the effectiveness of Collgar Wind Farm Pty Ltd's (**Collgar**) Asset Management System (**AMS**), relating to its Electricity Generation Licence (EGL22) (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 Collgar 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.

## Collgar's responsibility for the AMS

Collgar is responsible for ensuring that it has:

- Complied in all material respects with the requirements of the Licence as specified by the Review 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 Collgar'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 Collgar'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 Review 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 Collgar 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 Collgar's AMS requirements and standards
- Physical visit to operations located at the Collgar Wind Farm facility
- Consideration of reports and references evidencing activity
- Consideration of activities performed by Collgar 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 Collgar'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 Collgar's AMS for assets subject to the Licence will continue in the future.

## Restricted use

This report has been prepared for use by Collgar 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 Collgar, 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 Collgar'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**

2 March 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 Collgar Wind Farm Pty Ltd (**Collgar**) an Electricity Generation Licence (EGL22) (the **Licence**).

The Licence relates to Collgar's operation of a 222 MW wind farm located on 18,000 hectares of mostly farming land, approximately 25km south east of Merredin in the central wheatbelt of Western Australia. Collgar Wind Farm utilises 111 Vestas V90 2 MW turbines to deliver electricity into the South West Interconnected System (**SWIS**) via the Merredin to Kalgoorlie 220kV line. All power produced by the wind farm is purchased under agreement by Synergy. Collgar also owns and operates 33kV underground/overhead collection facilities and a 220 kV substation which provides two points of connection to a contiguous Western Power owned substation. Collgar is a 100% subsidiary of CWF Holdings Pty Ltd, which is wholly owned by the Retail Employees Superannuation Trust.

Operation and maintenance of the wind generation turbines (**WTGs**) and associated equipment is managed by Vestas Australian Wind Technology Pty Ltd (**Vestas**) under a 10 year Service Availability Agreement (**SAA**) contract, due for renewal in March 2022. Management of the balance of plant (**BOP**) assets, revenue management and overall operating management supervision remains with Collgar. Note that Vestas was contracted to manage BOP assets during construction until the end of the defects liability period on 16 March 2014. Vestas is responsible for operation of the BOP assets and windfarm generally under the SAA and is contracted to respond to BOP faults under a minor works agreement that will become part of the renewed SAA.

Section 14 of the Act requires Collgar 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 Collgar'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:
  - Collgar has maintained an appropriate level of resourcing and an appropriate suite of procedures and controls for the effective operation of the wind farm's WTG assets
  - With the exception of processes around the completion of scheduled and unscheduled BOP maintenance, Collgar has maintained an appropriate level of resourcing and an appropriate suite of procedures and controls for the effective operation of the wind farm's BOP assets
- Collgar and Vestas 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 a small number of minor opportunities for Collgar to improve elements of its asset management practices (where criteria are rated as "B" or "2"). Collgar had identified some of those improvement opportunities. In other instances, we raised the potential improvement opportunity with Collgar staff.

This review assessed that, of the 58 elements of Collgar’s AMS:

- For the asset management process and policy definition ratings:
  - 35 are rated as “Adequately defined”
  - 6 are rated as “Requires some improvement”
  - 17 are not rated.
- For the asset management performance ratings:
  - 34 are rated as “Performing effectively”
  - 7 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 Collgar’s performance may have deteriorated. We believe that this is not the case as on-the-whole, Collgar’s asset management practices have continued to improve since the 2016 AMS review.

### **2.3 Collgar’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**

Not applicable.

#### **B. Unresolved at end of current review period**

Not applicable.

### **2.5 Scope and objectives**

We have conducted a limited assurance engagement 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 Collgar’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 Collgar’s AMS for assets subject to the Licence involves performing procedures to obtain evidence about processes and controls designed and implemented within Collgar’s AMS for assets subject to the Licence. The procedures selected depend on our judgement, including the identification and assessment of risks of Collgar’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.

In accordance with the Review Guidelines, the review considered the effectiveness of Collgar’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<br>1.2 Planning processes and objectives reflect the needs of all stakeholders and are integrated with business planning<br>1.3 Service levels are defined in the asset management plan<br>1.4 Non-asset operations (e.g. demand management) are considered<br>1.5 Lifecycle costs of owning and operating assets are assessed<br>1.6 Funding options are evaluated<br>1.7 Costs are justified and cost drivers identified<br>1.8 Likelihood and consequences of asset failure are predicted<br>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<br>2.2 Evaluations include all life-cycle costs<br>2.3 Projects reflect sound engineering and business decisions<br>2.4 Commissioning tests are documented and completed<br>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<br>3.2 The reasons for under-utilisation or poor performance are critically examined and corrective action or disposal undertaken<br>3.3 Disposal alternatives are evaluated<br>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<br>4.2 Performance standards (availability of service, capacity, continuity, emergency response, etc.) are measured and achieved<br>4.3 Compliance with statutory and regulatory requirements<br>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<br>5.2 Risk management is applied to prioritise operations tasks<br>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<br>5.4 Accounting data is documented for assets [new criteria]<br>5.5 Operational costs are measured and monitored<br>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<br>11.2 The capital expenditure plan provides reasons for capital expenditure and timing of expenditure<br>11.3 The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan<br>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<br>12.2 Independent reviews (e.g. internal audit) are performed of the asset management system  |

Each key process and effectiveness criterion is applicable to Collgar'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 the period October to 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 Collgar staff to gain an understanding of process controls in place (see Appendix B for staff involved)
- Physical visit to operations located at the Collgar 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 Collgar'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 Collgar 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"> <li>Processes and policies are documented</li> <li>Processes and policies adequately document the required performance of the assets</li> <li>Processes and policies are subject to regular reviews, and updated where necessary</li> <li>The asset management information system(s) are adequate in relation to the assets being managed</li> </ul>                                   |
| B      | Requires some improvement        | <ul style="list-style-type: none"> <li>Processes and policies require improvement</li> <li>Processes and policies do not adequately document the required performance of the assets</li> <li>Reviews of processes and policies are not conducted regularly enough</li> <li>The asset management information system(s) requires minor improvements (taking into consideration the assets being managed)</li> </ul>         |
| C      | Requires substantial improvement | <ul style="list-style-type: none"> <li>Processes and policies are incomplete or require substantial improvement</li> <li>Processes and policies do not document the required performance of the assets</li> <li>Processes and policies are considerably out of date</li> <li>The asset management information system(s) requires substantial improvements (taking into consideration the assets being managed)</li> </ul> |
| D      | Inadequate                       | <ul style="list-style-type: none"> <li>Processes and policies are not documented</li> <li>The asset management information system(s) is not fit for purpose (taking into consideration the assets being managed).</li> </ul>  |

**Table 2: Performance rating scale**

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

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      |
| <b>1. Asset Planning</b>                 |  |                 | <b>B</b>           | <b>2</b>         |
| 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                |
| <b>2. Asset creation and acquisition</b> |  |                 | <b>Not rated</b>   | <b>Not rated</b> |
| 2.1                                      | Full project evaluations are undertaken for new assets, including comparative assessment of non-asset options              | Priority 4      |                    |                  |
| 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      |                    |                  |
| <b>3. Asset disposal</b>                 |  |                 | <b>Not rated</b>   | <b>Not rated</b> |
| 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      |                    |                  |

| Ref  | Asset management process and effectiveness criteria  | Review priority | Ratings            |             |
|--|--|-----------------|--------------------|-------------|
|  |  |                 | Process and policy | Performance |
| <b>4. Environmental analysis</b>               |  |                 | <b>A</b>           | <b>1</b>    |
| 4.1  | Opportunities and threats in the asset management system environment are assessed  | Priority 4      | A                  | 1           |
| 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           |
| <b>5. Asset operations</b>                     |  |                 | <b>B</b>           | <b>2</b>    |
| 5.1  | Operational policies and procedures are documented and linked to service levels required   | Priority 4      | B                  | 2           |
| 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                  | 2           |
| <b>6. Asset maintenance</b>                    |  |                 | <b>B</b>           | <b>2</b>    |
| 6.1  | Maintenance policies and procedures are documented and linked to service levels required   | Priority 4      | B                  | 2           |
| 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           |
| <b>7. Asset management information systems</b> |  |                 | <b>A</b>           | <b>1</b>    |
| 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   |

| Ref  | Asset management process and effectiveness criteria  | Review priority | Ratings            |                  |
|--|--|-----------------|--------------------|------------------|
|  |  |                 | Process and policy | Performance      |
| 7.7  | Management reports appear adequate for the licensee to monitor licence obligations   | Priority 5      | A                  | 1                |
| 7.8  | Adequate measures to protect asset management data from unauthorised access or theft by persons outside the organisation               | Priority 4      | A                  | 1                |
| <b>8. Risk management</b>                    |  |                 | <b>A</b>           | <b>1</b>         |
| 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                |
| <b>9. Contingency planning</b>               |  |                 | <b>A</b>           | <b>1</b>         |
| 9.1  | Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks                         | Priority 2      | A                  | 1                |
| <b>10. Financial planning</b>                |  |                 | <b>A</b>           | <b>1</b>         |
| 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                |
| <b>11. Capital expenditure planning</b>      |  |                 | <b>Not rated</b>   | <b>Not rated</b> |
| 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      |                    |                  |
| <b>12. Review of asset management system</b> |  |                 | <b>B</b>           | <b>2</b>         |
| 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      | B                  | 2                |
| 12.2   | Independent reviews (e.g. internal audit) are performed of the asset management system   | Priority 5      | A                  | 1                |

## 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   |   |
|--|--|---|
| 1.1 Asset management plan covers the processes in this table | <p>Throughout the review period, the following references applied to Collgar's asset management plans:</p> <ul style="list-style-type: none"> <li>• Life of Asset Management Plan (<b>LAMP</b>), which was first created in 2013 and last updated in 2018: <ul style="list-style-type: none"> <li>▪ The stated purpose of the LAMP is to preserve the long term value of the asset for a minimum of 25 years from practical completion</li> <li>▪ While the LAMP captures valuable and relevant information regarding Collgar's asset management practices, the most recent version does not reflect all current practices and arrangements and includes several recommendations (e.g. adoption of the Reliability Centred Maintenance approach), which were relevant at the time of last revision (2018)</li> <li>▪ The LAMP was intended to support a 5 year Asset Management Plan (AMP), which was developed in spreadsheets and related mainly to maintenance activities. The spreadsheets are updated annually to support those activities. As the spreadsheets were functional but not as user friendly as possible, in July 2021 a major AMP update was initiated to support the LAMP</li> </ul> </li> <li>• Asset Management Plan (<b>AMP</b>) Draft Revision B (October 2021), which is intended to support the LAMP: <ul style="list-style-type: none"> <li>▪ Leverages the learnings of the LAMP and supporting Failure Mode and Effects Analysis</li> <li>▪ Outlines: <ul style="list-style-type: none"> <li>• Methodologies for operating the wind farm, including the proposed use of the Reliability Centred Maintenance approach</li> <li>• Procedures governing the maintenance and upkeep of the wind farm and associated assets</li> <li>• Key contractual and regulatory arrangements governing the operations and maintenance, revenue management and funding arrangements</li> </ul> </li> <li>▪ Provides a detailed description, failure impact, spares holding strategy and asset history of all major system components</li> <li>▪ Otherwise reflects each of the elements outlined in the rest of this Asset Planning process.</li> </ul> </li> </ul> <p>Collgar has committed to finalising the AMP in the near future.</p> |   |
|  | <b>Process and Policy Rating:</b> Requires some improvement (B)  | <b>Performance Rating:</b> Improvement Required (2) |



| Effectiveness criteria   | Findings  |   |
|--|---|---|
| 1.2 Planning processes and objectives reflect the needs of all stakeholders and is integrated with business planning | <p>Through consideration of relevant supporting documentation and Collgar's business planning processes, we observed that:</p> <ul style="list-style-type: none"> <li>• Collgar's five-year Business Plan (2021-2025 being the current version) presents a consolidated reference to the business' operations plans, asset management strategy and plans, stakeholder management plans and operations and maintenance budgets</li> <li>• Collgar's business model and resources specifically accommodate the operation and maintenance of the Facility in accordance with Good Operating and Maintenance Practice and Original Equipment Manufacturer (OEM) Instructions, in order to meet Collgar's primary purpose of generating electricity from the wind farm and the sale of such energy into the WEM or directly to Synergy.</li> </ul> |   |
|  | <b>Process and Policy Rating:</b> Adequately defined (A)  | <b>Performance Rating:</b> Performing effectively (1) |
| 1.3 Service levels are defined in the asset management plan  | Through examination of Collgar's Business Plan and Life of Asset Management Plan, we observed that the facility's service levels are appropriately reflected in availability and performance requirements.  |   |
|  | <b>Process and Policy Rating:</b> Adequately defined (A)  | <b>Performance Rating:</b> Performing effectively (1) |
| 1.4 Non-asset operations (e.g. demand management) are considered   | As the primary purpose of Collgar is to supply electricity to the South West Integrated Network, there is no requirement or opportunity for Collgar to consider non-asset options.  |   |
|  | <b>Process and Policy Rating:</b> Not rated   | <b>Performance Rating:</b> Not rated                  |
| 1.5 Lifecycle costs of owning and operating assets are assessed  | <p>Through consideration of Collgar's business planning and asset management planning processes, we observed that:</p> <ul style="list-style-type: none"> <li>• Operating and maintenance costs are appropriately identified and built into Collgar's annual budgeting process</li> <li>• There is currently no requirement for capital expenditure planning</li> <li>• Beyond the owner's execution of its asset investment strategy, there is no specific need for asset lifecycle costs to be assessed by Collgar.</li> </ul>  |   |
|  | <b>Process and Policy Rating:</b> Not rated   | <b>Performance Rating:</b> Not rated                  |
| 1.6 Funding options are evaluated  | Collgar's current financial 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.  |   |
|  | <b>Process and Policy Rating:</b> Not rated   | <b>Performance Rating:</b> Not rated                  |

| Effectiveness criteria   | Findings   |   |
|--|--|---|
| 1.7 Costs are justified and cost drivers identified            | Through discussion with the Principal Engineer and Site Superintendent, and consideration of business planning and budgeting processes, we observed that operating and maintenance costs are appropriately identified and built into Collgar's annual budgeting process, which is designed to ensure that forecast costs are justified.  |   |
|  | <b>Process and Policy Rating:</b> Adequately defined (A)   | <b>Performance Rating:</b> Performing effectively (1) |
| 1.8 Likelihood and consequences of asset failure are predicted | <p>Through discussion with the Principal Engineer and Site Superintendent, and consideration of Collgar's risk management practices and examination of supporting documentation, we observed that Collgar has applied the following mechanisms for predicting the consequences and likelihood of the facility's failure:</p> <ul style="list-style-type: none"> <li>• The Collgar risk register considers the failure or unavailability of major items of equipment</li> <li>• Regular preventative maintenance provides for regular assessment of asset performance</li> <li>• WTG assets are monitored on a continuous basis (including condition monitoring techniques) by Vestas' Global operations</li> <li>• The Collgar Failure Mode and Effects Analysis (last revised in 2020) assists in determining which BOP spares are required to be held</li> <li>• 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</li> <li>• During scheduled outages, main components of the Facility's plant are inspected for defects.</li> </ul> |   |
|  | <b>Process and Policy Rating:</b> Adequately defined (A)   | <b>Performance Rating:</b> Performing effectively (1) |
| 1.9 Asset management plan is regularly reviewed and updated.   | <p>We observed that:</p> <ul style="list-style-type: none"> <li>• Collgar's LAMP was reviewed and updated in 2016 and 2018. The date of next review was listed as June 2023, which would have resulted in a five-year period before review and update</li> <li>• Since the last revision to the LAMP, Collgar recognised the need for a substantial update to its supporting Asset Management Plan and initiated a review in July 2021. At the time of this review, the new Asset Management Plan remained in draft, with an expectation for the plan to be finalised in the near future</li> <li>• The new Asset Management Plan appropriately proposes an annual review.</li> </ul>  |   |
|  | <b>Process and Policy Rating:</b> Requires some improvement (B)  | <b>Performance Rating:</b> 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, Collgar 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. Note that the scope of this review does not include any potential expansion project contemplated by Collgar.

## 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 Collgar 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 Collgar and Vestas Site Management Team and examination of relevant supporting documentation, we observed that:</p> <ul style="list-style-type: none"> <li>• In its Master Environmental Management Plan, Collgar has recognised and captured a range of threats to its asset management system, including fire events, lightning strikes and other weather events, other external events and emergencies. The plan encompasses Collgar’s Flora &amp; Fauna Management Plan, Mallee fowl Management Plan, Stakeholder Management Plan and Auswind Best Practice Guidelines.</li> <li>• Details of Collgar’s statutory obligations (e.g. Environmental Operating Licence, NGER Act, OHS Act and regulations) are maintained in its CAMMS Register, with compliance tracked: <ul style="list-style-type: none"> <li>▪ Environmental considerations relating to operation and maintenance, and decommissioning are included</li> <li>▪ There were no reportable breaches noted within the review period</li> </ul> </li> <li>• Traffic Management is effectively managed for compliance by all personnel accessing the Collgar Wind Farm site whether it be employees, site visitors and/or contractors.</li> </ul> |   |
|   | <b>Process and Policy Rating:</b> Adequately defined (A)  | <b>Performance Rating:</b> Performing effectively (1) |
| 4.2 Performance standards (availability of service, capacity, continuity, emergency response, etc.) are measured and achieved | <p>Through discussion with the Collgar and Vestas Site Management Team, and consideration of relevant supporting documentation, we observed that:</p> <ul style="list-style-type: none"> <li>• Collgar’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, enabling Collgar to ensure it either achieves those standards, or appropriately responds to any instance where a performance standard is not achieved. Collgar has reported a high level of performance during the audit period</li> <li>• Collgar staff manage and monitor environmental performance in accordance with established environmental and emergency response management plans</li> <li>• Collgar’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.</li> </ul>  |   |
|   | <b>Process and Policy Rating:</b> Adequately defined (A)  | <b>Performance Rating:</b> Performing effectively (1) |

| Effectiveness criteria   | Findings  |   |
|--|---|---|
| 4.3 Compliance with statutory and regulatory requirements                    | <p>Through discussion with the Collgar and Vestas Site Management Team, and examination of relevant supporting information, we determined that:</p> <ul style="list-style-type: none"> <li>• Collgar 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"> <li>▪ Occupational Health and Safety Act and associated regulations</li> <li>▪ Environmental Protection Act</li> <li>▪ Aboriginal Heritage Act</li> <li>▪ Waste Avoidance and Resource Recovery Act and subordinate legislation</li> </ul> </li> <li>• Collgar monitors and reports on its compliance with regulatory requirements on a regular basis</li> <li>• To date, no significant incidents or breaches have been recognised and reported.</li> </ul> |   |
|  | <b>Process and Policy Rating:</b> Adequately defined (A)  | <b>Performance Rating:</b> Performing effectively (1) |
| 4.4 Service standard (customer service levels etc) are measured and achieved | <p>Through discussion with the Collgar and Vestas Site Management Team and consideration of Collgar's business management processes, we observed that</p> <ul style="list-style-type: none"> <li>• Control and operation of the Collgar Wind Farm Facility is undertaken in accordance with Collgar's contractual arrangements</li> <li>• Collgar monitors and reports on its electricity production in accordance with its market obligations and any operational requirements of Western Power.</li> </ul>  |   |
|  | <b>Process and Policy Rating:</b> Adequately defined (A)  | <b>Performance Rating:</b> 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:** [Requires some improvement \(B\)](#) / [Improvement required \(2\)](#)

| Effectiveness criteria   | Findings   |   |
|--|--|---|
| 5.1 Operational policies and procedures are documented and linked to service levels required | <p>Through discussion with the Collgar and Vestas Site Management Team, and consideration of relevant supporting documentation, we observed that:</p> <ul style="list-style-type: none"> <li>• Control and operation of the Collgar Wind Farm Facility is undertaken in accordance with Collgar’s contractual obligations</li> <li>• Collgar has developed a comprehensive list of documented procedures, based on OEM documentation, to cover tasks required to operate and maintain the Facility’s wind turbine generators (<b>WTG</b>) in a safe manner. Key operational policies and procedures link to performance standards (i.e. service levels) and include: <ul style="list-style-type: none"> <li>▪ Relevant operating and maintenance principles and procedures, covering elements such as safety, plant control, performance monitoring, management of alerts and faults, WTG braking and restart, met mast lifting, management of work orders and maintenance strategies</li> <li>▪ Operating instructions for all WTG operations</li> <li>▪ SAP for SCADA Management with 24/7 off-site condition monitoring provided by Vestas’ resources in India</li> </ul> </li> <li>• Collgar has identified the following matters, which require attention in the medium term: <ul style="list-style-type: none"> <li>▪ As a result of a review of its Asset Management Plan (which remained in draft at the time of our review), Collgar has identified improvement opportunities for developing detailed procedures to operate and maintain Balance of Plant (<b>BOP</b>) assets with the view to implementing a Reliability Centred Maintenance approach</li> <li>▪ Due to limitations in its Trunk computerised maintenance management system, Collgar is also in the process of improving its processes for tracking and managing close-out of work orders for its BOP assets.</li> </ul> </li> </ul> |   |
|  | <b>Process and Policy Rating:</b> Requires some improvement (B)  | <b>Performance Rating:</b> Improvement Required (2) |

| Effectiveness criteria   | Findings   |   |
|--|--|---|
| 5.2 Risk management is applied to prioritise operations tasks  | <p>Through discussion with the Collgar and Vestas Site Management Team, and consideration of relevant supporting documentation, we observed that Collgar's operational processes include:</p> <ul style="list-style-type: none"> <li>• A comprehensive risk register based on Collgar's business-wide risk management policy and framework</li> <li>• 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</li> <li>• A designated Vestas team to manage all operational activity for Collgar's WTG assets, including response to alerts, faults and incidents</li> <li>• For BOP operational activity, adoption of manual methods to track and close out high priority items. We note that Collgar intends to automate its BOP work order tracking and close out as part of its continuous improvement approach</li> <li>• Daily site-meetings to review performance and to plan for upcoming tasks.</li> </ul> |   |
|  | <b>Process and Policy Rating:</b> Adequately defined (A)   | <b>Performance Rating:</b> 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 Collgar and Vestas Site Management Team and consideration of Collgar's asset management systems and records, we observed that:</p> <ul style="list-style-type: none"> <li>• The Vestas SAP system acts as Collgar's asset register for WTG assets</li> <li>• Details of each WTG's condition are also documented in supporting Vestas systems</li> <li>• The Hardcat asset management system acts as Collgar's asset register for BOP assets</li> <li>• An appropriate level of detail is documented for each asset, including links/references to maintenance activity relevant to each asset.</li> </ul>  |   |
|  | <b>Process and Policy Rating:</b> Adequately defined (A)   | <b>Performance Rating:</b> Performing effectively (1) |
| 5.4 Accounting data is documented for assets   | <p>We observed that Collgar's asset register and corporate records capture appropriate accounting data, including:</p> <ul style="list-style-type: none"> <li>• Purchase date</li> <li>• Acquisition cost</li> <li>• Depreciation rates and costs</li> <li>• Written down values.</li> </ul>   |   |
|  | <b>Process and Policy Rating:</b> Adequately defined (A)   | <b>Performance Rating:</b> Performing effectively (1) |

| Effectiveness criteria   | Findings  |   |
|--|---|---|
| 5.5 Operational costs are measured and monitored   | Through consideration of Collgar's information systems and relevant supporting documentation such as weekly and monthly reports, we observed that Collgar tracks and reports operational costs on a monthly basis. Costs measured and monitored against budget include SAA costs, BOP maintenance expenses, land (lease) expenses, network and ancillary expenses, overhead and other costs.  |   |
|  | <b>Process and Policy Rating:</b> Adequately defined (A)  | <b>Performance Rating:</b> Performing effectively (1) |
| 5.6 Staff resources are adequate and staff receive training commensurate with their responsibilities | <p>Through discussion with the Collgar and Vestas Site Management Team, and consideration of relevant supporting documentation, we observed that:</p> <p><u>For WTG assets</u></p> <ul style="list-style-type: none"> <li>• Up to 12 designated Vestas staff (including two shifts of five staff each, providing 7/365 coverage from 6am to 4pm) are allocated to the operation of the Collgar Wind Farm Facility</li> <li>• Vestas staff also provide designated Off-site Administration and Continuous Remote Monitoring of the WTG assets</li> <li>• Vestas provides corporate support from its Australian operations, plus enables sharing of information from its broader Regional and Australia-wide wind farm operations</li> <li>• An appropriate skills and training matrix is maintained for Vestas staff, with regular reminder notices sent for any upcoming staff training courses. We observed that the skills and training matrix contains some outdated information relating to former staff and courses that no longer require refreshers. We consider this point to be a housekeeping matter</li> </ul> <p><u>For BOP assets</u></p> <ul style="list-style-type: none"> <li>• Collgar's site team is constituted of two full-time staff responsible for BOP O&amp;M activities in addition to overseeing Vestas' site operations</li> <li>• Works associated with changing Collgar's work-order management system from Trunk to Hardcat has resulted in a backlog of data being captured. This backlog may indicate a lack of appropriate resourcing to complete the required work in a timely manner.</li> </ul> |   |
|  | <b>Process and Policy Rating:</b> Adequately defined (A)  | <b>Performance Rating:</b> Improvement Required (2)   |



## 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  |  |
|---|---|--|
| <p>6.1 Maintenance policies and procedures are documented and linked to service levels required</p> | <p>Through discussion with the Collgar and Vestas Site Management Team, and consideration of relevant supporting documentation, we observed that:</p> <p><u>For WTG assets</u></p> <ul style="list-style-type: none"> <li>• Vestas maintains a comprehensive suite of documented policies, procedures and work instructions to cover tasks required to maintain all WTGs operated by Vestas in accordance with the SAA</li> <li>• Key maintenance procedures link to performance standards (i.e. service levels) and include 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</li> <li>• Vestas maintains other supporting documentation such as schedules for maintenance and management of spare parts</li> <li>• Procedures for the scope and frequency of routine maintenance of equipment have been developed based on Vestas OEM documentation</li> <li>• Checklists and sign-off sheets are completed by Vestas staff upon completion of any service order that aligns with the work instruction for that task</li> <li>• Weekly, monthly and quarterly checklists are maintained to document completion of service orders.</li> </ul> <p><u>For BOP assets</u></p> <ul style="list-style-type: none"> <li>• Collgar maintains a suite of documented policies, procedures and work instructions to cover tasks required to maintain BOP assets</li> <li>• Collgar has identified the following matters, which require attention in the medium term:               <ul style="list-style-type: none"> <li>▪ Documented procedures, work instructions and drawings relevant to BOP assets need to be updated and stored within the designated SharePoint portal</li> <li>▪ A Spare Parts Preservation and Storage Procedure is yet to be developed to ensure that spares inventory is healthy and available for use.</li> </ul> </li> </ul> |  |
|   | <p><b>Process and Policy Rating:</b> Requires some improvement (B)</p>  | <p><b>Performance Rating:</b> Improvement Required (2)</p> |

| Effectiveness criteria  | Findings   |  |  |   |
|---|--|--|--|---|
| 6.2 Regular inspections are undertaken of asset performance and condition                               | <p>Through discussion with the Collgar and Vestas Site Management Team; consideration of relevant supporting documentation and sample testing of evidence of inspections and maintenance activity, we determined that:</p> <p><u>For WTG assets</u></p> <ul style="list-style-type: none"> <li>• In accordance with its SAA with Collgar, Vestas performs a combination of scheduled six-monthly inspections (one major and one minor inspection annually), blade drone inspections and other site inspections on an as needed basis, with maintenance service orders identified either through Vestas'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</li> <li>• Site inspections generate corrective maintenance requirements, which are captured and monitored within the supporting Vestas systems, including SAP. When attending a WTG for planned or unplanned work, technicians may identify items for repair or replacement</li> <li>• Appropriate prioritisation regimes are built into Vestas systems.</li> </ul> <p><u>For BOP assets</u></p> <ul style="list-style-type: none"> <li>• Collgar performs inspections of its BOP assets in accordance with defined schedules (including monthly, annual and other specified timeframes)</li> </ul> <p>We examined several examples of inspections, defects/faults identified and resulting work orders completed.</p> <table border="1" data-bbox="640 869 2072 922"> <tr> <td data-bbox="640 869 1451 922"><b>Process and Policy Rating:</b> Adequately defined (A)</td> <td data-bbox="1451 869 2072 922"><b>Performance Rating:</b> Performing effectively (1)</td> </tr> </table> |  | <b>Process and Policy Rating:</b> Adequately defined (A) | <b>Performance Rating:</b> Performing effectively (1) |
| <b>Process and Policy Rating:</b> Adequately defined (A)  | <b>Performance Rating:</b> Performing effectively (1)  |  |  |   |
| 6.3 Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule | <p>Through discussion with the Collgar and Vestas Site Management Team, consideration of relevant supporting documentation and testing of outstanding service/work orders, we observed that:</p> <p><u>For WTG assets</u></p> <ul style="list-style-type: none"> <li>• In accordance with its SAA with Collgar, Vestas has established maintenance plans to perform maintenance tasks on a combination of a six-monthly, annual, three yearly, five yearly and 10 yearly basis</li> <li>• Vestas' SAP system is used to record all work schedules and service orders, which are tracked on a daily basis and used to guide maintenance tasks for WTGs. We examined examples of completed Service Reports</li> <li>• Daily meetings are held on site for all Vestas staff on duty, to discuss production and execution of maintenance work, and to determine priorities</li> <li>• Completion of maintenance service orders are managed by the Collgar Site Manager</li> <li>• Overdue service orders are flagged and a listing of outstanding service orders can be extracted from the SAP system. We examined an example of an overdue service order report</li> </ul>  |  |  |   |

| Effectiveness criteria | Findings  |   |
|------------------------|---|---|
| 6.3 (cont.)            | <p data-bbox="654 212 1671 244">For BOP assets (projected to represent 8% of total maintenance expenditure in 2021)</p> <ul data-bbox="685 260 2051 887" style="list-style-type: none"> <li data-bbox="685 260 2051 328">• Scheduled, routine maintenance tasks are captured in a BOP Maintenance Work Plan spreadsheet, which contains comprehensive schedules and details of maintenance activities performed during each calendar year</li> <li data-bbox="685 344 2051 413">• Unscheduled maintenance requirements are identified and managed through a combination of SCADA logging of events and Trunk system alerts, events/conditions and equipment faults</li> <li data-bbox="685 429 2051 529">• Between 26 March 2021 and 6 October 2021, the Trunk system was not in service. During that period, Collgar relied on manual tracking of maintenance items via the BOP Maintenance Work Plan spreadsheet and SCADA logging</li> <li data-bbox="685 545 2051 614">• At the time of this review, there was a backlog of data entry of completed maintenance works in the BOP Maintenance Work Plan spreadsheet</li> <li data-bbox="685 630 2051 767">• Collgar has recognised that the Trunk system is not user friendly and has some functional limitations, particularly for responding to alarms as part of its condition monitoring arrangements (as of March 2021, &gt; 15,000 unacknowledged alarms had been generated). Collgar has also identified the need for the Trunk system vendor, Jarrah Solutions to deliver improvements to the system's functionality</li> <li data-bbox="685 783 2051 887">• Collgar's Hardcat system has been identified as a possible alternate solution to support its planning and tracking of BOP maintenance work requests. At the time of this review, a small number of routine maintenance activities had been captured in the Hardcat maintenance module.</li> </ul> <p data-bbox="654 903 2063 1074">Collgar has recognised the need to fully consider the appropriate resources and systems required to most effectively and efficiently reflect the up-to-date status of historical and future BOP maintenance works, culminating in a potential business case for either improving or replacing the Trunk system in the longer term. However, it had yet to assign a timeframe for resolving this matter. <i>We discussed this matter with Collgar staff as a potential improvement opportunity.</i></p> |   |
|                        | <b>Process and Policy Rating:</b> Requires some improvement (B)   | <b>Performance Rating:</b> Improvement Required (2) |

| Effectiveness criteria   | Findings  |   |
|--|---|---|
| 6.4 Failures are analysed and operational/maintenance plans adjusted where necessary | <p>Through discussion with the Collgar and Vestas Site Management Team, and consideration of relevant supporting documentation, we observed that:</p> <ul style="list-style-type: none"> <li>Defects identified through Vestas' continuous monitoring are logged for investigation, root cause analysis and action by Vestas staff on site in accordance with their criticality to achieve asset protection, performance guarantees and performance availability</li> <li>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</li> <li>It is one of Collgar'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.</li> </ul> |   |
|  | <b>Process and Policy Rating:</b> Adequately defined (A)  | <b>Performance Rating:</b> Performing effectively (1) |
| 6.5 Risk management is applied to prioritise maintenance tasks                       | <p>Through discussion with the Collgar and Vestas Site Management Team, and consideration of relevant supporting documentation, we observed that Collgar's operational processes include:</p> <ul style="list-style-type: none"> <li>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</li> <li>A designated Vestas team to manage all maintenance activity for Collgar's WTG assets, including prioritised response to alerts, faults and incidents</li> <li>For BOP operational activity, adoption of manual methods to track and close-out high priority items. We note that Collgar intends to automate its BOP work order tracking and close out as part of its continuous improvement approach</li> <li>Daily site-meetings to review performance and plan for upcoming tasks.</li> </ul>  |   |
|  | <b>Process and Policy Rating:</b> Adequately defined (A)  | <b>Performance Rating:</b> Performing effectively (1) |
| 6.6 Maintenance costs are measured and monitored                                     | <p>Through discussion with Collgar's information systems and relevant supporting documentation such as weekly and monthly reports, we observed that Collgar tracks and reports maintenance costs on a monthly basis. Costs measured and monitored against budget include BOP maintenance expenses and the SAA costs payable to Vestas for undertaking scheduled and unplanned maintenance.</p>  |   |
|  | <b>Process and Policy Rating:</b> Adequately defined (A)  | <b>Performance Rating:</b> 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 Collgar staff, Collgar’s technology consultant and Vestas staff, and consideration of relevant system documentation, we observed that Collgar 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"> <li>• Technical documentation for Collgar’s application of its SCADA and other supporting systems, which is maintained and updated in accordance with Collgar’s IT standards</li> <li>• Technical documentation for Vestas’ application of its SAP, SCADA and other supporting systems, which is maintained and updated in accordance with Vestas’ IT standards.</li> </ul>   |
|   | <p><b>Process and Policy Rating:</b> Adequately defined (A)      <b>Performance Rating:</b> Performing effectively (1)</p>   |
| 7.2 Input controls include suitable verification and validation of data entered into the system | <p>Through discussion with the Collgar and Vestas Site Management Team, consideration of relevant system documentation and walkthrough of a sample of functions managed by the SAP and SCADA systems, we observed that Collgar’s core systems maintained appropriate data verification and validation controls and techniques.</p>   |
|   | <p><b>Process and Policy Rating:</b> Adequately defined (A)      <b>Performance Rating:</b> Performing effectively (1)</p>   |
| 7.3 Security access controls appear adequate, such as passwords                                 | <p>Through discussions with Collgar staff, Collgar’s technology consultant and Vestas staff and consideration of relevant supporting documentation, we observed that Collgar 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 Collgar and Vestas IT standards, policies and procedures.</p>  |
|   | <p><b>Process and Policy Rating:</b> Adequately defined (A)      <b>Performance Rating:</b> Performing effectively (1)</p>   |
| 7.4 Physical security access controls appear adequate   | <p>Through discussions with the Collgar and Vestas Site Management Team, and consideration of relevant supporting documentation, we observed that Collgar has established and maintained appropriate processes and procedures relating to physical access and 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"> <li>• Access to the site operations building, main control room and key plant control facilities is via locked door, with all keys managed by designated Vestas duty personnel</li> <li>• All visitors and contractors are required to report to and be accompanied by designated Collgar or Vestas duty personnel.</li> </ul> |
|   | <p><b>Process and Policy Rating:</b> Adequately defined (A)      <b>Performance Rating:</b> Performing effectively (1)</p>   |

| Effectiveness criteria   | Findings   |   |
|--|--|---|
| 7.5 Data backup procedures appear adequate and backups are tested  | <p>Through discussions with Collgar and Vestas staff, and consideration of relevant supporting documentation, we observed that:</p> <ul style="list-style-type: none"> <li>• Procedures for managing data backup and data restore of Collgar servers have been established and maintained in accordance with Collgar and Vestas IT standards</li> <li>• Collgar's and Vestas' procedures provide for regular backups of all key data in accordance with accepted industry practice, with regular testing of back-ups recommended</li> <li>• Vestas IT staff provide full support for Vestas' operations at Collgar, including management of backups for data maintained on Vestas facilities.</li> </ul>   |   |
|  | <b>Process and Policy Rating:</b> Adequately defined (A)   | <b>Performance Rating:</b> Performing effectively (1) |
| 7.6 Computations for licensee performance reporting are accurate   | Collgar's asset management information systems do not directly provide data used in any computation related to Collgar's licensee performance reporting.   |   |
|  | <b>Process and Policy Rating:</b> Not rated  | <b>Performance Rating:</b> Not rated                  |
| 7.7 Management reports appear adequate for the licensee to monitor licence obligations                                       | <p>Through discussions with Collgar and Vestas staff, and and consideration of relevant supporting documentation and management reporting procedures, we determined that:</p> <ul style="list-style-type: none"> <li>• Collgar's SCADA and SAP (Vestas) systems are capable of generating a substantial variety of reports, which assist Collgar to monitor its performance in managing the facility's assets and its compliance with licence obligations</li> <li>• 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</li> <li>• Collectively, these reports appear adequate to enable Collgar to monitor its licence obligations.</li> </ul> |   |
|  | <b>Process and Policy Rating:</b> Adequately defined (A)   | <b>Performance Rating:</b> 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 Collgar and Vestas staff, and consideration of relevant supporting documentation, we observed that with the support of Vestas staff and resources, Collgar 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"> <li>• Comprehensive user access controls, including user permissions and remote access</li> <li>• Contemporary information and cyber security processes and procedures.</li> </ul>  |   |
|  | <b>Process and Policy Rating:</b> Adequately defined (A)   | <b>Performance Rating:</b> 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 the Governance Manager, Principal Engineer and Site Supervisor; consideration of Collgar’s risk management practices and examination of supporting documentation, we observed that:</p> <ul style="list-style-type: none"> <li>• Collgar maintains a combination of the Collgar business-wide risk management approach and Vestas operational risk management processes</li> <li>• From an operational perspective, Collgar 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"> <li>▪ Risk-based policies and procedures are applied to Collgar’s operational and maintenance activities performed by Vestas, including asset condition assessments. We sighted several examples of risk based practices being applied to Collgar’s monitoring of WTG operations, and in its responses to alarms, faults and incidents. Collgar maintains appropriate records of those activities</li> <li>▪ Collgar maintains a comprehensive risk register, which is subject to regular review in accordance with the Collgar Risk Management Policy and Framework</li> <li>▪ Progress with the implementation of risk treatment plans is monitored on a regular basis</li> <li>▪ Results of reviews of the risk register, plus monitoring of the progress of risk treatment plans are reported to Collgar management and the Board.</li> </ul> </li> </ul> <p>We sighted evidence of risk-based decision making and instructions relevant to management of the Facility’s assets during the review period, including resulting amendments to asset planning.</p> <p>Based on our examination of the risk management processes in place, we determined that Collgar uses a well-established and consistent system for identifying and managing risks, including formal supporting procedural documentation.</p> |  |
|   | <p><b>Process and Policy Rating:</b> Adequately defined (A)</p>  | <p><b>Performance Rating:</b> Performing effectively (1)</p> |

| Effectiveness criteria   | Findings  |   |
|--|---|---|
| 8.3 Probability and consequences of asset failure are regularly assessed | <p>Through discussion with the Governance Manager, Principal Engineer and Site Supervisor; consideration of Collgar's risk management practices and examination of supporting documentation, we observed that Collgar has applied the following mechanism for identifying and assessing the consequence and likelihood of facility asset failure:</p> <ul style="list-style-type: none"> <li>• Regular preventative maintenance provides for regular assessment of asset performance</li> <li>• WTG assets are monitored on a continuous basis (including condition monitoring techniques) by Vestas' Global operations</li> <li>• The Collgar Failure Mode and Effects Analysis (last revised in 2020) assists in determining which BOP spares are required to be held</li> <li>• 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</li> <li>• The Collgar risk register considers the failure or unavailability of major items of equipment.</li> </ul> <p>The management structures, skills and resources assigned to Collgar's asset management processes appear to be appropriate for enabling the regular assessment of the probability and consequences of asset failure.</p> |   |
|  | <b>Process and Policy Rating:</b> Adequately defined (A)  | <b>Performance Rating:</b> Performing effectively (1) |



## 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) / Performing effectively (1)

| 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 Site Superintendent and Site Manager - Vestas, examination of emergency response and business continuity processes established to accommodate the Collgar Wind Farm Facility, and testing of a sample of emergency response activities, we determined that:</p> <ul style="list-style-type: none"> <li>• A key objective of Collgar’s operations is to maintain the facility’s availability (including for individual turbines) and to maximise the supply of electricity to the extent allowable by the market operator</li> <li>• Collgar has developed a comprehensive Emergency Response Plan and Business Continuity Plan (BCP). The BCP outlines measures in place for ensuring the business can continue operations during a disaster, including restoration of operations as quickly as possible. Independent consultants were engaged to assist with the development and implementation of the BCP and related business impact assessments</li> <li>• Collgar’s risk register captures higher risks relating to potential major disruption to operations, including equipment failure, unavailability of assets or personnel, cyber incidents and physical harm to personnel or assets</li> <li>• Vestas has applied a suite of emergency response procedures and management plans to its Collgar Wind Farm activities, including : <ul style="list-style-type: none"> <li>▪ A comprehensive Emergency Response Plan specific for the Collgar Wind Farm Facility, with detailed instructions and references to be used in responding to emergency scenarios. We sighted evidence of several emergency response scenarios being performed on site during the review period</li> <li>▪ Vestas Crisis Management Policy</li> <li>▪ Vestas Major Incident Management Procedure</li> <li>▪ Vestas ASP Cyber Incident Response Plan</li> </ul> </li> <li>• Spares are managed to minimise the exposure to disruption and unavailability of WTGs or BOP equipment.</li> </ul> <p>We sighted evidence of:</p> <ul style="list-style-type: none"> <li>• Several emergency response scenarios being performed on site during the review period</li> <li>• Review and testing of the Collgar BCP, including business impact assessments</li> <li>• Collgar’s COVID response arrangements.</li> </ul> |  |
|   | <p><b>Process and Policy Rating:</b> Adequately defined (A)</p>   | <p><b>Performance Rating:</b> Performing effectively (1)</p> |

#### 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 consideration of Collgar’s Business Plan and supporting financial planning mechanisms, we observed that the Business Plan states Collgar’s financial objectives and the related activities for achieving those objectives.  |   |
|   | <b>Process and Policy Rating:</b> Adequately defined (A)  | <b>Performance Rating:</b> Performing effectively (1) |
| 10.2 The financial plan identifies the source of funds for capital expenditure and recurrent costs  | Through consideration of Collgar’s Business Plan, financial model and annual O&M budget, we observed that: <ul style="list-style-type: none"> <li>• The Collgar annual O&amp;M budget is aligned with Collgar’s overall business plans and is expected to be funded through its operational revenue</li> <li>• Source of funding and related financing costs are clearly accounted for.</li> </ul>  |   |
|   | <b>Process and Policy Rating:</b> Adequately defined (A)  | <b>Performance Rating:</b> Performing effectively (1) |
| 10.3 The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets) | Through consideration of Collgar’s Business Plan, financial model and annual O&M budget, we observed that the annual O&M budget: <ul style="list-style-type: none"> <li>• Is comprised of a summary of forecast revenue and expenses relating to the production and dispatch of electricity in accordance with contractual agreements</li> <li>• Provides projections of operating profit and loss, and the financial position attributable to the Facility</li> <li>• Contains projections that are sufficient to cover future operating costs.</li> </ul> |   |
|   | <b>Process and Policy Rating:</b> Adequately defined (A)  | <b>Performance Rating:</b> 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 consideration of Collgar’s Business Plan, financial model and annual O&M budget, we determined that the Collgar Business Plan and financial model provides projections of income (in the form of monthly bundled payments from Synergy) over a five-year period, which can be extended for the duration of the Facility’s life and relevant contractual agreements.   |   |
|   | <b>Process and Policy Rating:</b> Adequately defined (A)  | <b>Performance Rating:</b> Performing effectively (1) |

| Effectiveness criteria   | Findings  |   |
|--|---|---|
| 10.5 The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services | Through consideration of Collgar's Business Plan, financial model and annual O&M budget, we determined that the financial model and O&M budget provides a sufficient level of detail relating to forecast operational, maintenance and administrative costs. There are currently no expectations for capital expenditure. |   |
|  | <b>Process and Policy Rating:</b> Adequately defined (A)  | <b>Performance Rating:</b> Performing effectively (1) |
| 10.6 Large variances in actual/budget income and expenses are identified and corrective action taken where necessary                     | Through consideration of Collgar's financial planning and reporting processes, we determined that actual versus budgeted expenditure is monitored and reported on a monthly basis, with variances identified and investigated where required to determine whether corrective action is required.                          |   |
|  | <b>Process and Policy Rating:</b> Adequately defined (A)  | <b>Performance Rating:</b> 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 Collgar's annual O&M 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  |   |
|--|---|---|
| 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>We observed that:</p> <ul style="list-style-type: none"> <li>• Collgar’s LAMP was reviewed and updated in 2016 and 2018. The date of next review was listed as June 2023, which would have resulted in a five-year period without review and update</li> <li>• Since the last revision to the LAMP, Collgar recognised the need for a substantial update to its Asset Management Plan and initiated a review in July 2021. At the time of this review, the new Asset Management Plan remained in draft, with an expectation for the plan to be finalised in the near future</li> <li>• The new Asset Management Plan appropriately proposes an annual review.</li> </ul> |   |
|  | <b>Process and Policy Rating:</b> Requires some improvement (B)   | <b>Performance Rating:</b> Improvement required (2)   |
| 12.2 Independent reviews (e.g. internal audit) are performed of the asset management system  | <p>We observed that:</p> <ul style="list-style-type: none"> <li>• Collgar had engaged Jarrah Solutions Pty Ltd to review the LAMP and provide input through the Failure Modes and Effects Analysis</li> <li>• Collgar staff independent to those involved in the preparation of the LAMP were involved in the initiation and development of the new (draft) AMP</li> <li>• Collgar utilises an internal audit function to assist in providing assurance to its management and Board that key risks and controls are subject to review, including asset management activities where considered relevant.</li> </ul>  |   |
|  | <b>Process and Policy Rating:</b> Adequately defined (A)  | <b>Performance Rating:</b> Performing effectively (1) |

## 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 <b>Further action required</b> (Yes/No/Not Applicable) reference, if applicable) |
|--|--|---|---------------|---|
| <b>A. Resolved during current review period</b>  |  |   |               |   |
| <b>B. Unresolved at end of current review period</b>   |  |   |               |   |
| Not applicable – there were no recommendations addressing asset system deficiencies from the previous 2016 review. |  |   |               |   |

## Appendix A - Review Plan



### **Collgar Wind Farm Pty Ltd**

Electricity Generation Licence (EGL22)

2021 Asset Management System Review

Review Plan

26 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 Collgar Wind Farm Pty Ltd (**Collgar Wind Farm**) an Electricity Generation Licence (EGL 22) (the **Licence**).

Section 14 of the Act requires Collgar 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 Collgar Wind Farm's operation of a 222 MW wind farm located on 18,000 hectares of mostly farming land, approximately 25km south east of Merredin in the central wheatbelt of Western Australia. Collgar Wind Farm utilises 111 Vestas V90 turbines to deliver electricity into the South West Interconnected System (**SWIS**) via the Merredin to Kalgoorlie 220kV line. All power produced by the wind farm is purchased under agreement by Synergy. Collgar Wind Farm also owns and operates 33kV underground / overhead collection facilities and a 220 kV substation which provides two points of connection to a contiguous Western Power-owned substation.

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 Collgar 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 Collgar Wind Farm's Licence during the review period.

### Scope

In accordance with the Review Guidelines, the review will consider the effectiveness of Collgar 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 Collgar 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"><li>1.1 Asset management plan covers the processes in this table</li><li>1.2 Planning processes and objectives reflect the needs of all stakeholders and is integrated with business planning</li><li>1.3 Service levels are defined in the asset management plan</li><li>1.4 Non-asset operations (e.g. demand management) are considered</li><li>1.5 Lifecycle costs of owning and operating assets are assessed</li><li>1.6 Funding options are evaluated</li><li>1.7 Costs are justified and cost drivers identified</li><li>1.8 Likelihood and consequences of asset failure are predicted</li><li>1.9 Asset management plan is regularly reviewed and updated.</li></ul> |

| 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<br>2.2 Evaluations include all life-cycle costs<br>2.3 Projects reflect sound engineering and business decisions<br>2.4 Commissioning tests are documented and completed<br>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<br>3.2 The reasons for under-utilisation or poor performance are critically examined and corrective action or disposal undertaken<br>3.3 Disposal alternatives are evaluated<br>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<br>4.2 Performance standards (availability of service, capacity, continuity, emergency response, etc.) are measured and achieved<br>4.3 Compliance with statutory and regulatory requirements<br>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<br>5.2 Risk management is applied to prioritise operations tasks<br>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<br>5.4 Accounting data is documented for assets [new criteria]<br>5.5 Operational costs are measured and monitored<br>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<br>6.2 Regular inspections are undertaken of asset performance and condition<br>6.3 Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule<br>6.4 Failures are analysed and operational/maintenance plans adjusted where necessary<br>6.5 Risk management is applied to prioritise maintenance tasks<br>6.6 Maintenance costs are measured and monitored  |
| 7. Asset management information systems | 7.1 Adequate system documentation for users and IT operators<br>7.2 Input controls include suitable verification and validation of data entered into the system<br>7.3 Security access controls appear adequate, such as passwords<br>7.4 Physical security access controls appear adequate<br>7.5 Data backup procedures appear adequate and backups are tested<br>7.6 Computations for licensee performance reporting are accurate<br>7.7 Management reports appear adequate for the licensee to monitor licence obligations<br>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>  |

### **Collgar Wind Farm's responsibility for maintaining an effective asset management system**

Collgar 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 limited assurance conclusion on whether, based on the procedures performed and the evidence obtained, anything has come to our attention that causes us to believe that Collgar Wind Farm's AMS for assets subject to its Licence have not 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 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.

### **Limitations of use**

Our report will be produced solely for the information and internal use of Collgar 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 Collgar 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 reports.

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

### **Inherent limitations**

A review consists primarily of making enquiries, primarily of persons responsible for the management of assets, applying analytical and other review procedures, and examination of evidence for a small number of transactions or events. A review is substantially less in scope than a reasonable assurance "audit" conducted in accordance with ASAEs. Accordingly, we will not express an audit opinion in the asset management system review report.

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 Collgar Wind Farm's asset management systems established for the assets subject to Collgar Wind Farm's licence. The risk assessment considers changes to Collgar Wind Farm's relevant systems and processes and any matters of significance raised by the ERA and/or Collgar 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 Collgar 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 Collgar 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"> <li>• Via interview and walkthrough, understand relevant processes and controls as they apply to each asset management system effectiveness criteria</li> <li>• Examine relevant documents, registers and reports as they apply to each asset management system effectiveness criteria</li> <li>• Obtain evidence of policies, procedures and controls being in place and working effectively</li> <li>• Controls testing and extensive substantive testing of activities and/or transactions as they apply to each asset management system effectiveness criteria, including physical inspection of applicable asset infrastructure</li> <li>• Follow-up and if necessary, re-test matters previously reported.</li> </ul> |
| Review Priority 2 | <ul style="list-style-type: none"> <li>• Via interview and walkthrough, understand relevant processes and controls as they apply to each asset management system effectiveness criteria</li> <li>• Examine relevant documents, registers and reports as they apply to each asset management system effectiveness criteria</li> <li>• Obtain evidence of policies, procedures and controls being in place and working effectively</li> <li>• Controls testing and moderate substantive testing of activities and/or transactions as they apply to each asset management system effectiveness criteria, including physical inspection of applicable asset infrastructure</li> <li>• Follow-up and if necessary, re-test matters previously reported.</li> </ul>  |
| Review Priority 3 | <ul style="list-style-type: none"> <li>• Via interview and walkthrough, understand relevant processes and controls as they apply to each asset management system effectiveness criteria</li> <li>• Examine relevant documents, registers and reports as they apply to each asset management system effectiveness criteria</li> <li>• Limited controls testing (moderate sample size) of activities and/or transactions as they apply to each asset management system effectiveness criteria, including physical inspection of applicable asset infrastructure. Only substantively test transactions if further control weakness found</li> <li>• Follow-up of matters previously reported.</li> </ul>  |
| Review Priority 4 | <ul style="list-style-type: none"> <li>• Confirmation of existing controls via walk through of key processes and examination of key documents including policies and procedures, compliance/breach registers and reports</li> <li>• Follow-up of matters previously reported.</li> </ul>   |
| Review Priority 5 | <ul style="list-style-type: none"> <li>• Confirmation of existing controls via observation, discussions with key staff and/or reliance on key references including policies and procedures, compliance/breach registers and reports (“desktop review”).</li> </ul>   |

The risk assessment has been discussed with Collgar 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 Collgar 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 Collgar 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 Collgar 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 Collgar Wind Farm representatives and key operational and administrative staff
- Physical visit to the wind farm 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 Collgar Wind Farm's asset management system.

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

**Table 6: Performance rating scale**

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



## Resources and team

### Key Collgar Wind Farm contacts

The key contacts for this review are:

- Dale Cartwright, Principal Engineer
- Rebecca White, Regulatory and Trading Manager
- Zhang Fan, CFO
- Ross Billing, Site Superintendent.

### AAG Staff

AAG staff who will be involved with this assignment are:

- Andrew Baldwin Executive Director
- Tanuja Sanders Senior Engineer
- Margaret-Mary Gauci Consultant
- Stephen Linden Director (QA review).

Resumes for key AAG staff are outlined in the proposal accepted by Collgar Wind Farm and subsequently presented to the ERA.

### Timing

The initial risk assessment phase was completed on 12 October 2021, after which the draft review plan and risk assessment were presented to Collgar Wind Farm for comment prior to submission to the ERA for review and approval.

The remainder of the fieldwork phase is scheduled to be performed over the period October to December 2021, enabling draft and final reports to be submitted to the ERA by the due dates of 31 December 2021 and 31 January 2022 respectively.

AAG time and staff commitment to the completion of the review is outlined in the proposal accepted by Collgar Wind Farm. In summary, the estimated time allocated to each AMS Review activity is as follows:

- Planning (including risk assessment): 11 hours
- Fieldwork (including system analysis/walkthrough and testing/review): 69 hours
- Reporting: 25 hours.

## 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"> <li>• The consequences of ineffective performance would cause major damage, loss or disruption to customers; or</li> <li>• The consequences of ineffective performance would endanger or threaten to endanger the safety or health of a person.</li> </ul>  |
| 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"> <li>• 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;</li> <li>• Assessment of performance against the obligation is immeasurable;</li> <li>• The matter of ineffective performance is identified by a party other than the licensee; or</li> <li>• 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.</li> </ul> |

### 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               | Moderate            | Priority 4      |
| 4.4                       | Service standard (customer service levels etc) are measured and achieved.   | Moderate  | Unlikely   | Medium               | Strong              | Priority 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)  |            |                      |                     |                 |
| 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               | Moderate            | 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 |  |             |            |                      |                     |                 |
|----------------------|--|-------------|------------|----------------------|---------------------|-----------------|
| <b>Key process</b>   | Asset maintenance is the upkeep of assets  |             |            |                      |                     |                 |
| <b>Outcome</b>       | 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 |  |             |            |                      |                     |                 |
|--------------------|--|-------------|------------|----------------------|---------------------|-----------------|
| <b>Key process</b> | Risk management involves the identification of risks and their management within an acceptable level of risk               |             |            |                      |                     |                 |
| <b>Outcome</b>     | 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 |  |             |            |                      |                     |                 |
|-------------------------|--|-------------|------------|----------------------|---------------------|-----------------|
| <b>Key process</b>      | Contingency plans document the steps to deal with the unexpected failure of an asset.                          |             |            |                      |                     |                 |
| <b>Outcome</b>          | 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 |   |             |            |                      |                     |                 |
|----------------------------------|---|-------------|------------|----------------------|---------------------|-----------------|
| <b>Key process</b>               | 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 |             |            |                      |                     |                 |
| <b>Outcome</b>                   | 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 |   |             |            |                      |                     |                 |
|---------------------------------------|---|-------------|------------|----------------------|---------------------|-----------------|
| <b>Key process</b>                    | The asset management system is regularly reviewed and updated   |             |            |                      |                     |                 |
| <b>Outcome</b>                        | 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

### Collgar representatives participating in the audit

- Principal Engineer
- Site Superintendent
- Site Coordinator
- Vestas Site Manager
- Vestas Site Supervisor
- Governance Manager
- Chief Financial Officer
- Regulatory and Trading Manager
- Chief Executive Officer

### AAG staff participating in the audit

|                       |                      | <b>Hrs</b> |
|-----------------------|----------------------|------------|
| • Andrew Baldwin      | Executive Director   | 60         |
| • Tanuja Sanders      | Senior Engineer      | 30         |
| • Margaret-Mary Gauci | Consultant           | 19         |
| • Stephen Linden      | Director (QA review) | 1          |

### Key documents and other information sources examined

- Collgar Wind Farm Life of Asset Management Plan (2018)
- Collgar Wind Farm Asset Management Plan, Draft Revision B (2021)
- Collgar Wind Farm – Failure Modes and Effect Analysis (2018)
- Vestas Service Availability Agreement (2010)
- Collgar Wind Farm ETAC
- Collgar Wind Farm Master Environmental Management Plan O&M Rev 7 (2018)
- Collgar Wind Farm Environmental and Social Management Plan O&M Rev 1 (2019)
- Collgar Wind Farm Stakeholder Management Plan V9 (2019)
- Collgar Wind Farm Malleefowl Management Plan O&M Rev 7 (2018)
- Collgar Wind Farm Flora & Fauna Management plan O&M Rev 7 (2018)
- Extended Sustainability Risk Register
- Vestas HSE monthly meeting records
- Safety Alert (risk of electric shock)
- Asset Registers (SAP and HardCat)
- Vestas Collgar Staff Training Matrix
- Collgar Wind Farm Staff Training Matrix
- Vestas Contractor Induction Certificate Register
- Vestas ANZ Lightning Procedures (2016)
- Vestas ANZ Switching Instruction (2021)
- Vestas Service Order Management framework
- Listing of O&M procedures and work instructions
- Protocols for operation of turbines (e.g. wind speed, lightning, temperature)

- Example Monthly Operating reports
- Example Toolbox Meeting minutes
- Example WTG Major Service Reports
- Spares parts inventory listing
- Listing of Service Orders not executed per schedule
- Trunk system screenshots
- SCADA system screenshots
- Hardcat system screenshots
- BOP Maintenance Workplan 2019 to 2026
- DVAR Services Summary register and records - BOP
- Example monthly inspection checklists
- Vestas Wind Systems A/S Information Security Policy v1.5 (2020)
- Vestas Information Security Classification System (March 2021)
- Collgar Wind Farm Risk Management Policy and Framework (2020)
- Collgar Wind Farm Risk Register
- June 2021 Risk Summary Report
- Collgar Wind Farm Emergency Response Plan (May 2021)
- Collgar Wind Farm Business Continuity Plan (2019)
- Vestas ANZ Collgar Emergency Response Plan V1 (2020)
- Vestas Crisis Management Policy
- Vestas Major Incident Management Procedure
- Vestas ASP Cyber Incident Response Plan
- Other example reports
  - Response to a severe bearing failure (2021)
  - Gearbox inspection (2021)
  - Emergency Response Exercise (2020)
  - CMS Alarm
  - Site Road Inspection
  - Reactive Power Control Fault
  - Incident brief – Switching Instructions
- Emergency Response Debrief Form examples
- Collgar Wind Farm Business Plan and Budget 2021 to 2025
- 2021 Maintenance budget forecast
- Representations from the Principal Engineer, Site Superintendent, Site Coordinator, Vestas Site Manager and Vestas Site Supervisor.