EMU DOWNS JOINT VENTURE

Performance Audit & Asset Management System Review Report 2024

ELECTRICITY GENERATION LICENCE – EGL1

Audit Report	Authorisation	Name	Position	Date
Prepared By	[redacted]	Nicole Davies	Principal Consultant (GES Pty Ltd)	15/11/2024
Reviewed By (licensee)		Martin Riley	Regulatory Compliance and Risk Manager	9/12/2024

Geographe Environmental Services Pty Ltd
PO Box 572 DUNSBOROUGH WA 6281
Tel: 0438 938 394

August_2024
Audit Report No: AR_EDRF_082024_5

Contents

List of Tables

GLOSSARY

AEMO – Australian Energy Market Operator

AMP - Asset Management Plan

AMS – Asset Management System

AMSM – Asset Management System Manual

APA – APA Group

Audit Guidelines - March 2019 Audit and Review Guidelines – Electricity and Gas Licences

BOP – Balance of Plant

CBoP – Civil Balance of Plant

CMMS - Computerised Maintenance Management System

Compliance Reporting Manual - Electricity Compliance Reporting Manual – February 2023

EBoP – Electrical Balance of Plant

EDJV – Emu Downs Joint Venture

EDRF – Emu Downs Renewable Facility

EDSF – Emu Downs Solar Farm

EDWF – Emu Downs Wind Farm

EGL1 – The Electricity Generation Licence for Emu Downs Joint Venture

EMP – Environmental Management Plan

ERA – Economic Regulation Authority

ETAC – Electricity Transfer Access Contract

GES – Geographe Environmental Services

MW – MegaWatt

PPA – Power Purchase Agreement

RACI – Responsible, Accountable, Consulted and Informed

SCADA - Supervisory Control and Data Acquisition

WEM – Wholesale Electricity Market

This report was prepared by representatives of GES Pty Ltd in relation to the above named client's conformance to the nominated audit standard(s). Audits were undertaken using a sampling process and the report and its recommendations were reflective only of activities and records sighted during this audit process. GES Pty Ltd shall not be liable for loss or damage caused to or actions taken by third parties as a consequence of reliance on the information contained within this report or its accompanying documentation. The client had the opportunity for review to ensure no commercially sensitive information was disclosed.

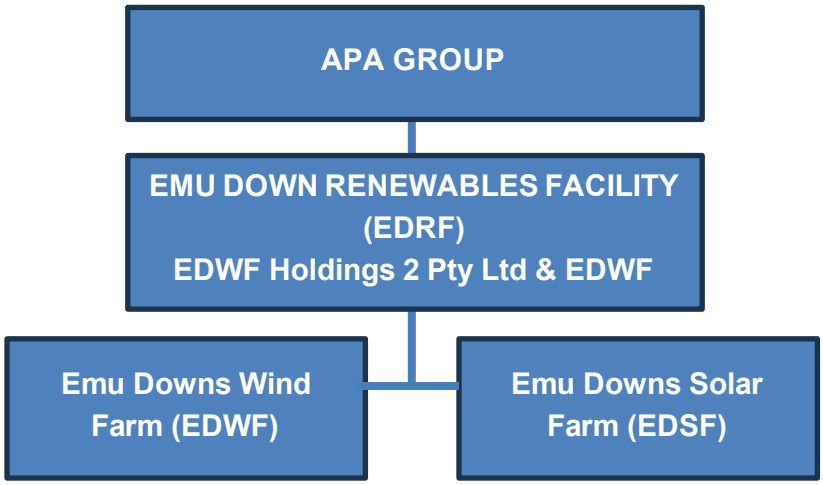
1. EXECUTIVE SUMMARY

The Licensee is EDWF Holdings 1 Pty Ltd & EDWF Holdings 2 Pty Ltd (trading as **Emu Downs Wind Farm Joint Venture**).

The Emu Downs Renewables Facility (**EDRF**) is comprised of the Emu Downs Wind Farm (**EDWF**) and the Emu Downs Solar Farm (**EDSF**) and is jointly owned by EDWF Holdings 1 Pty Ltd and EDWF Holdings 2 Pty Ltd, subsidiaries of the APA Group.

The APA Group also owns EDWF Manager Pty Ltd, which is responsible for the operational management of the EDRF. To ensure effective oversight of the operations and maintenance activities conducted by EDWF Manager, the APA Group has established a dedicated Management Committee.

Figure 1 – EDWF Joint Venture Organisational Schematic



Emu Downs Joint Venture (**EDJV**) holds an Electricity Generation Licence (**EGL1**) issued by the Economic Regulation Authority under the *Electricity Industry Act 2004*. This performance audit and asset management review were conducted in accordance with the 2019 Audit and Review Guidelines – Electricity and Gas Licences (the **Guidelines**) issued by the ERA to assess the effectiveness of the licensee's Asset Management System (**AMS**).

Sections 13 and 14 of the *Electricity Industry Act 2004* require as a condition of every licence that the licensee must, not less than once in every period of 24 months (or any longer period that the Authority allows) calculated from the grant of the licence, provide the Authority with a performance audit and an asset management system review report by an independent expert acceptable to the Authority. Geographe Environmental Services (**GES**) has been approved by the Authority to undertake this audit and review as outlined by the approved audit and review plan.

Following the 2019 Audit and Review, the ERA decided to increase the period covered by the current audit and review to 60 months. As such, the period for the review is 1 July 2019 to 30 June 2024 (**audit and review period**).

A review of Asset Management System Review and the Performance Audit has been conducted, through a limited and reasonable assurance respectively, in order to assess the effectiveness of EDJV's Asset Management Systems and level of compliance with the conditions of its Electricity Generation Licence EGL1. Through the execution of the Audit and Review Plan, field work, assessment and testing of the control environment, the information system, control procedures and compliance attitude, the Auditor's have determined the licensee has complied with requirements of its electricity generation licence and has an effective asset management system with consideration of the exceptions detailed in Table 1.

There were 2 recommendations made by the Audit Team to address internal compliance processes during the audit period and there were 6 asset management system deficiencies identified during the review period. Opportunities for improvement identified that relate to the performance audit and review findings have been provided directly to the Licensee and have not been included in this document as required by the 2019 Audit and Review Guidelines – Electricity and Gas Licences section 5.1.8.

It is the auditors' opinion that with respect to the performance audit timely internal review would improve the integrity of reporting by the Licensee. As such recommendations to improve the compliance and internal monitoring were made. With respect to the asset management system review greater focus on the maintenance and review of key asset management documentation, clear definition of asset disposal strategies, testing of contingency plans and establishment of processes for verification of contractor controls would improve the effectiveness of the asset management system.

TABLE 1 Summary Performance Audit Non-Compliances & AMS Deficiencies

REF	OBLIGATION / ASSET MANAGEMENT CRITERIA DESCRIPTION	NON-COMPLIANCE/AMS DEFICIENCY & EFFECTIVENESS OF CORRECTIVE ACTION
105*	***Economic Regulation Authority (Licensing Funding) Regulations 2014*** A licensee must pay the prescribed licence fees to the ERA according to clauses 6, 7 and 8 of the Economic Regulation Authority (Licensing Funding) Regulations 2014.	Standing Charges were paid outside the requirements of the obligations on one occasion during the audit period (i.e., Q1 2021 was paid 14 days past the due date). The payment of Standing Charges has been well addressed by the Licensee and future payments were made within the required timeframes. The Licensee demonstrated awareness to the obligation through controls and effective corrective action. Since June 2021 all invoices were compliant and 95% of the invoices were paid in accordance with requirements of the obligation. As such, no further recommendations were made (refer table 11)
124*	***Electricity Industry Act, section 11*** A licensee must provide the ERA, in the manner prescribed, with any information that the ERA requires in connection with its functions under the Electricity Industry Act.	The Standing Charge Data was submitted past the required date for the 2022 reporting year. This obligation was raised in the previous audit period and recommendations have been made in relation to developing a more robust process for tracking and responding to non-compliance, such as internal reviews prior to reporting deadlines, development of a RACI framework. Refer recommendation 02/2024.

REF	OBLIGATION / ASSET MANAGEMENT CRITERIA DESCRIPTION	NON-COMPLIANCE/AMS DEFICIENCY & EFFECTIVENESS OF CORRECTIVE ACTION
1.1	**Asset management plan covers the processes in this table*** *Table 23 of the 2019 Audit and Review Guidelines – Electricity and Gas Licences Assess the adequacy of the asset planning process Assess the adequacy of the asset management plan	The asset management system manual plan, as outlined in Table 23 of the 2019 Audit and Review Guidelines for Electricity and Gas Licences, had several deficiencies: ***Asset Disposal:*** The asset management system did not include a formal and clear process for disposing of obsolete or end-of-life assets. Additionally, inconsistencies existed between the AMS and the EDRF 2024/2025 Year Plan concerning the wind farm's design life, potentially causing gaps in asset replacement planning and strategy. ***Contingency Planning:*** The AMS Manual referenced general risk management practices, as did the Emergency Response Plans and Business Continuity Plans and the EDRF Year Plans detailed EBoP risks and EBoP strategic spares only. However, there was a lack of testing of contingency plans for critical asset failures. There was also no documented evidence of regular testing for risk controls, crucial for ensuring preparedness during unexpected failures. ***AMS Review Process:*** Although the AMS was scheduled for review every five years, the last formal review took place during the audit period on 27/3/20 following the change to O&M responsibilities for the solar farm, indicating irregular review practices. Best practices recommend more frequent reviews to keep the AMS up-to-date and responsive to changes, for example ISO 55001. Additionally, there was no contractor verification process formalised for Vestas's AMS functions. Refer to recommendation 03/2024 for corrective actions
1.9	**Asset management plan is regularly reviewed and updated** Assess whether the asset management plan is up-to-date and implemented in practice Assess whether the asset management plan clearly assigns responsibilities and whether these have been applied in practice	The WA Renewables Asset Management Plan (WARAMP) and the Asset Management System Manual (AMSM) were reviewed only once during the audit period, with the current review frequency set at every five years for the AMSM and every 2 years for the WARAMP, although the review was not undertaken in February 2024. This schedule does not align with best practices as per Table 23 of the 2019 Audit and Review Guidelines, which recommend more frequent reviews to keep the system up-to-date. Additionally, Vestas did not have a formal Asset Management Plan in place, relying instead on yearly plans. This was not the case in the previous audit and review period where a Contractor AMP was developed. Consequently, there was no site specific asset management plan developed, or formal contractor verification process implemented The recommended corrective action was to adopt a more frequent review cycle for the AMS and established a contractor verification process in line with generation licence requirements. Refer recommendation 04/2024.

REF	OBLIGATION / ASSET MANAGEMENT CRITERIA DESCRIPTION	NON-COMPLIANCE/AMS DEFICIENCY & EFFECTIVENESS OF CORRECTIVE ACTION
3.4	**There is a Replacement Strategy for Assets** Assess the adequacy of policies and procedures covering the identification of under-performing assets, disposal of assets and replacement strategy Determine whether a regular review of the performance of assets is undertaken Select a sample of disposals over the review period and confirm adequate procedures have been followed	During the review period, no clearly defined and consistent replacement strategy was established. While APA developed a life cycle financial model for the wind and solar farms, including provisions for OPEX, CAPEX, and asset replacement, there were inconsistencies in the Asset Management System Manual (design life of 25 years to 2031) and the 2024-2025 EDRF Year Plan (design life of 20 years to 2026) regarding the end-of-life assumptions for the wind farm. The WA Renewables AMP (WARAMP) stated end of life range 2026-2031. This discrepancy could impact the effectiveness of asset replacement planning as asset condition assessment for the wind farm was due to commence in FY23 and was delayed to FY25. It was noted that the EBoP Equipment Life Extension was initiated in 2021 and completed in 2023. To improve the AMS, it is recommended to resolve the discrepancies by setting a consistent end-of-life assumption (either 20 or 25 years) and if required update the life cycle financial model accordingly. Regularly reviewing and adapting the replacement strategy based on condition assessments and life extension studies would ensure the strategy remains effective in addressing changing asset performance and lifespan expectations, enhancing long-term asset management. Refer recommendation 05/2024.
9.1	**Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks** Determine whether contingency plans have been developed and are current Determine whether contingency plans have been tested. If so, review the results to confirm any improvements identified have been implemented.	Although contingency and emergency response plans were established for the Emu Downs Renewable Facility (EDRF) and supported by comprehensive Business Continuity and Disaster Recovery Plans, there was no evidence of testing and personnel training for the specific contingency plans. This lack of testing could compromise the plans' effectiveness in responding to high-risk scenarios. To enhance the AMS, it is recommended to ensure contingency plans are thoroughly documented and to schedule regular testing and training sessions for all personnel. This approach would confirm the plans' operability and improve readiness for higher-risk situations, thereby increasing the effectiveness of the overall asset management system. Refer recommendation 06/2024.

REF	OBLIGATION / ASSET MANAGEMENT CRITERIA DESCRIPTION	NON-COMPLIANCE/AMS DEFICIENCY & EFFECTIVENESS OF CORRECTIVE ACTION
12.1	**A review process is in place to ensure the asset management plan, and the asset management system described in it remain current** Determine when the asset management plan was last updated and assess whether any substantial changes have occurred Determine when the asset management system was last reviewed.	The Asset Management System Manual (AMSM) specified a five-year review cycle, with the most recent review completed in 2020 following the change to O&M duties for the solar farm. In contrast, the WA Renewable Asset Management Plan (WARAMP) follows a two-year review cycle, but the scheduled review for February 2024 was not conducted. This prolonged interval for the AMSM review reduced its effectiveness, allowing some significant changes to remain undocumented. Examples include the transition from Excel spreadsheets to the Vigilant system for risk management and inconsistencies between the AMSM and the 2024-2025 Year Plan regarding the design life of the Emu Downs Wind Farm. The WARAMP specifies a design life range of 2026–2031, highlighting potential conflicts in strategies for maintenance, upgrades, or decommissioning. Reducing the review cycle from five to three years, or initiating reviews following major operational changes, would ensure timely updates to the AMSM. Incorporating changes like the Vigilant system adoption would keep the AMS current and mitigate risks related to compliance or asset performance. Improving the processes for verification of contractor controls for Vestas's would also be beneficial as it was noted there was no longer a Contractor AMP developed by Vestas. Refer recommendation 07/2024.
12.2	**Independent reviews (e.g., internal audit) are performed of the asset management system** Determine whether any independent reviews have been performed. If so, review the results and action taken Consider the need to update the asset management plan based on the results of this review	While internal audits were conducted for Health, Safety, and Environmental (HSE) compliance, they did not specifically focus on the Emu Downs Renewable Facility's asset management system. Formal independent reviews and structured audits of the AMS, as provided for in the O&M contract, were not carried out. This limited the identification of potential improvements in asset management practices, particularly in the absence of a Contractor AMP or a contractor verification process. Establishing a regular schedule for independent or third-party audits, regardless of performance outcomes, would enhance compliance and ensure continuous improvement. Scheduling service audits per the O&M contract would help proactively address operational inefficiencies and align with performance obligations. Refer recommendation 08/2024.

* Electricity Compliance Reporting Manual 2022

** Table 23 2019 Audit and Review Guidelines – Electricity and Gas Licences

The site visit was conducted on the 6-7 August 2024 and at the Emu Downs Wind Farm office. This audit and review report is an accurate representation of the audit team's findings and opinions. The Auditors confirm that the Licensee readily provided assistance to the Auditors, as required by Section 4.1 of the Audit Guidelines (2019).

1.1 Performance Audit Summary of Findings

We have undertaken a reasonable assurance engagement on Emu Downs Joint Venture (**EDJV, the Licensee**) compliance in all material respects, with the conditions of its Electricity Generation Licence (**EGL1**) (the **Licence**) and relevant legislative obligations for the period 1 July 2019 to 30 June 2024. Our evaluation was made against the licence obligations listed in the relevant versions of the Electricity Compliance Reporting Manual and in accordance with the Economic Regulation Authority's (the **ERA**) 2019 Audit and Review Guidelines: Electricity and Gas Licences (the **Guidelines**).

In our opinion, based on the procedures performed and the evidence obtained, except for the possible effects of the matters described in Table 1, Emu Downs Joint Venture has complied, in all material respects, in accordance with the conditions of its Electricity Generation Licence (**EGL1**) for the period 1 July 2019 to 30 June 2024.

As required by the Audit Guidelines Section 5.1.6.1, Table 4 lists the number of licence obligations that were given each combination of compliance and controls ratings. The table allows licensees and the ERA to confirm the auditor has rated all relevant licence obligations and provides a simple summary of the licensee's compliance during the audit period.

There were 2 non-compliant licence obligations in current audit period associated with administrative issues, and integrity of annual compliance reports. One of the obligations was addressed by the licensee and effectively closed out during the audit period (Refer obligation 105). An explanation of the audit findings is detailed in Appendix 1.

Table 2 sets out the rating scale defined by the ERA in the Audit Guidelines for the assessment of the level of compliance with the conditions of the Licence. For the highest possible compliance rating to be achieved, EDJV was required to demonstrate it has maintained mature processes and controls, which facilitate compliance with relevant obligations

TABLE 2 Performance Audit Compliant and Control Rating Scales

Adequacy of Controls Rating		Compliance Rating	
Rating	**Description**	**Rating**	**Description**
A	Adequate controls – no improvement needed	1	Compliant
B	Generally adequate controls – improvement needed	2	Non-Compliant – minor impact on customers or third parties
C	Inadequate controls – significant improvement needed	3	Non-Compliant – moderate impact on customers or third parties
D	No controls evident	4	Non-Compliant – major impact on customers or third parties
NP	Not Performed	NR	Not rated – Determined Not Applicable during the audit period

Source: Table 6: 2019 Audit and Review Guidelines – Electricity and Gas Licences

The following table summarises the assessments made during the performance audit on EDJV's compliance and the adequacy of controls in place for EDJV to manage its compliance with the relevant obligations or conditions of the Licence.

TABLE 3 Performance Audit - Compliance and Controls Ratings Summary Table

		COMPLIANCE RATING					
		1	2	3	4	N/R	TOTAL
CONTROLS RATING	A	-	1	-	-	-	1
	B	1	1	-	-	-	2
	C	-	-	-	-	-	-
	D	-	-	-	-	-	-
	N/P	14	-	-	-	16	30
	TOTAL	15	2	-	-	16	33

1.2 Asset Management Review Summary of Findings

We have undertaken a limited assurance engagement on Emu Downs Joint Venture (**EDJV, the Licensee**) compliance in all material respects, with the conditions of its Electricity Generation Licence (**EGL1**) (the **Licence**) and relevant legislative obligations for the period 1 July 2019 to 30 June 2024. Our evaluation was made against the asset management criteria listed in Table 23 of the Economic Regulation Authority's (the **ERA**) 2019 Audit and Review Guidelines: Electricity and Gas Licences (the **Guidelines**).

In our opinion, based on the procedures performed and the evidence obtained, except for the possible effects of the matters described in Table 1, Emu Downs Joint Venture has complied, in all material respects, in accordance with the conditions of its Electricity Generation Licence (**EGL1**) for the period 1 July 2019 to 30 June 2024.

In accordance with the Guidelines, the assessment of both the process and policy definition rating and the performance rating (refer to Table 4) for each of the key AMS processes was performed using the below ratings.

TABLE 4 Rating Scale Reviews - Process & Policy and Performance

Rating	Process And Policy Rating Description	Rating	Performance Rating Description
A	Adequately defined	1	Performing effectively
B	Requires some improvement	2	Improvement required
C	Requires substantial improvement	3	Corrective action required
D	Inadequate	4	Serious action required
NR	Not rated	NR	Not rated

Source: Tables 9 and 10 2019 Audit and Review Guidelines – Electricity and Gas Licences

An overall effectiveness rating for an asset management process was determined by the Audit Team, based on a combination of the process and policy adequacy rating and the performance rating for each effectiveness criterion.

TABLE 5 Summary of Asset Management Process Overall Rating

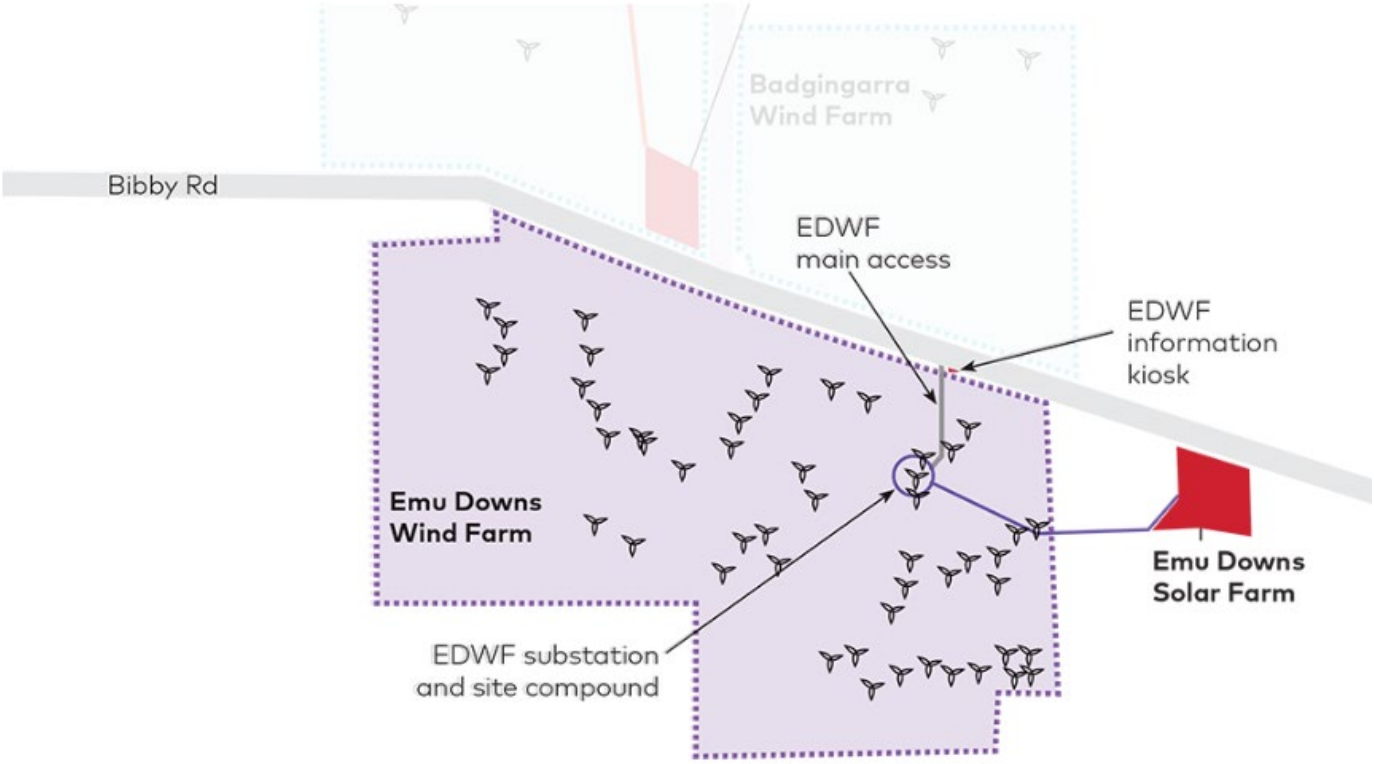
ASSET MANAGEMENT SYSTEM PROCESS	PROCESS & POLICY OVERALL RATING	PERFORMANCE OVERALL RATING
1. ASSET PLANNING	B	2
2. ASSET CREATION AND ACQUISITION	A	1
3. ASSET DISPOSAL	B	2
4. ENVIRONMENTAL ANALYSIS	A	1
5. ASSET OPERATIONS	A	1
6. ASSET MAINTENANCE	A	1
7. ASSET MANAGEMENT INFORMATION SYSTEM	A	1
8. RISK MANAGEMENT	B	2
9. CONTINGENCY PLANNING	B	3
10. FINANCIAL PLANNING	A	1
11. CAPITAL EXPENDITURE PLANNING	A	1
12. REVIEW OF AMS	B	3

Whilst the overall performance rating detailed in table 5 found 2 asset management processes to have areas of concern (i.e. Contingency Planning and Review of the AMS) there were a total of 6 asset management criterion deficiencies (i.e. rated C, D, 3 or 4) identified in the 2024 asset management review and as such recommendations arising from the review are detailed in section 3.6. An explanation of the review findings is detailed in Appendix 2.

1.3 Asset Overview

The EDRF is located on the Emu Downs Farm approximately 200km north of Perth and includes the Emu Downs Wind Farm and the Emu Downs Solar Farm. The EDWF is made up of 48 Vestas V82 Wind Turbine Generators (**WTG**s) with a total rating of 79.2MW. The EDSF is made up 8 SMA Inverters with a total rating of 20MW. The Declared Sent Out Capacity (**DSOC**) for the EDRF is 80MW. The 132/22kV substation is connected to the South West Interconnected Network (**SWIN**) via two 132kV transmission lines.

Figure 2 Emu Downs Wind and Solar Farm Site Locations



The EDRF exports all power generated into the SWIN. A Connection Agreement (**CA**) and Network Access Agreement (**NAA**) between the Western Power Corporation (**WPC**) and EDWF Holdings 1 Pty Ltd and EDWF Holdings 2 Pty Ltd sets out the terms of the EDRF's connection to the SWIN.

EDRF main and check bi-directional tariff metering equipment is provided by Western Power and located at the two 132kV connection points in the 132/22kV substation. These meters record the combined generation from the EDWF and EDSF. EDRF exports between 274 to 293 GWh of energy per year.
A Lease Agreement between the land owner and the EDRF and the Farm Rules sets out the of the land usage by the EDRF.

The EDRF was commissioned in June 2006 with 48 turbines (each with 1.65 MW generating capacity), a substation, interconnection to the main 132 kV grid, an administration/stores building and a network of access roads. EDSF consisting of two sets of 4 x 2.5MW PV arrays was added during the reporting period in 2019 to the generation but the DSOC remains at 80MW.

The EDRF is currently operated and maintained under an Operation and Maintenance (O&M) contract by sub-contractor, Vestas. The O&M Contract covered the operation and maintenance of the generation plant and the Civil Balance of Plant. The EDSF was previously maintained by UGL, however, this agreement was terminated in March 2020, during the current audit and review period. As such, Vestas is responsible for the operation and maintenance of both the wind and solar facilities onsite. The Balance of Plant is comprised of both the Civil Balance of Plant (CBoP) and the Electrical Balance of Plant (EBoP).

Key dates and contracts applicable to the Emu Downs Joint Venture include:

- APA acquired the EDWF in July 2011
- APA opened the solar farm in March 2018
- UGL ceased to be contractor of the solar farm March 2020 (OM taken over by Vestas)
- Electricity Generation Licence - expires 22nd June 2035.
- EDWF operating design life (20 years): October 2006 to October 2026
- EDSF operating design life (25 years): March 2018 to March 2043
- *Farm Land Lease Agreement (22 years): July 2005 to July 2027*
- *Farm Land Lease Agreement optional renewal (10 years): July 2027 to July 2037*
- Vestas O&M Contract: 3 October 2018 to 31 December 2025
- *Western Power Connection Agreement: 20 July 2032 (extended 5 years from 20 July 2027 on 20/6/24)*
- *Western Power Network Access Agreement: 20 July 2032 (extended 5 years from 20 July 2027 on 20/6/24)*
- Power Purchase Agreement: 31 December 2030
- *Shire of Dandaragan's Planning Consent: Decommissioning shall commence within 12 months of termination of operations at EDWF and be completed within a period as agreed.*

References made to operating design life for the solar and wind farm are indicative of timeframes determined at the time of commissioning of the facilities. The organisations asset management system processes require the assessment of the design life as part of the planning process. The asset management planning process includes assessment and renewal of all supporting documentation, licences and agreements. During the audit and review period, APA Group were undertaking life extension/refurbishment studies for the wind farm and these were anticipated to be completed in January 2025.

Previous Performance Audit and Asset Management Review Report (2019)

The previous Performance Audit and Asset Management System (**AMS**) review report was for the review period 1st July 2015 to 30th June 2019 and was conducted in accordance with the Audit and Review Guidelines – Electricity and Gas Licences March 2019.

The licensee confirmed that there have been no substantial changes to the assets or the business since the previous Performance Audit and AMS review.

The 2019 Performance Audit and AMS review reports as well as the ERA's Notice of Assessment are available on the ERA website.

The 2019 Performance Audit Plan determined that there were 38 licence obligations applicable to Emu Downs Joint Venture generation licence and found the following, including two non-compliances:

- 11 were rated A1 (adequate controls, compliant)
- 2 were rated B2 (generally adequate controls, non-compliant)
- 3 were rated A/NR (adequate controls, not rated)
- 33 were rated NP/NR (not performed, not rated).

As required by the 2019 Guidelines, the licensee developed a Post Audit Implementation Plan (**PAIP**) to address non-compliance for licence obligations rated C, D, 2, 3 or 4 (refer to Table 1). As the 2019 Asset Management System (AMS) Review did not identify any asset management processes or effectiveness criteria rated C, D, 3 or 4 (Refer to Table 2), the licensee was not required to develop a Post Review Implementation Plan (**PRIP**).

As part of the 2024 Performance Audit, the recommendations and actions from the 2019 PAIP were reviewed for their effectiveness and implementation (Refer Appendix 1). Despite efforts to implement the 2019 PAIP, obligations 105 and 124 were again raised as non-compliances in the current audit period. The causes of non-compliance for obligation 105 were administrative in nature. Further assessment of this is detailed in Tables 6 and 11.

TABLE 6 Summary of Performance Audit Non-Compliance Ratings - 2019 PAIP

Ref	Licence Obligation	Control Adequacy	Compliance Rating
01/2019	**Obligation 105** **Section 17(1); *ERA (Licensing Funding) Regulations 2014*** A licensee must pay the prescribed licence fees to the ERA according to clauses 6, 7 and 8 of the Economic Regulation Authority (Licensing Funding) Regulations 2014. Non-Compliance - The licensee has not met the obligations in regards to payment of prescribed licence fees on 1 occasion during the audit period.	B	2
02/2019	**Obligation 124** **Licence condition 4.5.1** A licensee must provide the ERA, in the manner prescribed, with any information that the ERA requires in connection with its functions under the Electricity Industry Act. Non-Compliance - The Standing Charge Data was submitted past the required date for the 2022 reporting year.	B	2

Following the 2024 Asset Management Review, a Post Review Implementation Plan (**PRIP**), was not required from the 2019 review period. The Asset Management Review Report 2019 determined all of the 12 asset management components prescribed in the ERA's Audit and Review Guidelines: Electricity and Gas Licences found were rated A1 (Refer Table 2 - documentation adequately defined, performing effectively).

2. PERFORMANCE AUDIT

The Performance has been carried out as a 'reasonable assurance engagement'. A reasonable assurance engagement conducted in accordance with ASAE 3500 required identifying areas where the compliance with the licence was not achieved, addressing the areas identified and considering the control procedures and the control environment established by the Licensee. A reasonable assurance engagement is a high but not absolute level of assurance.

2.1 Performance Audit Scope

The Performance Audit was conducted in accordance with the following guidance documentation:

- 2019 Audit and Review Guidelines – Electricity and Gas Licences
- the ERA approved Audit & Review Plan
- Electricity Generation Licence EGL1
- Electricity Compliance Reporting Manual July 2018, June 2020, February 2022, January 2023 and February 2023
- ISO 31000:2018 (risk based approach to auditing using the risk evaluation model)
- ASAE 3000 Standard on Assurance Engagements - Assurance Engagements Other than Audits or Reviews of Historical Financial Information
- ASAE 3100 Standard on Assurance Engagements - Compliance Engagements
- ASAE 3500 Standard on Assurance Engagements - Performance Engagements

In accordance with the Audit Guidelines, the scope of the audit considered the compliance with its licence and the obligations of the Electricity Compliance Reporting Manual 2022.

As specified in the Audit Plan, each licence obligation applicable to EGL1 and was individually considered in this audit for the duration of the audit period. Specifically, the scope for the Performance Audit included:

- Site visit to Emu Downs Wind Farm.
- Interviews with key APA staff and contractors.
- Review, testing and assessment of relevant documents and systems.
- Review of the licensee's Annual Compliance reports and compliance registers
- Preparation of an audit report in accordance with the format outlined in the Guidelines.
- Consideration of the recommendations from the previous audit report and PAIP and assessment of the actions taken by the licensee to address the recommendations (Refer Appendix 1).

In order to meet their legal and other obligations, EDJV has established several material commercial agreements, approvals and compliance requirements associated with the EDRF and these requirements were considered within the scope of the Performance Audit.

- Commercial Agreements
  - Power Purchase Agreement
  - Insurance Agreements
  - OM Agreements
  - Network access agreement

- Connection Agreement
- Lease agreements

- Licences and Permits
  - Electricity Generation Licence EGL1

- Management Plans with Compliance Requirements
  - Electricity Compliance Reporting Manual (ERA)
  - HSE Management Plan
  - Emergency Response Plan

- Statutory Compliance
  - Acts (for example *Electricity Industry Act 2004, Work Health and Safety Act 2020 etc).*
  - Regulations *(for example Economic Regulation Authority (Licensing Funding) Regulations 2014, Work Health and Safety (General) Regulations 2022, etc)*
  - Codes (for example, Electricity Industry (Metering) Code 2012)
  - Mandatory Standards

2.2 Performance Audit Objectives

The objective of the performance audit was to provide to the Authority an independent assessment of the Licensee's compliance with applicable obligations under the licence.

Additionally, in relation to the previous audit the objective was to provide an assessment of findings from the last audit and the actions taken to address the recommendations from the previous audit.

2.3 Performance Audit Excluded Obligations

During the audit period, there were some Electricity Compliance Reporting Manual obligations for EGL1 that have been excluded (Refer Table 7) as they are not applicable to EDJV's operations. There were no Type 1 reporting requirements applicable to EGL1. Excluded compliance obligations were detailed in the approved Audit Plan. Deviations from the Audit Plan are detailed in Section 2.3.2 and Table 8.

TABLE 7 Obligations Excluded from the Performance Audit Report

Legislative Obligation	Obligation Reference	Explanation for Obligations Not Applicable to EDWF JV's Operations
13. Electricity licences – Licence conditions and obligations		
Electricity Industry Act 2004	120	▪ Obligation 120 was not applicable as during the audit period, the Licensee was not prescribed individual performance standards by the ERA during the audit period.
15. Electricity Industry Metering Code – Licence conditions and obligations		
Electricity Industry Metering Code 2012	364 401 402 405 406 407 408 410 435	▪ Obligation 364 was not applicable to Generation Licensees during the audit period, the Electricity Compliance Reporting Manual was update to correct reference to the applicable Licensees in July 2018. ▪ Obligation 401 was not applicable as during the audit period, the Licensee did not collect energy data as this was undertaken by the Network Operator ▪ Obligation 402 was not applicable as during the audit period, there were no meters maintained by the Licensee to collect information or data from billing. The Network Operator was responsible for metering installations. ▪ Obligation 405 was not applicable as during the audit period, as the Network Operator had access to their own tariff meters. ▪ Obligation 406 was not applicable during the audit period, as there were no requests to any user to collect information during the audit period. ▪ Obligations 407 and 408 were not applicable as during the audit period, the connection point was the responsibility of the Network Operator. ▪ Obligations 410 and 435 were not applicable to Generation Licensees during the audit period, the Electricity Compliance Reporting Manual was updated to correct reference to the applicable Licensees in February 2022.

2.4 Performance Audit Variation to Audit Plan

As required by section 5.1.4 of the Audit and Review Guidelines – 2019, Auditors must identify any licence obligations or effectiveness criteria that were assessed after the approval of the audit plan by the ERA, as 'not applicable' or if the auditor has revised the audit priority for one or more licence obligations, the auditor must identify this in the report. Table 8 depicts the deviations from the Audit Plan and there were 34 not 32 obligations (as detailed in the approved Audit and Review Plan) applicable to the performance audit scope.

TABLE 8 Deviations from the Audit Plan – Summary Performance Audit Priorities

AUDIT PRIORITY RATING						
Legislative & Regulatory Instrument (Electricity Compliance Reporting Manual)	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5	Not Applicable
12 *Electricity Industry Act 2004*						
Sub Total =7	0	0	0	6	1	1
13 Electricity Generation Licence (EGL1)						
Sub Total =7	0	0	0	7	0	0
15 *Electricity Industry (Metering) Code 2012*						
Sub Total =~~18~~ 19	0	0	0	12	~~6~~ 7	~~8~~ 9
Sub Total	**0**	**0**	**0**	**25**	~~7~~ 8	~~9~~ 10
Total ~~32~~ 33						

2.5 Performance Audit Methodology

The performance audit methodology detailed in the Audit and Review Guidelines – Electricity and Gas Licences (March 2019) was used in the execution of the Performance Audit and its application to this audit was detailed in the Audit Plan. The were a total of 10 obligations removed from the scope of audit as determined not applicable (refer table 7) and 2 deviations from the Audit Plan which were attributable to tallying errors in the audit plan, as detailed in section 2.4.
A risk-based approach, using the risk model described in the Appendix 3 of 2019 Guideline, was applied to planning and conducting the audit by the Audit Team. The audit priority was determined for each of the applicable licence obligations by assessing the relevant risk factors and controls in place.

The audit procedures included audit, testing and assessment of relevant documents and systems in relation to financial management and planning, service performance standards, compliance, asset management, operations and maintenance functions and reporting determine effectiveness through:

- Interview supervisory personnel and operational personnel
- Inspect relevant documents

- Obtain evidence policies, procedures and controls are in place and controls are working effectively
- Examine compliance reports and breach register
- Obtain confirmations from third parties if applicable
- Examine reports and correspondence with other regulators (e.g. Environmental)
- Physically examine applicable asset infrastructure
- Review compliance documentation and breach registers
- Sample output and timeliness procedures
- Recalculate a sample of relevant performance indicators
- Walkthrough the process to calculate relevant performance indicators

EDJV's audit priorities were determined in the development of the audit plan ranged from priority 4 to 5 (refer Appendix 1 for detail).

The Performance Audit was conducted during August - October 2024 and included desktop review and two day site visit to execute the audit plan, conduct interview sessions and report writing (Refer to Table 12 for a list of personnel who participated in the audit and review). In total the audit required a combined total of 80 hours of the Audit Team member's time.

2.6 Performance Audit Detailed Summary of Ratings

As required by section 5.1.6.1 of the Audit & Review Guidelines (March 2019) Table 9 summarises the auditor's assessment of the performance summary rating for each applicable licence obligation as specified in the Electricity Compliance Reporting Manual 2022 using the scales described in Table 1.

TABLE 9 Performance Audit Compliance Summary

Compliance Obligation Reference No.	Licence Reference	Audit Priority	Adequacy of Controls Rating					Compliance Rating				
			A	B	C	D	NP[1]	1	2	3	4	NR[2]
SECTION 8: TYPE 1 REPORTING REQUIREMENTS												
THERE ARE NO TYPE 1 REPORTING REQUIREMENTS APPLICABLE TO EGL1												
SECTION 12: ELECTRICITY INDUSTRY ACT - LICENCE CONDITIONS AND OBLIGATIONS												
101Δ♦	Electricity Industry Act section 13(1) EGL, condition 5.3.1	4					NP	1				
102♦	Electricity Industry Act section 14(1)a) EGL, condition 5.1.1	4					NP	1				
103	Electricity Industry Act section 14(1)(b) EGL, condition 5.1.4	4					NP	1				
104*Δ♦	Electricity Industry Act section 14(1)(c) EGL, condition 5.1.2 and 5.1.3	4					NP	1				
105	Electricity Industry Act section 17(1) EGL, condition 4.2.1	4	A						2			
106	Electricity Industry Act section 31(3) EGL, condition 4.1.1	5		B				1				
107	Electricity Industry Act section 41(6) EGL, condition 4.1.1	4					NP					NR
SECTION 13: ELECTRICITY LICENCES - LICENCE CONDITIONS AND OBLIGATIONS												
119	Electricity Industry Act section 11 EGL, condition 4.3.1	4					NP	1				
121	Electricity Industry Act section 11 EGL, condition 5.3.2	4					NP	1				
122	Electricity Industry Act section 11 EGL, condition 5.1.5	4					NP	1				
123	Electricity Industry Act section 11 EGL, condition 4.4.1	4					NP					NR
124*⊗	Electricity Industry Act section 11 EGL, condition 4.5.1	4		B					2			
125	Electricity Industry Act section 11 EGL, condition 3.8.1 and 3.8.2	4					NP					NR
126	Electricity Industry Act section 11 EGL, condition 3.7.1	4					NP	1				
SECTION 15: ELECTRICITY INDUSTRY METERING CODE - LICENCE CONDITIONS AND OBLIGATIONS												
PART 3 – METERS AND METERING INSTALLATIONS												
324	Electricity Industry Metering Code Cl 3.3B	4					NP					NR
339	Electricity Industry Metering Code Cl 3.11(3)	4					NP					NR
PART 4 - THE METERING DATABASE												
371	Electricity Industry Metering Code Cl 4.4(1)	5					NP					NR
372	Electricity Industry Metering Code Cl 4.5(1)	5					NP	1				
373	Electricity Industry Metering Code Cl 4.5(2)	4					NP					NR

Compliance Obligation Reference No.	Licence Reference	Audit Priority	Adequacy of Controls Rating					Compliance Rating				
			A	B	C	D	NP[1]	1	2	3	4	NR[2]
PART 5 - METERING SERVICES												
388	Electricity Industry Metering Code Cl 5.4(2)	4					NP	1				
416	Electricity Industry Metering Code Cl 5.21(5)	4					NP					NR
417	Electricity Industry Metering Code Cl 5.21(6)	4					NP					NR
PART 6 DOCUMENTATION												
448	Electricity Industry Metering Code, Cl 6.1(2)	4					NP	1				
PART 7 - NOTICES AND CONFIDENTIAL INFORMATION												
451	Electricity Industry Metering Code Cl 7.2(1)	5					NP	1				
453	Electricity Industry Metering Code Cl 7.2(4)	4					NP					NR
454	Electricity Industry Metering Code Cl 7.2(5)	4					NP					NR
455	Electricity Industry Metering Code Cl 7.5	4					NP	1				
456	Electricity Industry Metering Code Cl 7.6(1)	4					NP	1				
PART 8 - DISPUTE RESOLUTION												
457	Electricity Industry Metering Code Cl 8.1(1)	5					NP					NR
458	Electricity Industry Metering Code Cl 8.1(2)	5					NP					NR
459	Electricity Industry Metering Code Cl 8.1(3)	5					NP					NR
460	Electricity Industry Metering Code Cl 8.1(4)	4					NP					NR
461	Electricity Industry Metering Code Cl 8.3(2)	5					NP					NR

[1] NP (Not Performed)
[2] NR (Not Rated)

2.7 Status of Recommendations 2019 Performance Audit

In executing the Audit Plan and in line with the Audit & Review Guidelines (March 2019) the auditors, when assessing if the licensee has complied with its licence obligations, applied a level of scrutiny that corresponds to a "reasonable assurance engagement". This was further detailed within the audit plan (refer Paragraph 12(a)(i)(a) of ASAE 3000, June 2014). The previous performance audit occurred in 2019. As such, the status of recommendations from the previous audit, and as required by Section 11.3 of the Audit Guidelines (March 2019) are detailed in Table 10.

TABLE 10 Status of Recommendations Addressing Non-Compliances from the Previous Audit

A Resolved during current audit period				
Recommendation Reference (no./year)	**Licence Obligation Reference Number** **Controls and Compliance Rating** **Legislative Obligation** **Details of Inadequate Controls and/or Non-Compliance**	**Auditors' Recommendation**	**Date Resolved**	**Further Action Required (Yes/No/Not Applicable)** **Details of Further Action Required (Including Current Recommendation Reference, if Applicable)**
01/2019	▪ 105 ▪ B2 ▪ *A licensee must pay the prescribed licence fees to the ERA according to clauses 6, 7 and 8 of the Economic Regulation Authority (Licensing Funding) Regulations 2014.* ▪ The licensee has not met the obligations in regards to payment of prescribed licence fees on 2 occasions during the audit period.	There are no recommendations made in relation to this obligation. Whilst it is noted that obligation 105 again occurred as a non-compliance during this audit period (Refer recommendation 01/2024), the instance was isolated and administrative in nature and was readily rectified when the licensee became aware of the non-compliance.	14 July 2021	No further action required.

B Unresolved at end of current audit period

	Details of Inadequate Controls and/or Non-Compliance	Auditors Recommendations	Auditors Comments
02/2019	▪ **124** ▪ **B2** ▪ *A licensee must provide the Authority in the manner prescribed with any information that the Authority requires in connection with its functions under the Electricity Industry Act.* ▪ The Annual Compliance Report for 2015-2016 Year did not reflect the late payment of the licence fee for the Standing Data Charge quarter commencing July 2015.	The Standing Charge Data was submitted past the required date for the 2022 reporting year. This obligation was raised in the previous audit period. As such recommendations have been made in relation to developing a more robust process for tracking and responding to non-compliance, such as internal audits prior to reporting deadlines. Refer recommendation 02/2024.	Refer Recommendation 02/2024

2.8 2024 Performance Audit Recommendations and Action Plans

Recommendations made within the report are detailed below (if applicable) and will be reviewed and included in the post audit implementation plan (if required) by the licensee to ensure compliance with requirements.

TABLE 11 Recommendations to Address Current Non-Compliances and Control Deficiencies

A Resolved during the current audit period				
Recommendation Reference (no./year)	**Licence Obligation Reference Number** **Controls and Compliance Rating** **Legislative Obligation** **Details of Inadequate Controls and/or Non-Compliance**	**Auditors' Recommendation**	**Date Resolved & Action Taken by the Licensee**	**Auditors Comments**
01/2024	▪ **105** ▪ **A 2** ▪ *A licensee must pay the prescribed licence fees to the ERA according to clauses 6, 7 and 8 of the Economic Regulation Authority (Licensing Funding) Regulations 2014.* ▪ Due to administrative errors the Standing Charges were paid late on 1 of the 20 invoices due during the audit period. The subsequent compliance report noted an administrative error was responsible for the non-compliance.	The payment of Standing Charges has been well addressed by the Licensee and future payments were made within the required timeframes. The Licensee demonstrated awareness to the obligation through controls and effective corrective action. As such, no further recommendations were made.	14 July 2021	Since June 2021 all invoices were compliant and 95% of the invoices were paid in accordance with requirements of the obligation.

B Unresolved during the current audit period			
Recommendation Reference (no./year)	**Licence Obligation Reference Number** **Controls and Compliance Rating** **Legislative Obligation** **Details of Inadequate Controls and/or Non-Compliance**	**Auditors' Recommendation**	**Auditors Comments**
02/2024	**124** **B2** **EGL, condition 4.5.1** *A licensee must provide the ERA, in the manner prescribed, with any information that the ERA requires in connection with its functions under the Electricity Industry Act.* The Standing Charge Data was submitted past the required date for the 2022 reporting year. This obligation was raised in the previous audit period and recommendations have been made in relation to developing a more robust process for tracking and responding to non-compliance, such as internal audits prior to reporting deadlines. Refer recommendation 02/2024.	To establish a more robust process for tracking and responding to non-compliance, it is recommended that APA: 1. **Enhance Compliance Documentation and Record-Keeping**: ○ Review and update policies and procedures related to compliance with the Electricity Generation Licence (EGL1) to ensure accurate record-keeping and timely reporting. ○ Improve compliance documentation management to facilitate easier tracking and verification of compliance status. 2. **Update and Optimise Vigilant System for Compliance Management**: ○ Complete the upload of the actions from Gap analysis to vigilant. ○ Conduct a comprehensive review of the Vigilant system to ensure that all compliance obligations, including Type 2 reportable obligations, are accurately recorded and tracked. ○ Set up automated alerts within Vigilant for upcoming compliance deadlines and flagging of any discrepancies in recorded information. 3. **Conduct a Pre-Submission Internal Review**: ○ Establish and document a structured internal review process to ensure accuracy of Type 2 reportable obligations before submitting annual compliance reports.	Refer PAIP

B Unresolved during the current audit period			
Recommendation Reference (no./year)	**Licence Obligation Reference Number** **Controls and Compliance Rating** **Legislative Obligation** **Details of Inadequate Controls and/or Non-Compliance**	**Auditors' Recommendation**	**Auditors Comments**
		○ Leverage monthly asset performance meetings to review and resolve non-compliance issues 4. **Assign Clear Responsibilities and Accountability with RACI integration**: ○ Use the RACI model to clarify roles, accountabilities, and communication for all compliance activities. ○ Ensure Operations Risk, Compliance and Assurance team oversee tracking and reporting obligations.	

3. AMS EFFECTIVENESS REVIEW SCOPE & OBJECTIVES

The Asset Management System Review has been carried out as a 'limited assurance engagement'. A limited assurance engagement conducted in accordance with ASAE 3500 required identifying areas where the AMS is likely to be materially ineffective, addressing the areas identified and considering the process used to prepare the AMS. 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.

3.1 AMS Review Scope

The asset management review was conducted in accordance with the following guidance documentation:

- 2019 Audit and Review Guidelines – Electricity and Gas Licences
- the ERA approved Review Plan
- Electricity Generation Licence EGL1
- ISO 31000:2018 (risk based approach to auditing using the risk evaluation model)
- ASAE 3000 Standard on Assurance Engagements - Assurance Engagements Other than Audits or Reviews of Historical Financial Information
- ASAE 3100 Standard on Assurance Engagements - Compliance Engagements
- ASAE 3500 Standard on Assurance Engagements - Performance Engagements

In accordance with the Review Guidelines, the scope of the review considered the effectiveness of EDJV's existing control procedures within the 12 key processes in the asset management life cycle and their associated effectiveness criterion (Refer Table 15 for detail) as outlined as detailed in Table 23 of the 2019 Guidelines.

The scope of the AMS review included an assessment of adequacy and effectiveness of the EDJV's Asset Management System by evaluating during the review period 1 July 2019 to 30th June 2024 the following.

1. Asset Planning
2. Asset creation/acquisition
3. Asset disposal
4. Environmental analysis
5. Asset operations
6. Asset maintenance
7. Asset management information system
8. Risk management
9. Contingency planning
10. Financial planning
11. Capital expenditure planning
12. Review of asset management system

Each key process and effectiveness criteria were applicable to EDJV's AMS and was individually considered in this review for the duration of the review period. Specifically, the scope for the AMS review included:

- Site visit to the Emu Downs Wind Farm.
- Interviews with key staff and contractors
- Review, testing and assessment of relevant documents and systems.
- Review of the licensee's understanding and compliance with legal / environmental / safety obligations
- Preparation of a review report in accordance with the format outlined in the Guidelines.
- Consideration of the recommendations from the previous review report and PRIP and assessment of the actions taken by the licensee to address the recommendations (Refer Appendix 1, as determined not required for inclusion in Table 17 of this review report).

In order to meet their legal and other obligations, EDJV has established several material commercial agreements, approvals and compliance requirements associated with the asset management for the wind and solar farms and these requirements were considered within the scope of the AMS review.

3.2 Asset Management System Review Objective

The objective of the review was to provide to the Authority an independent assessment of performance against each asset management process and determined the effectiveness EDJV's AMS in relation to EGL1 and to provide recommendations to address any asset management system deficiencies observed.

Additionally, in relation to the previous review the objective was to provide an assessment of findings from the last review and the actions taken to address the recommendations from the previous review.

3.3 Asset Management System Review Methodology

The review methodology detailed in the Audit and Review Guidelines – Electricity and Gas Licences (March 2019) was used in the execution of the Asset Management System Review and its application to this review was detailed in the Review Plan. The were no deviations from the Review Plan.

A risk-based approach, using the risk model described in the Appendix 3 of 2019 Guideline, was applied to planning and conducting the review by the Audit Team. The review priority was determined for each of the 12 asset management processes by assessing the relevant risk factors and controls in place.

The review procedures included review, testing and assessment of relevant documents and systems in relation to financial management and planning, service performance standards, compliance, asset management, operations and maintenance functions and reporting determine effectiveness through:

- Interview supervisory personnel and operational personnel
- Obtain evidence policies, procedures and controls are in place and controls are working effectively
- Examine compliance reports and breach register
- Physically examine applicable asset infrastructure
- Examine asset management system effectiveness criteria

- Sample output and timeliness procedures
- Walkthrough the process to calculate relevant performance indicators
- Review of key process control and management systems

The EDJVs review priorities determined in the development of the review plan ranged from priority 4 to 5 (refer Appendix 1 for detail).

TABLE 12 List of Personnel Who Participated in Review

ITEM	NAME	COMPANY	POSITION
1	[redacted]	APA Group	Asset Manager
2		APA Group	Regulatory Compliance and Risk Manager, Asset Management
3		Power Plan	EDWF Engineer
4		Power Plan	Operations Manager
5		APA Group	Regulatory Compliance Manager (WA Power & NT), Asset Management
6		APA Group	Asset Performance & Lifecycle Specialist
7		Vestas	EDRF Site Manager
8		Vestas	Team Lead Cyber Security & SCADA Infrastructure
9		Vestas	Site Supervisor
10		Vestas	Planner
11		APA Group	Consultant – Disaster Recovery
12		APA Group	Sourcing Specialist, Procurement & Real Estate
13		APA Group	Senior Management Accountant
14	[redacted]	APA Group	Technical Specialist, O&M

The Review was conducted in conjunction with the Performance Audit during 6-7 August 2024 and included desktop review and two day audit on site to execute the review plan, interview sessions and report writing. In total the review required 60 hours of each of the Audit Teams time.

3.4 Asset Management System Effectiveness Detailed Summary of Ratings

The asset management system was found to be appropriate and met the requirements of the Audit and Review Guidelines – Electricity and Gas Licences (2019). There were 6 asset management system deficiencies where the asset management review performance rating or process and policy rating required recommendations to be made (refer section 5.1.8 of the Audit and Review Guidelines).

There were a number of Opportunities for Improvement that were noted, and they have been provided directly to the Licensee.

As required by section 5.1.6.2 of the Audit & Review Guidelines (March 2019) Table 15 summarises the auditor's assessment of both the process and policy definition rating and the performance rating for each key process in the licensee's asset management system, using the scales described in Tables 13 and 14.

TABLE 13 Asset Management Process and Policy Definition Adequacy Ratings

RATING	DESCRIPTION	CRITERIA
A	Adequately defined	• Processes and policies are documented. • Processes and policies adequately document the required performance of the assets. • Processes and policies are subject to regular reviews and updated where necessary. • The asset management information system(s) are adequate in relation to the assets being managed.
B	Requires some improvement	• Processes and policies require improvement. • Processes and policies do not adequately document the required performance of the assets. • Reviews of processes and policies are not conducted regularly enough. • The asset management information system(s) requires minor improvements (taking into consideration the assets being managed).
C	Requires substantial improvement	• Processes and policies are incomplete and require substantial improvement. • Processes and policies do not document the required performance of the assets. • Reviews of processes and policies are considerably out of date. • The asset management information system(s) requires substantial improvements (taking into consideration the assets being managed)
D	Inadequate	• Processes and policies are not documented. • The asset management information system(s) is not fit for purpose (taking into consideration the assets being managed).

TABLE 14 Asset Management Performance Ratings

RATING	DESCRIPTION	CRITERIA
1	Performing effectively	• The performance of the process meets or exceeds the required levels of performance. • Process effectiveness is regularly assessed, and corrective action taken where necessary.
2	Improvement required	• The performance of the process requires some improvement to meet the required level. • Process effectiveness reviews are not performed regularly enough. • Recommended process improvements are not implemented
3	Corrective action required	• The performance of the process requires substantial improvement to meet the required level. • Process effectiveness reviews are performed irregularly or not at all. • Recommended process improvements are not implemented
4	Serious action required	• Process is not performed, or the performance is so poor the process is considered to be ineffective.
NP	Not Performed	• A performance rating was not able to be assessed. The licensee's performance (performance rating) for the management process and effectiveness criterion was not able to be assessed as function did not occur during the review period.

The process and policy and asset management system adequacy ratings are summarised in Table 15.

TABLE 15 Asset Management System Effectiveness Summary

ASSET MANAGEMENT SYSTEM CRITERA	PROCESS & POLICY RATING	PERFORMANCE RATING
1. ASSET PLANNING	**B**	**2**
1.1 Asset management plan covers the processes in this table	B	3
1.2 Planning processes and objectives reflect the needs of all stakeholders and are integrated with business planning	A	1
1.3 Service levels are defined in the asset management plan	A	1
1.4 Non-asset options (e.g. demand management) are considered	N/A	N/A
1.5 Lifecycle costs of owning and operating assets are assessed	B	1
1.6 Funding options are evaluated	A	1
1.7 Costs are justified, and cost drivers identified	B	1
1.8 Likelihood and consequences of asset failure are predicted	A	1
1.9 Asset management plan is regularly reviewed and updated	B	3
2. ASSET CREATION AND ACQUISITION	**A**	**1**
2.1 Full project evaluations are undertaken for new assets, including comparative assessment of non- asset options	A	1
2.2 Evaluations include all life-cycle costs	A	1
2.3 Projects reflect sound engineering and business decisions	A	1
2.4 Commissioning tests are documented and completed	A	1
2.5 Ongoing legal / environmental / safety obligations of the asset owner are assigned and understood	A	1
3. ASSET DISPOSAL	**B**	**2**
3.1 Under-utilised and under-performing assets are identified as part of a regular systematic review process	A	1
3.2 The reasons for under-utilisation or poor performance are critically examined and corrective action or disposal undertaken	A	1
3.3 Disposal alternatives are evaluated	B	1

ASSET MANAGEMENT SYSTEM CRITERA	PROCESS & POLICY RATING	PERFORMANCE RATING
3.4 There is a replacement strategy for assets	B	3
4. ENVIRONMENTAL ANALYSIS	**A**	**1**
4.1 Opportunities and threats in the asset management system environment are assessed	B	1
4.2 Performance standards (availability of service Capacity, continuity, emergency response, etc.) are measured and achieved	A	1
4.3 Compliance with statutory and regulatory requirements	A	1
4.4 Service standard (customer service levels etc) are measured and achieved.	A	1
5. ASSET OPERATIONS	**A**	**1**
5.1 Operational policies and procedures are documented and linked to service levels required	A	1
5.2 Risk management is applied to prioritise operations tasks	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	B	1
5.4 Accounting data is documented for assets	A	1
5.5 Operational costs are measured and monitored	A	1
5.6 Staff resources are adequate, and staff receive training commensurate with their responsibilities.	A	1
6. ASSET MAINTENANCE	**A**	**1**
6.1 Maintenance policies and procedures are documented and linked to service levels required	A	1
6.2 Regular inspections are undertaken of asset performance and condition	A	1
6.3 Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule	A	1
6.4 Failures are analysed, and operational / maintenance plans adjusted where necessary	A	1
6.5 Risk management is applied to prioritise maintenance tasks	A	1
6.6 Maintenance costs are measured and monitored	A	1
7. ASSET MANAGEMENT INFORMATION SYSTEM	**A**	**1**
7.1 Adequate system documentation for users and IT operators	A	1
7.2 Input controls include suitable verification and validation of data entered into the system	A	1
7.3 Security access controls appear adequate such as passwords	A	1
7.4 Physical security access controls appear adequate	A	1
7.5 Data backup procedures appear adequate, and backups are tested	A	1
7.6 Computations for licensee performance reporting are accurate	A	1
7.7 Management reports appear adequate for the licensee to monitor licence obligations	A	1
7.8 Adequate measures to protect asset management data from unauthorised access or theft by persons outside the organisation	A	1
8. RISK MANAGEMENT	**B**	**2**
8.1 Risk management policies and procedures exist and are applied to minimise internal and external risks	B	2
8.2 Risks are documented in a risk register and treatment plans are implemented and monitored	B	2
8.3 Probability and consequences of asset failure are regularly assessed	A	1
9. CONTINGENCY PLANNING	**B**	**3**
9.1 Contingency plans are documented understood and tested to confirm their operability and to cover higher	B	3
10. FINANCIAL PLANNING	**A**	**1**
10.1 The financial plan states the financial objectives and identifies strategies and actions to achieve those	A	1
10.2 The financial plan identifies the source of funds for capital expenditure and recurrent costs	A	1

ASSET MANAGEMENT SYSTEM CRITERA	PROCESS & POLICY RATING	PERFORMANCE RATING
10.3 The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets)	A	1
10.4 The financial plan provides firm predictions on income for the next five years and reasonable predictions beyond this period	A	1
10.5 The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services	A	1
10.6 Large variances in actual/budget income and expenses are identified and corrective action taken where necessary	A	1
11. CAPITAL EXPENDITURE PLANNING	**A**	**1**
11.1 There is a capital expenditure plan covering works to be undertaken, actions proposed, responsibilities and dates	A	1
11.2 The capital expenditure plan provides reasons for capital expenditure and timing of expenditure	A	1
11.3 The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan	A	1
11.4 There is an adequate process to ensure the capital expenditure plan is regularly updated and implemented	A	1
12. REVIEW OF AMS	**B**	**3**
12.1 A review process is in place to ensure the asset management plan and the asset management system described in it remain current	B	3
12.2 Independent reviews (e.g., internal audit) are performed of the asset management system	B	3

3.5 Status of Recommendations 2019 Asset Management Review

There were no recommendations of the previous review to be considered.

TABLE 16 Ineffective Components Recommendations, Previous Review Implementation Plan

A Resolved during current review period				
Recommendation Reference (no./year)	**Rating** **Asset Management Process and Effectiveness Criterion** **Details of Deficiency** **Details of Inadequate Controls and/or Non-Compliance**	**Auditors' Recommendation**	**Date Resolved**	**Further Action Required (Yes/No/Not Applicable)** **Details of Further Action Required (Including Current Recommendation Reference, if Applicable)**
There were no asset management system deficiencies resolved during the current review period.				
B Unresolved at end of current review period				
There were no asset management system deficiencies unresolved during the current review period				

3.6 2024 Asset Management System Recommendations and Action Plans

As stipulated in section 5.3 of the Audit and Review Guidelines – Electricity and Gas Licences (March 2019), the Audit Team noted that the Asset Management Review Post Implementation Plan does not form part of the Audit Opinion. There were 6 recommendations made from the current review that required post review implementation plans.

TABLE 17 Recommendations to Address Current Asset System Deficiencies

A Resolved during current review period				
Recommendation Reference (no./year)	**Rating** **Asset Management Process and Effectiveness Criterion** **Details of Deficiency Details of Inadequate Controls and/or Non-Compliance**	**Action Taken by Licensee**	**Date Resolved**	**Auditor's Comments**
There were no recommendations from the current review that were resolved during the current review period.				

B Unresolved during current review period

Recommendation Reference (no./year)	Rating Asset Management Process and Effectiveness Criterion Details of Deficiency	Auditors Recommendation	Action taken by the Licensee by the end of the review period
03/2024	▪ **B3** ▪ **1.1 Asset management plan covers the processes in this table*** ▪ The WA Renewables Asset Management Plan (WARAMP), Emu Downs Asset Management System Manual (AMSM) and the EDRF Year Plans lack a formal asset disposal process and testing of contingency planning for all assets. There was an absence of regular management reviews, and there is no contractor verification process formalised for Vestas, leading to reduced system effectiveness	To enhance the effectiveness of the WA Renewables Asset Management Plan (WARAMP) and the Asset Management System Manual (AMSM), APA should undertake the following corrective actions: 1. **Formalise a Structured Review Process for the AMS**: o Implement a more frequent review cycle for the AMS, with updates conducted annually or biennially, and additional reviews triggered by significant operational changes, regulatory updates, or risk assessments. Inclusion of a contractor verification process is recommended. o Establish a review committee with representatives from key departments (e.g., operations, compliance, risk management) to oversee and approve updates to the AMS. o Develop a timeline for the next three review cycles to ensure proactive planning, with the first updated review completed by Q4 2024 2. **Establish a Comprehensive Asset Disposal and Replacement Strategy**: o Develop a clear asset disposal strategy that covers end-of-life management, including criteria for asset decommissioning, sale, or repurposing, and document this in the AMS. o Align the disposal strategy with regulatory requirements and operational frameworks, ensuring that all steps comply with environmental and safety standards. o Create a phased replacement strategy for assets nearing end-of-life, with specific timelines for each phase, and update the life cycle financial model accordingly. o Include an asset condition monitoring program to identify underperforming assets and plan for their timely replacement. 3. **Develop and Regularly Test Detailed Contingency Plans**:(Also Refer 9.1, Recommendation 06/2024)	The recommendation has not yet been addressed. Refer 2024 PRIP

		○ Create comprehensive contingency plans for critical asset failures, addressing key risk scenarios such as major equipment breakdowns, extreme weather events, and cyberattacks. The EDRF Year Plan currently included EBoP only. If required to be undertaken by Vestas the AMS should specify this requirement and process. ○ Schedule semi-annual testing and drills for the contingency plans, with post-drill reviews to identify areas for improvement and ensure plans are understood by all personnel. ○ Integrate contingency planning into the AMS to ensure alignment with business continuity and disaster recovery frameworks. 4. **Review and Update the Requirement for Vestas to Develop a Contract Asset Management Plan (CAMP)**: ○ Reassess the requirement for Vestas to provide a Contract Asset Management Plan and ensure it aligns with current asset management standards and the ISO 55001 framework. ○ If a CAMP is deemed necessary, establish a timeline for Vestas to submit an updated plan by Q4 2024 and include provisions for annual reviews to ensure it remains current. ○ Incorporate requirements for Vestas to provide regular updates on key asset management activities, including maintenance schedules, performance reports, and compliance with the CAMP. 5. **Monitor and Report on the Implementation of Corrective Actions**: ○ Develop key performance indicators (KPIs) to track the progress and effectiveness of the corrective actions, such as review cycle adherence, completion of contingency plan tests, and asset disposal milestones. i.e. formalise Services Audit option in the O&M Contract. Provide quarterly updates to senior management on the status of these actions to ensure accountability and continuous improvement.	
04/2024	▪ **B3** ▪ **1.9 Asset management plan is regularly reviewed and updated** ▪ The WA Renewables Asset Management Plan (WARAMP) and Asset Management System Manual (AMSM) were reviewed infrequently, Vestas lacked a formal Asset Management Plan (AMP) and there	To ensure the Asset Management System (AMS) remains effective and responsive, APA should undertake the following actions: 1. **Adopt a More Frequent AMS Review Cycle**: ○ Reduce the AMS review cycle from five years to a more frequent schedule, such as every two years, or initiate reviews whenever significant changes in operations, technology, or regulatory requirements occur.	The recommendation has not yet been addressed. Refer 2024 PRIP

	was an absence of a contractor verification process to ensure AMS activities were aligned with the generation licence requirements.	○ Establish a structured review process that includes interim updates (e.g., annual reviews) to address any emerging risks or regulatory changes. The first interim review should be completed by Q4 2024. ○ Form a cross-functional review committee to oversee the updates, consisting of representatives from risk management, compliance, operations, and asset management. 2. **Clarify and Formalise the Requirement for Vestas to Develop a Contractor Asset Management Plan (AMP)**: ○ Review the O&M Contract to determine if the requirement for Vestas to develop a Contractor AMP aligns with contractual and asset management standards, including ISO 55001. ○ If a Contractor AMP is required, set a deadline for Vestas to submit an updated plan by Q4 2024, ensuring it covers key asset management activities, including maintenance schedules, risk management practices, and compliance requirements. ○ Include provisions in the O&M Contract for regular reviews of the Contractor AMP (e.g., annually), with feedback from APA to ensure it remains current and aligned with the AMS. 3. **Integrate Monitoring and Reporting Mechanisms**: ○ Establish key performance indicators (KPIs) to monitor the responsiveness of the AMS to changes in risk, technology, and regulations, and track compliance with the new review cycle. ○ Implement a reporting process where progress on AMS updates and the development of the Contractor AMP are reviewed quarterly by senior management to ensure accountability. 4. **Implement Contractor Verification Processes**: ○ Develop a clear RACI framework to ensure Vestas understand the AMS requirements. ○ Utilise the provisions of the Services Audit clause in the O&M Contract.	
05/2024	▪ **B3** ▪ **3.4 There is a replacement strategy for assets** ▪ During the review period, APA lacked a clearly defined and consistent replacement strategy for assets, with discrepancies in end-of-life assumptions for the Emu Downs Wind Farm across key	To ensure consistency and accuracy in asset replacement planning, it is recommended that APA: 1. **Resolve the Discrepancy in Design Life**: ○ Establish a unified end-of-life assumption for the Emu Downs assets (20 or 25 years) by the end of Q3 2024, ensuring that the AMSM, WARAMP, and Year Plans are updated accordingly.	The recommendation has not yet been addressed. Refer 2024 PRIP

		documents—the AMS Manual (stated EOL 2031), the 2024-2025 EDRF Year Plan (stated EOL 2026), and the WARAMP (Indicated EOL range 2026–2031). These inconsistencies, coupled with the delayed wind farm condition assessment (from FY23 to FY25), could undermine effective asset replacement planning. While the EBoP Equipment Life Extension was completed in 2023, decisions regarding extending operations or decommissioning the wind farm remain misaligned with asset condition assessments, financial models, and contract timelines, As such necessitating improved planning integration to link these unified assumptions to timelines for upgrades, decommissioning, and contract obligations, ensuring coordinated decision-making and effective asset management.	Clearly specify where assets have differing asset life spans, for example the wind turbines, EBoP, solar farm, etc. ○ Conduct stakeholder consultations (e.g., with Vestas, financial planners, and engineers) to determine the most feasible design life based on current asset conditions and projected performance. 2. **Update the Life Cycle Financial Model and Replacement Strategies**: ○ Where required, revise the life cycle financial model and asset replacement strategies based on the agreed-upon design life, with updates completed by Q4 2024. ○ Incorporate provisions for phased replacements or upgrades to extend asset life where feasible, in line with industry standards for similar renewable facilities. 3. **Implement a Structured Review Process for the Replacement Strategy**: ○ Establish a biannual review cycle for the replacement strategy to ensure it remains aligned with the latest asset performance data, condition assessments, and industry developments. ○ Integrate findings from life extension studies (to be completed by early 2025) into the replacement strategy, allowing for dynamic adjustments in planning. ○ Include performance indicators in the review process to measure the effectiveness of the replacement strategy and adapt it to evolving operational and financial conditions. 4. **Document and Communicate All Changes Across Relevant Plans**: ○ Ensure that any updates to the design life, financial model, or replacement strategies are reflected in all relevant documents (AMSM, WARAMP, Year Plans) and communicated to key stakeholders by Q1 2025. ○ Implement a change management process to track updates across documents and develop a RACI framework where appropriate.	
06/2024	▪ **B3** ▪ **9.1 Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks** ▪ Although contingency and emergency response plans were established for the Emu Downs Renewable Facility (EDRF) and supported by comprehensive	To strengthen the effectiveness of contingency planning, APA should undertake the following actions: 1. **Enhance Documentation of Contingency Plans**: ○ Review and update all existing contingency plans to ensure they are comprehensive, covering various high-risk scenarios, including equipment failures, extreme weather events, and cybersecurity threats.	The recommendation has not yet been addressed. Refer 2024 PRIP

	Business Continuity and Disaster Recovery Plans, there was no evidence of testing and personnel training for the specific contingency plans. This lack of testing could compromise the plans' effectiveness in responding to high-risk scenarios.	○ Standardise the format for contingency plans, including clear roles, responsibilities, and step-by-step response procedures. Complete this update by Q4 2025. 2. **Implement a Regular Testing and Training Schedule**: ○ Schedule semi-annual testing and drills for each contingency plan to ensure they remain effective and actionable. The first drill should take place by Q4 2025. ○ After each drill, conduct a debrief session to identify any gaps or improvements needed in the plans and document the outcomes in an action log. ○ Develop a training schedule for all relevant personnel, ensuring they receive refresher training at least once a year or more frequently for high-risk roles. 3. **Establish a Compliance and Monitoring Program**: ○ Assign a contingency planning coordinator responsible for ensuring all plans are tested on schedule and that any identified improvements are implemented promptly. ○ Monitor and report on the progress of training and testing activities, using key performance indicators (KPIs) such as the percentage of staff trained, number of drills conducted, and time taken to complete corrective actions. ○ Submit quarterly updates to senior management on the status of contingency planning activities, including the results of tests and training outcomes. 4. **Integrate Contingency Plans with the AMS and Business Continuity Plan**: ○ Ensure contingency plans are linked to the Asset Management System (AMS) and Business Continuity Plan (BCP) to provide a cohesive response strategy. ○ Update the AMS and BCP whenever significant changes are made to contingency plans, ensuring consistency across documents.	
07/2024	▪ **B3** ▪ **12.1 A review process is in place to ensure the asset management plan and the asset management system described in it remain current** The Asset Management System Manual (AMSM) specified a five-year review cycle, with	To ensure that key operational changes are not overlooked and the Asset Management System Manual (AMSM) remains up-to-date, APA should implement the following changes: 1. **Adopt a More Frequent Review Cycle:** ○ Reduce the review cycle for the AMSM and key supporting documents from five years to a shorter interval, such as every two	The recommendation has not yet been addressed. Refer 2024 PRIP

the most recent review completed in 2020 following the change to O&M duties for the solar farm. In contrast, the WA Renewable Asset Management Plan (WARAMP) follows a two-year review cycle, but the scheduled review for February 2024 was not conducted. This prolonged interval for the AMSM review reduced its effectiveness, allowing some significant changes to remain undocumented. Examples include the transition from Excel spreadsheets to the Vigilant system for risk management and inconsistencies between the AMSM and the 2024-2025 Year Plan regarding the design life of the Emu Downs Wind Farm. The WARAMP specifies a design life range of 2026–2031, highlighting potential conflicts in strategies for maintenance, upgrades, or decommissioning.

to three years, to ensure that operational changes and new risks are incorporated promptly.

2. **Update the AMSM and WARAMP to Reflect Current Practices**:
    - Revise the AMSM and WA Renewables Asset Management Plan (WARAMP) to incorporate current asset management practices, such as the adoption of the Vigilant system for risk management, and the updated design life of the Emu Downs Wind Farm (EDWF).
    - Establish a timeline for incorporating these updates, with the revisions completed by Q1 2025, ensuring the documents reflect all significant operational adjustments.
    - Develop a change management procedure for documenting new updates and revisions to ensure all stakeholders are informed of changes and the impact on operations.
3. **Incorporate a Review of Vestas' Asset Management Practices**:
    - Include a formal review of Vestas' asset management practices in the updated AMSM and WARAMP. This should address any gaps resulting from the absence of a Contractor Asset Management Plan (AMP) and align with ISO 55001 standards. Utilise the provisions of the Services Audit clause in the O&M Contract.
    - Set up a process for Vestas to provide regular updates on their asset management activities, including maintenance schedules, performance reports, and compliance with AMS requirements, with the first review to be completed by Q4 2024.
    - Establish requirements for Vestas to develop a simplified Contractor AMP, if deemed necessary, and align it with the overall AMSM.
4. **Strengthen Monitoring and Accountability**:
    - Establish clear accountability using a RACI framework for overseeing updates to the AMSM and WARAMP. Assign a dedicated team or individual as Responsible for managing updates, with senior management Accountable for review and approval. Ensure key stakeholders are Consulted and Informed as appropriate.
    - Implement key performance indicators (KPIs) to measure the timeliness, quality, and completeness of updates to the AMSM and WARAMP. Include metrics for incorporating significant operational changes, such as those involving the Vigilant system.
    - Report progress to senior management quarterly, focusing on:
        - Updates made to the AMSM and WARAMP.
        - Significant operational changes and their integration.

		➢ Status of Vestas' asset management reviews. ○ Ensure relevant personnel are Informed of updates and changes through clear communication channels. Facilitate awareness of their roles in implementing and adhering to revised asset management practices.	
08/2024	▪ B3 ▪ 12.2 **Independent reviews (e.g., internal audit) are performed of the asset management system** ▪ While internal audits were conducted for Health, Safety, and Environmental (HSE) compliance, they did not specifically focus on the Emu Downs Renewable Facility's asset management system. Formal independent reviews and structured audits of the AMS, as provided for in the O&M contract, were not carried out. This limited the identification of potential improvements in asset management practices, particularly in the absence of a Contractor AMP or a contractor verification process.	To improve the accuracy, compliance, and operational effectiveness of the Asset Management System (AMS) at the Emu Downs Renewable Facility (EDRF), APA should implement the following actions: 1. **Formalise Regular Independent or Third-Party Reviews of the AMS**: ○ Establish a schedule for independent or third-party reviews of the AMS at least every two years, regardless of Key Performance Indicators (KPIs), to ensure continuous improvement and compliance with regulatory requirements. ○ Conduct the first review by Q1 2025 and include a comprehensive assessment of asset management practices, documentation, and regulatory compliance specific to the EDRF. ○ Incorporate a process for tracking corrective actions identified during the reviews, with quarterly updates to senior management on the progress of implementing these actions. 2. **Improve verification of contractor controls**: ○ Integrate a Formal Schedule for Service Audits as permitted in the O&M Contract. ○ Begin conducting service audits by Q4 2024, with the results reviewed by both APA and Vestas to develop joint corrective action plans aimed at improving operational performance. ○ Establish a process for documenting audit outcomes and tracking the resolution of any identified issues, with regular reports submitted to APA's senior management. 3. **Establish a Process for Regular Internal and Third-Party Audits of the AMS and O&M Contract Performance**: ○ Implement a formal schedule for regular internal and third-party audits of the AMS and O&M contract performance, with the first internal audit scheduled by Q4 2024 and subsequent third-party audits every two years. ○ Set up an audit committee to review findings and oversee the implementation of corrective actions, ensuring that audit results lead to measurable improvements in the AMS.	The recommendation has not yet been addressed. Refer 2024 PRIP

- Develop Key Performance Indicators (KPIs) to track compliance with the audit schedule, the timeliness of corrective actions, and the impact on asset management effectiveness.

4. **Establish Accountability and Responsibility for Compliance and Audit Procedures**:
   - Develop RACI framework for the new audit schedule, requirements, and procedures, including the importance of addressing discrepancies and the role of service audits in maintaining operational effectiveness.

APPENDIX 1 - EMU DOWNS JOINT VENTURE PERFORMANCE AUDIT

AUGUST 2024

TABLE 18 Performance Audit

KEY

♦ Indicates obligation was reclassified during the audit period from NR to Type 2 (Refer Amendment Record - Electricity Compliance Reporting Manual – July 2018, June 2020, February 2022, January 2023 & February 2023). Prior to the amendment, the rating was NR.

Δ Indicates revision of clause in the Electricity Compliance Reporting Manual during the audit period or Audit Priority differs from rating defined in 2019 Audit Report

⊗ Indicates the obligation non-compliant in 2019 Audit Report or an Annual Compliance Report during the audit period

12. Electricity Industry Act – Licence conditions and obligations				
No.	**2024 AUDIT REPORT EVIDENCE/ /VERIFICATION/FINDING/ACTION**			
101Δ♦ Type [2]	**OBLIGATION*: Electricity Generation Licence, condition 5.3.1 / Electricity Industry Act, section 13(1)*** A licensee must provide the ERA with a performance audit conducted by an independent expert acceptable to the ERA, not less than once every 24 months (or any longer period that the ERA allows).	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding: The previous Performance Audit report was submitted to the ERA in 2019, covering the 48-month period from 1 July 2015 to 30 June 2019. The current Performance Audit, covering the period from 1 July 2019 to 30 June 2024, was initiated in accordance with the ERA's Audit Guidelines, with the auditor approved by the ERA. **Documents/Evidence:** ▪ Economic Regulation Authority Website ▪ Audit Plan – EGL1 Performance Audit 2024 **Observations:** ▪ 2019 Performance Audit & Asset Management Review published to ERA website. (Refer https://www.erawa.com.au/electricity/electricity-licensing/licence-holders#E) ▪ There was a PAIP developed by the Licensee addressing obligations 105 and 124 and published on the ERA Website. ▪ The audit found two non-compliances. ▪ ERA published notice 8 November 2019			
	Recommendation: None	**Action: Nil**		

102♦ Type [2]	**OBLIGATION:** ***Electricity Generation Licence, condition 5.1.1 / Electricity Industry Act, section 14(1)(a)*** A licensee must provide for an asset management system	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding: The AMS Manual outlined asset planning, risk management, and operational processes for maintaining the wind and solar farms and was supported by the EDRF Year Plans together with other APA and Vestas documentation and systems. However, while the AMS generally aligned with operational and regulatory requirements, certain aspects relating management review, asset disposal and contingency planning require improvement. **Documents/Evidence:** ▪ 2.1.1 EDWF 33100101R5 - AMS Rev 5 ▪ 2.1.2 33190101R EDWF Year Plan 2019-2020 Rev 1 ▪ 2.1.3 33190102R1 EDRF Year Plan 2020-2021 ▪ 2.1.4 33110101R1 EDRF Year Plan 2021-2022 ▪ 2.1.5 33120101R2 EDRF Year Plan 2022-2023 ▪ 2.1.6 33120102R1 EDRF Year Plan 2023-2024 ▪ 2.1.7 33140101R0 - EDRF Year Plan 2024-25 ▪ 2.1.8 WA Renewables Asset Management Plan ▪ 2.2.1 APA.WA.CA.699 EDRF Contract ▪ 2.2.2 EDWF Vestas Report - October 2018 December 2019 Rev 1 ▪ 2.2.3 EDWF Vestas Report -2020 v2 ▪ 2.2.4 2021 O&M - NOT PROVIDED ▪ 2.2.5 2022-Emu Downs RF - Annual Report (Rev 1) ▪ 2.2.6 2023-Emu Downs RF - Annual Report ▪ 2.2.7 2024-Emu Downs RF - Annual Plan v.1 **Observations:** ▪ Refer to Appendix 3, finding 1.1. ▪ A discrepancy was identified between the design life stated in the AMSM for the Emu Downs Wind Farm (EDWF) and the information provided in the 2024-2025 Year Plans. The AMSM lists the design life as 2031, while the Year Plan refers to a design life of 2026, which creates uncertainty in long-term asset management strategies.			
	Recommendation: None	**Action: Nil**		
103 Type [2]	**OBLIGATION:** ***Electricity Generation Licence, condition 5.1.2 and 5.1.3 / Electricity Industry Act, section 14(1)(b)*** A licensee must notify details of the asset management system and any substantial changes to it to the ERA.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding: The Licensee complied with the obligation to notify the ERA of the details of its Asset Management System (AMS) as part of its generation licence applications. The Licensee confirmed no substantial changes were made to the AMS during the audit period. As no significant changes to the AMS were identified, this obligation has not been rated for the audit period. **Documents/Evidence: Refer 102** **Observations:**			

	▪ The Power Station Manager confirmed that the AMS continued to operate under the effectiveness criteria defined in the Asset Management System Manual, consistent with the criteria outlined in Table 23 of the Audit and Review Guidelines. ▪ Whilst the AMS Manual was subject to review every 5 years, the EDRF Year Plans were prepared annually as part of the business planning process, to ensure consistent with the business objectives and operational needs. ▪ The refurbishment studies were initiated during the audit period but were not complete. ▪ The Licensee confirmed the change from UGL to Vestas was not reported to the ERA.			
	Recommendation: None	**Action: Nil**		
104$^{\Delta\blacklozenge}$ Type [2]	**OBLIGATION:** ***Electricity Generation Licence, condition 5.1.4 / Electricity Industry Act, section 14(1)(c)*** A licensee must provide the ERA with a report by an independent expert about the effectiveness of its asset management system every 24 months, or such longer period as determined by the ERA.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding: The previous Performance Audit report was submitted to the ERA in 2019, covering the 48-month period from 1 July 2015 to 30 June 2019. The current Performance Audit, covering the period from 1 July 2019 to 30 June 2024, was initiated in accordance with the ERA's Audit Guidelines, with the auditor approved by the ERA **Documents/Evidence:** ▪ ERA Website ▪ Audit Plan – EGL1 Performance Audit 2024 **Observations:** ▪ 2019 Performance Audit & Asset Management Review published to ERA website. (Refer https://www.erawa.com.au/electricity/electricity-licensing/licence-holders#E) ▪ There was no PRIP developed by the Licensee as no AMS deficiencies were identified. ▪ ERA published notice 8 November 2019			
	Recommendation: None	**Action: Nil**		
105$^{\otimes}$ Type [2]	**OBLIGATION:** ***Electricity Generation Licence, condition 4.2.1/ Economic Regulation Authority (Licensing Funding) Regulations 2014*** A licensee must pay the prescribed licence fees to the ERA according to clauses 6, 7 and 8 of the Economic Regulation Authority (Licensing Funding) Regulations 2014.	**Audit Priority** **4**	**Controls Rating:** **A**	**Compliance Rating:** **2**

	Finding: The Licensee paid all the Annual Licence charges within one month after the day on which the licence was Granted (i.e. 23 June 2005) and within one month after each anniversary of that day during the audit period (i.e. 23 July annually). Standing Charges were paid within the requirements of *Economic Regulation Authority (Licensing Funding) Regulations 2014 clause 8(2)* for 19 of the 20 invoices applicable during the audit period. On one occasion the Standing Charges for Licensing were paid 2 weeks late(i.e. Invoice 1000592 was due 30/6/2021 and was paid 14/7/2021). **Documents/Evidence:** ▪ 8.1.3 ERA Invoice and Payment Information ▪ 8.1.1.3 EDRF Compliance report - FY2021 **Observations:** ▪ It was noted that the 2021 Annual Compliance Report did report the late payment of the 2021 Jan- March Quarter Standing Charges. ▪ The Compliance Manual, which was updated in response to the 2019 PAIP to incorporate corrective controls, was replaced by the Vigilant system during the audit period.			
	01/2024 Recommendation: The late payment of standing charge invoice on 1 of the 20 invoices applicable during the audit period was due to an administrative error. Since June 2021 all invoices were compliant and 95% of the invoices were paid in accordance with requirements of the obligation. As such, no further recommendations are made.	**Action:** ▪ No further recommendation.		
106 Type [NR]	**OBLIGATION:** ***Electricity Generation Licence, condition 4.1.1 / Electricity Industry Act, section 31(3)*** A licensee must take reasonable steps to minimise the extent, or duration, of any interruption, suspension or restriction of the supply of electricity due to an accident, emergency, potential danger or other unavoidable cause.	**Audit Priority** **5**	**Controls Rating:** **B**	**Compliance Rating:** **1**
	Finding: During the audit period, the Licensee has met the obligation to minimise the extent or duration of any interruption, suspension, or restriction of the supply of electricity. Through a combination of proactive maintenance, risk management strategies, and effective operational practices. Additionally, measures such as cyber security, backup of systems and data were confirmed to be established by the Licensee and the Contractor. **DOCUMENTS/SYSTEMS:** ➢ Asset Management System Manual ➢ WA Renewables Asset Management Plan ➢ EDRF Yearly Plans ➢ Annual Health and Safety Plan ➢ Emergency Response Plan ➢ Farm Rules ➢ SCADA ➢ SAP/Salesforce ➢ Vigilant			

	➢ PI Vision ➢ VOB ➢ VTM **Documents/Evidence: Refer obligation 102** **Observations:** ▪ The Licensee implemented preventive maintenance routines and condition monitoring via the SAP/Salesforce systems. ▪ The use of root cause analysis and specific plant area AMPs facilitated the Licensee to anticipate and address high-risk scenarios, reducing the likelihood and duration of electricity supply interruptions. ▪ The Licensee enhanced monitoring through the PIVision system, allowing for faster response to operational issues, thereby reducing potential outages. ▪ A strong focus on health and safety was evident, as outlined in the Health and Safety Plan, Emergency Response Plan, risk management, incident reporting and corrective action which contributed to the minimisation of risks. ▪ The Licensee developed a process to identify, assess and mitigate key cybersecurity risks, which leveraged the Australian Energy Sector Cyber Security Framework and was in line with regulatory requirements such as the *Security of Critical Infrastructure Act 2018* and the *Privacy Act 1988.* ▪ Enhancement of testing of emergency response procedures and contingency plans was further reviewed in Appendix 3 (refer 9.1).			
	Recommendation: None	**Action: Nil**		
107 Type [2]	**OBLIGATION:** ***Electricity Generation Licence, condition 4.1.1 / Electricity Industry Act, section 41(6)*** A licensee must pay the costs of taking an interest in land or an easement over land.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding: Several leases existed over the EDEF and EDSF properties and was validly executed and maintained in compliance with the lease terms, including timely payments, throughout the audit period. **Documents/Evidence: Nil** **Observations:** ▪ Obligation specific to the requirements of the *Land Administration Act 1997* in relation to compulsory acquisition of land. ▪ Budget Allocation of funds were noted to cover the lease payments.			
	Recommendation: None	**Action: Nil**		

13 Electricity Licences – Licence Conditions and Obligations				
119 Type [2]	**OBLIGATION:** ***Electricity Generation Licence, condition 4.3.1 / Electricity Industry Act, section 11*** A licensee and any related body corporate must maintain accounting records that comply with the Australian Accounting Standards Board Standards or equivalent International Accounting Standards.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**

Finding: The Licensee's financial records for 2019 to 2023 were reviewed (results for FY 2024 were not available at the end of the audit period), confirming compliance with the requirement to maintain accounting records in accordance with Australian Accounting Standards Board Standards or equivalent International Standards throughout the audit period. This was evidenced in both the annual reports and interim financial statements.

Documents/Evidence:

- 14.1.1.1 2019-08-21-apa-fy19-results
- 14.1.1.2 2020-08-26-fy2020-annual-financial-results
- 14.1.1.3 apa-fy21-annual-report
- 14.1.1.4 annual-report-2022
- 14.1.1.5 apa-fy23-annual-report_interactive_230823
- 14.1.1.6 interim-financial-reports-1h-fy20.pdf
- 14.1.1.7 interim-financial-reports-1h-fy21.pdf
- 14.1.1.8 interim-financial-reports-1h-fy22.pdf
- 14.1.1.9 interim-financial-reports-1h-fy23.pdf
- 14.1.1.10 interim-financial-reports-1h-fy24.pdf

Observations:

- Across the audit period, the financial statements indicated a stable financial performance. Key metrics such as revenue, EBITDA, and net profit showed continuity, supporting the ongoing operational viability of the licensee's activities, including the Emu Downs Renewable Facility.
- The financial reports reflected planned capital and operational expenditures in alignment with the asset management and operational needs of the wind and solar farms. The financial planning integrated provisions for asset maintenance and upgrades.
- The annual financial reports underwent independent external audits, which resulted in unqualified audit opinions for each year. This further verified the accuracy and compliance of the financial records with accounting standards.
- Financial planning extended to cover long-term asset lifecycle costs, including projections for capital expenditures associated with potential life extensions for the wind farm.
- Any changes in accounting policies or estimates were disclosed in the financial reports, demonstrating APA's compliance with the requirements for transparency under the accounting standards.
- The reports highlighted how market factors, such as electricity price fluctuations and regulatory changes, influenced financial performance. These were factored into the financial planning and budgeting processes.

Recommendation: None	**Action: Nil**

121 Type [2]	**OBLIGATION: Electricity Generation Licence, condition 5.3.2 / Electricity Industry Act, section 11** A licensee must comply, and require its auditor to comply, with the ERA's standard audit guidelines for a performance audit	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding: The Licensee and the Auditor complied with the 2019 Audit Guidelines were applied to the development of the 2024 Audit Plan for the current Performance Audit. The Licensee has provided direct instructions to the auditor to follow the ERA's guidelines and ensured that the Audit Plan was developed and approved accordingly. **Documents/Evidence** ▪ Economic Regulation Authority Website ▪ ERA Communication ▪ Emu Downs Joint Venture Audit and Review Plan **Observations:** ▪ The Licensee communicated the ERA's audit requirements to the auditor, ensuring compliance with the Audit & Review Guidelines. ▪ The audit plan was reviewed and approved in accordance with the ERA's standards, confirming that the auditor complied with the performance audit guidelines. ▪ Communication between the Licensee and the ERA ensured that audit procedures were aligned with the Authority's expectations.			
	Recommendation: None	**Action: Nil**		
122 Type [2]	**OBLIGATION: Electricity Generation Licence, condition 5.1.5 / Electricity Industry Act, section 11** A licensee must comply, and must require the licensee's expert to comply, with the relevant aspects of the ERA's standard audit guidelines for an asset management system review.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding: The Licensee and the Auditor complied with the 2019 Audit Guidelines were applied to the development of the 2024 Audit Plan for the current Asset Management Review. **Documents/Evidence:** ▪ Economic Regulation Authority Website ▪ ERA Communication ▪ Emu Downs Joint Venture Audit and Review Plan **Observations:** ▪ Copies of communications received from the Authority relating to audit requirements were sent by Licensee through to Auditor to convey requirements specifically the undertaking of audits in compliance with the 2019 Audit and Review Guidelines – Electricity and Gas Licences ▪ The Review Plan was developed the Audit Team, endorsed by the Licensee and approved by the ERA.			

	Recommendation: None	**Action: Nil**		
123 Type [2]	**OBLIGATION: Electricity Generation Licence, condition 4.4.1 / Electricity Industry Act, section 11** In the manner prescribed, a licensee must notify the ERA, if it is under external administration or if there is a significant change in the circumstances that the licence was granted which may affect the licensee's ability to meet its obligations.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding: During the audit period, the Licensee confirmed that it was not under external administration, and there were no significant changes in circumstances that would affect the Licensee's ability to meet its obligations under the licence. As such, there was no requirement to notify the Economic Regulation Authority (ERA) in relation to this condition. **Documents/Evidence:** ▪ WEM Market Rules ▪ Communications with ERA, AEMO ▪ 14.1.1 Financial Statements (Refer Obligation 119) **Observations:** ▪ The Licensee maintained stable operations throughout the audit period, with no events triggering the need for external administration or significant changes in circumstances. ▪ Regular financial reporting and internal audits indicated that the Licensee remained compliant with the financial and operational requirements, further supporting its ability to meet all licence obligations. ▪ The absence of any significant changes or external administration events ensured that the Licensee consistently met the criteria under Licence Condition 4.4.1, without requiring notification to the ERA.			
	Recommendation: None	**Action: Nil**		
124⊗ Type [2]	**OBLIGATION: Electricity Generation Licence, condition 4.5.1 / Electricity Industry Act, section 11** A licensee must provide the ERA, in the manner prescribed, with any information that the ERA requires in connection with its functions under the Electricity Industry Act.	**Audit Priority** **4**	**Controls Rating:** **B**	**Compliance Rating:** **2**
	Finding: During the Audit Period the Licensee was required to provide the Authority with the following information as required in connection with its functions under the Act. ▪ The 2019-2023 Annual Compliance Reports were to be submitted by the 31st of August annually. ▪ Provision of information for the calculation of standing data charges was due 30th September annually for 2019 to 2023 All the Annual Compliance Reports were submitted on time but the 2022 Standing Charges data were submitted outside the required timeframes (i.e due 30/9/2022 and submitted 7/10/2022).			

The Licensee had established a process for review of its non-compliances (i.e. Vigilant system), however, it was not specific enough to facilitate compliance and as such was not effective. The Licensee indicated that a full review would be undertaken to ensure any inconsistencies were addressed following the completion of the 2024 Performance Audit.

Annual Compliance Reports

Year	2019	2020	2021	2022	2023
Date Submitted	28/08/2019	30/07/2020	05/08/2021	30/08/2022	09/08/2023
Compliant	YES	NO	YES	YES	NO
Obligations Reported	Nil	105 [Type 2]	105 [Type 2]	Nil	Nil
Integrity of Reporting		**105** - Incorrectly reported non-compliant when cross checked with ERA Accounts payment records. All invoices were paid within the required timeframes.	**105** - Reported late payment 2021 Annual Compliance Report		**124** – Omitted reported the late submission of standing data in 2022. As such reported as compliant.

Standing Data

Year	2019	2020	2021	2022	2023
Date Submitted	30/8/2019	14/7/2020	13/7/2021	07/10/2023	30/8/2023
Compliant	YES	YES	YES	NO	YES

Documents/Evidence:

- 8.1.11 -8.1.1.5 Annual Compliance Reports 2019-2023
- Email communications with ERA
- 8.1.3 ERA Licence Payment Report
- 8.1.4.1-8.1.4.5 Standing Charges Data

Observations:

<table>
<tr><td></td><td colspan="3">

- Electricity Generation Licence were required under the *Economic Regulation Authority (Licensing Funding) Regulations 2014* to report electricity generation (MW of generation capacity).
- It was noted that the Vigilant items for upload included the licence fee payments, however the date for the annual licence fee was specified as due 30/7 annually. Similarly, the due date for standing data was 30 September annually and the system had it due 31/08/2024.
- The standing charges invoice and the annual invoices were within the same action item. Not clear if different due dates could be attached to the actions.
- The Compliance Manual that was updated to include the corrective controls in the 2019 PAIP has been replaced with the Vigilant system during the audit period.
- Results of audits both internal and external were communicated to senior management and are tracked through the Operations Performance Dashboard on a monthly basis.

</td></tr>
<tr><td></td><td colspan="2">

02/2024 Recommendation: To establish a more robust process for tracking and responding to non-compliance, it is recommended that APA:

5. **Enhance Compliance Documentation and Record-Keeping**:
   - Review and update policies and procedures related to compliance with the Electricity Generation Licence (EGL1) to ensure accurate record-keeping and timely reporting.
   - Improve compliance documentation management to facilitate easier tracking and verification of compliance status.
6. **Update and Optimise Vigilant System for Compliance Management**:
   - Complete the upload of the actions from Gap analysis to vigilant.
   - Conduct a comprehensive review of the Vigilant system to ensure that all compliance obligations, including Type 2 reportable obligations, are accurately recorded and tracked.
   - Set up automated alerts within Vigilant for upcoming compliance deadlines and flagging of any discrepancies in recorded information.
7. **Conduct a Pre-Submission Internal Review**:
   - Establish and document a structured internal review process to ensure accuracy of Type 2 reportable obligations before submitting annual compliance reports.
   - Leverage monthly asset performance meetings to review and resolve non-compliance issues
8. **Assign Clear Responsibilities and Accountability with RACI integration**:
   - Use the RACI model to clarify roles, accountabilities, and communication for all compliance activities.
   - Ensure Operations Risk, Compliance and Assurance team oversee tracking and reporting obligations.
   -

</td><td>

Action:

- Refer 2024 PAIP

</td></tr>
<tr><td>125
Type</td><td>OBLIGATION: Electricity Generation Licence, condition 3.8.1 and 3.8.2 / Electricity Industry Act, section 11
A licensee must publish any information as directed by the ERA to publish, within the timeframes specified.</td><td>Audit Priority
4</td><td>Controls Rating:
NP</td><td>Compliance Rating:
NR</td></tr>
</table>

[2]	**Finding:** During the audit period, there were no requests from the Authority for the Licensee to publish any information. According to the Licensee's Electricity Generation Licence (EGL1), the term "publish" refers to either: (a) posting the report or information on the Licensee's website, or (b) sending the report or information to the Authority for publication on the Economic Regulation Authority's website. **Documents/Evidence:** ▪ ERA Website **Observations:** ▪ The Licensee has previously submitted required documents in accordance with the specified audit guidelines, as evidenced by their publication on the ERA's website			
	Recommendation: None		**Action: Nil**	
126 Type [2]	**OBLIGATION: Electricity Generation Licence, condition 3.7.1 / Electricity Industry Act, section 11** All notices must be in writing, unless otherwise specified.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding: During the audit period, the Licensee maintained a record of all communications with the ERA, primarily conducted via mail and email. All notices and responses were provided in writing, as required. Specific notices related to the Electricity Generation Licence were reviewed during the audit. **Documents/Evidence:** ▪ Communication with ERA ▪ ERA Website **Observations:** ▪ All sampled notices were submitted in writing, either through email or hardcopy mail, and records were maintained.			
	Recommendation: None		**Action: Nil**	
15 Electricity Industry Metering Code – Licence Conditions and Obligations				
324 Type	**OBLIGATION: Electricity Generation Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.3B**	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**

[2]	If a user is aware of bi-directional electricity flows at a metering point that was not previously subject to a bi-directional flows or any changes in a customer's or user's circumstances in a metering point that will result in bi-directional flows, the user must notify the network operator within 2 business days.			
	Finding: The Licensee confirmed that EDRF did not become aware of changes in bi-directional electricity flow in a metering point, which was not previously subject to bi-directional electricity flow and as such was require meet notification requirements. **Documents/Evidence:** ▪ Western Power Web Portal ▪ Connection Agreement ▪ Access Agreement **Observations:** ▪ The Licensee has no meters, and Western Power owns the meters at Emu Downs Joint Venture substation and was responsible for their operational and quality control.			
	Recommendation: None	**Action: Nil**		
339 Type [2]	**OBLIGATION: Electricity Generation Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.11(3)** A Code participant who becomes aware of an outage or malfunction of a metering installation must advise the network operator as soon as practicable.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding: The Licensee confirmed that during the audit period there was no outage or malfunction of the metering installations. **Documents/Evidence:** ▪ Web Portal ▪ SCADA **Observations:** ▪ The Licensee confirmed that WPN holds primary responsibility for the management and monitoring of metering installations. During the audit period, no outages or malfunctions of the metering installations were identified. The Station Manager oversees production calculations to verify generation and ensure consistency with metering data.			
	Recommendation: None	**Action: Nil**		
PART 4 - THE METERING DATABASE				

371 Type [NR]	**OBLIGATION: Electricity Generation Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 4.4(1)** If there is a discrepancy between energy data held in a metering installation and in the metering database, the affected Code participants and the network operator must liaise to determine the most appropriate way to resolve the discrepancy.	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding: The Licensee confirmed there were no discrepancies identified between the energy data held in the metering installation and the metering database during the audit period. Therefore, compliance with this requirement has not been assessed. **Documents/Evidence:** ▪ Western Power Web Portal ▪ Connection Agreement ▪ Access Agreement **Observations:** ▪ The Licensee confirmed there was several meter data review processes established which ensured anomalous meter data would highlight issues relating to the reliability of metering installations and checking of data by operational staff was also undertaken			
	Recommendation: None	**Action: Nil**		
372 Type [NR]	**OBLIGATION: Electricity Generation Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 4.5(1)** A Code participant must not knowingly permit the registry to be materially inaccurate.	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding: The Licensee did not knowingly permit the registry to be materially inaccurate over the audit period. **Documents/Evidence:** ▪ Western Power Web Portal ▪ Connection Agreement ▪ Access Agreement **Observations:** ▪ The Network Operator was solely responsible for the accuracy of the registry, metering equipment and metering data. No involvement from the Licensee in the maintenance of this data was required or identified during the audit period.			

	▪ Vestas's O&M Contract covered the operation and maintenance of the WTGs, solar farm and balance of plant (BOP). The BOP included the Electrical Balance of Plant (EBoP); the substation, underground 22kV collector cables and the Civil Balance of Plant (CBoP); the WTG roads, EDWF administration buildings. The main 132/22kV transformers and SVCs were excluded from the OM Contract scope.			
	Recommendation: None	**Action: Nil**		
373 Type [2]	**OBLIGATION: Electricity Generation Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 4.5(2)** Subject to subclause 5.19(6), if a Code participant, other than a network operator, becomes aware of a change to, or inaccuracy in, an item of standing data in the registry, then it must notify the network operator and provide details of the change or inaccuracy within the timeframes prescribed.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding: Refer to finding for obligation 371. **Documents/Evidence:** Refer 371 **Observations:** ▪ There were no specific control procedures established in relation to this requirement as it was primarily the function performed by the Network Operator.			
	Recommendation: None	**Action: Nil**		
PART 5 - METERING SERVICES				
388 Type [2]	**OBLIGATION: Electricity Generation Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.4(2)** A user must, when reasonably requested by a network operator, assist the network operator to comply with the network operator's obligation under subclause 5.4(1).	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding: During the audit period, the Licensee confirmed that the network operator did not request the assistance of Emu Downs Joint Venture in relation to their metering installations. **Documents/Evidence:** ▪ Western Power Web Portal ▪ Connection Agreement ▪ Access Agreement **Observations:** ▪ Western Power was solely responsible for the metering installations at the EDWF substation, including all aspects of meter quality control and compliance.			

	Recommendation: None	**Action: Nil**		
416 Type [2]	**OBLIGATION: Electricity Generation Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.21(5)** A Code participant must not request a test or audit under subclause 5.21(1) unless the Code participant is a user and the test or audit relates to a time or times at which the user was the current user, or the Code participant is the IMO.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding: The Licensee confirmed that during the audit period no tests or audits were requested during the audit period from 1 July 2019 to 31 June 2024. Therefore, compliance with this obligation could not be assessed. **Documents/Evidence:** ▪ Western Power Web Portal ▪ Connection Agreement ▪ Access Agreement **Observations: NIL**			
	Recommendation: None	**Action: Nil**		
417 Type [2]	**OBLIGATION: Electricity Generation Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.21(6)** A Code participant must not make a request under subclause 5.21(1) that is inconsistent with any access arrangement or agreement.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding: The Licensee confirmed that during the audit period no tests or audits were requested during the audit period from 1 July 2019 to 31 June 2024. Therefore, compliance with this obligation could not be assessed. **Documents/Evidence:** ▪ Western Power Web Portal ▪ Connection Agreement ▪ Access Agreement **Observations:**			

	▪ It was noted that a request for a test or audit could not be raised through the Web Portal if the Code Participant was not classified as a user. The Licensee confirmed compliance with Clause 5.21(6), ensuring that any request, if made, would have been consistent with the terms of the access arrangement or agreement, as required under the Code's application to a generator under Clause 1.2(1)(c).			
	Recommendation: None	**Action: Nil**		
PART 6	**DOCUMENTATION**			
448 Type [2]	**OBLIGATION: Electricity Generation Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 6.1(2)** A user must, in relation to a network on which it has an access contract, comply with the rules, procedures, agreements and criteria prescribed.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding: During the audit period, the Licensee complied with all applicable rules, procedures, agreements, and criteria prescribed under its access contract, as required by Clause 6.1(2) of the *Electricity Industry Metering Code*. No breaches or instances of non-compliance were identified. **DOCUMENTS/SYSTEMS:** ▪ Web Portal ▪ Connection Agreement ▪ Access Arrangement **OBSERVATIONS:** ▪ The Licensee adhered to the terms of its access contract and ensured compliance with all prescribed rules and procedures during the audit period. As confirmed by the Licensee, no instances of non-compliance with Clause 6.1(2) were identified.			
PART 7 - NOTICES AND CONFIDENTIAL INFORMATION				
451 Type [NR]	**OBLIGATION: Electricity Generation Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 7.2(1)** Code participants must use reasonable endeavours to ensure that they can send and receive a notice by post, facsimile and electronic communication and must notify the network operator of a telephone number for voice communication in connection with the Code.	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding: During the audit period, the Licensee confirmed that Emu Downs Joint Venture maintained postal, electronic, and voice communication channels in line with standard business practices. The agreements with Western Power outlines the operating arrangements, including the provision of a telephone number for compliance with the Electricity Industry Metering Code.			

	Documents/Evidence: ▪ Web Portal ▪ Connection Agreement ▪ Access Arrangement **Observations:** ▪ The Licensee primarily communicated with Western Power via telephone, email, and the Web Portal, with postal communication used less frequently. Both parties did not use facsimile, as it is considered obsolete. Communication systems at EDWF and EDSF were robust, with postal, electronic, and voice channels in place, meeting the requirements of Clause 7.2(1) of the Electricity Industry Metering Code.			
	Recommendation: None	**Action: Nil**		
453 Type [2]	**OBLIGATION: Electricity Generation Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 7.2(4)** If requested by a network operator with whom it has entered into an access contract, the Code participant must notify its contact details to a network operator within 3 business days after the request.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding: During the audit period, the Licensee confirmed that the network operator did not request Emu Downs Joint Venture to provide its contact details. **Documents/Evidence:** ▪ Web Portal ▪ Connection Agreement ▪ Access Arrangement **Observations:** ▪ No requests for contact details were made by the network operator during the audit period, and the Licensee's contact information remained unchanged.			
	Recommendation: None	**Action: Nil**		
454 Type [2]	**OBLIGATION: Electricity Generation Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 7.2(5)** A Code participant must notify any affected network operator of any change to the contact details it notified to the network operator under subclause 7.2(4) at least 3 business days before the change takes effect.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding: During the audit period, the Licensee confirmed that no changes to contact details were required for Emu Downs Joint Venture. Therefore, compliance with the 3-business-day notification rule could not be assessed.			

	Documents/Evidence: ▪ Web Portal ▪ Connection Agreement ▪ Access Arrangement **Observations:** ▪ The Licensee's contact details remained unchanged during the audit period, and no updates were necessary or provided to the network operator.			
	Recommendation: None	**Action: Nil**		
455 Type [2]	**OBLIGATION: Electricity Generation Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 7.5** A Code participant must subject to subclauses 5.17A and 7.6 not disclose, or permit the disclosure of, confidential information provided to it under or in connection with the Code and may only use or reproduce confidential information for the purpose for which it was disclosed, or another purpose contemplated by the Code	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding: During the audit period, the Licensee confirmed that confidential information provided was only used for its intended use in connection with the Electricity Industry Metering Code. All confidential information was used and reproduced strictly for its intended purpose, in compliance with Clause 7.5 of the Code. **Documents/Evidence:** ▪ Web Portal ▪ Connection Agreement ▪ Access Arrangement **Observations:** ▪ The Licensee had robust procedures and rules in place to ensure compliance with confidentiality and privacy obligations. ▪ Emu Downs Joint Venture managed its information and technology assets in alignment with the Australian Energy Sector Cyber Security Framework (AESCSF) and other relevant international standards.			
	Recommendation: None	**Action: Nil**		
456 Type	**OBLIGATION: Electricity Generation Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 7.6(1)** A Code participant must disclose or permit the disclosure of confidential information that is required to be disclosed by the Code.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**

[2]	**Finding:** During the audit period, the Licensee confirmed that confidential information was disclosed only as required by the Electricity Industry Metering Code, in compliance with the Licensee's obligations as a generator. Disclosures were made under the permitted circumstances outlined in Clause 7.6, including to officers, employees, legal advisers, and consultants, with appropriate confidentiality arrangements in place. Internal control procedures ensured that disclosures were compliant with the Code and limited to necessary information. **Documents/Evidence:** ▪ Web Portal ▪ Connection Agreement ▪ Access Arrangement **Observations:** ▪ The Licensee adhered to Clause 7.6(1), ensuring that confidential information was disclosed only when necessary and in compliance with the Code. ▪ Appropriate confidentiality arrangements were implemented for any party receiving the disclosed information, with all disclosures following the requirements of Clause 7.6(2).			
	Recommendation: None	**Action: Nil**		
PART 8 - DISPUTE RESOLUTION				
457 Type [NR]	**OBLIGATION: Electricity Generation Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 8.1(1)** If any dispute arises between any Code participants, then (subject to subclause 8.2(3)) representatives of disputing parties must meet within 5 business days after a notice given by a disputing party to the other disputing parties and attempt to resolve the dispute by negotiations in good faith.	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding: During the audit period, the Licensee confirmed that no disputes with Western Power occurred in relation to the metering code obligations. **Documents/Evidence:** ▪ Web Portal ▪ Connection Agreement ▪ Access Arrangement **Observations:** ▪ The Licensee and Western Power maintained effective and efficient processes regarding the electricity generation licence functions, with no disputes arising during the audit period.			

	Recommendation: None	**Action: Nil**		
458 Type [NR]	**OBLIGATION: Electricity Generation Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 8.1(2)** If a dispute is not resolved within 10 business days after the dispute is referred to representative negotiations, the disputing parties must refer the dispute to a senior management officer of each disputing party who must meet and attempt to resolve the dispute by negotiations in good faith.	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding: During the audit period, the Licensee confirmed that no disputes arose with Western Power concerning metering code obligations. Therefore, the application of dispute resolution procedures, including senior management involvement, was not required. **Documents/Evidence:** ▪ Web Portal ▪ Connection Agreement ▪ Access Arrangement **Observations:** ▪ No disputes occurred during the audit period, and no senior management negotiations were necessary under Clause 8.1 of the Metering Code.			
	Recommendation: None	**Action: Nil**		
459 Type [NR]	**OBLIGATION: Electricity Generation Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 8.1(3)** If the dispute is not resolved within 10 business days after the dispute is referred to senior management negotiations, the disputing parties must refer the dispute to the senior executive officer of each disputing party who must meet and attempt to resolve the dispute by negotiations in good faith.	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding: During the audit period, no disputes were referred to senior management negotiations, and therefore no escalation to senior executive officers was required under Clause 8.1(3) of the Electricity Industry Metering Code. As a result, compliance with this obligation could not be assessed. **Documents/Evidence:** ▪ Web Portal ▪ Connection Agreement ▪ Access Arrangement **Observations:**			

	▪ The Licensee confirmed that no disputes reached the level of senior management negotiations, and no senior executive involvement was required under Clause 8.1(3) during the audit period.			
	Recommendation: None	**Action: Nil**		
460 Type [2]	**OBLIGATION: Electricity Generation Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 8.1(4)** If the dispute is resolved by representative negotiations, senior management negotiations or CEO negotiations, the disputing parties must prepare a written and signed record of the resolution and adhere to the resolution.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding: During the audit period, the Licensee confirmed that no disputes occurred with Western Power concerning metering code obligations, and therefore no resolutions or written records were required under Clause 8.1(4). **Documents/Evidence:** ▪ Web Portal ▪ Connection Agreement ▪ Access Arrangement **Observations:** ▪ Western Power designated a primary Customer Service representative to address any concerns Emu Downs Joint Venture may have regarding the electricity generation licence. ▪ Regular communication and clarification of Metering Code functions were confirmed.			
	Recommendation: None	**Action: Nil**		
461 Type [NR]	**OBLIGATION: Electricity Generation Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 8.3(2)** The disputing parties must at all times conduct themselves in a manner which is directed towards achieving the objective in subclause 8.3(1).	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding: During the audit period, the Licensee confirmed that no disputes arose with Western Power regarding metering code obligations. As a result, compliance with the requirement for informality and expedition in resolving disputes under Clause 8.3(2) was not assessed. **Documents/Evidence:** ▪ Web Portal ▪ Connection Agreement ▪ Access Arrangement			

	Observations: ▪ Western Power designated a primary Customer Service representative to address any concerns Emu Downs Joint Venture may have regarding the generation licence. Regular communication and clarification of Metering Code functions were confirmed.	
	Recommendation: None	**Action: Nil**

Note:

NP - not possible to provide a controls rating because no activity has taken place to exercise the obligation during the audit period

NR - Not applicable to audit period and as such compliance was not assessed

APPENDIX 2 – EMU DOWNS JOINT VENTURE ASSET MANAGEMENT REVIEW

AUGUST 2024

TABLE 19 Audit Review Ratings and Recommendations

1. ASSET PLANNING □ Assess the adequacy of the asset planning process □ Assess the adequacy of the asset management plan □ Assess whether the asset management plan is up-to-date and implemented in practice □ Assess whether the asset management plan clearly assigns responsibilities and whether these have been applied in practice **Key Process** – *Asset planning strategies focuses 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.*			**OVERALL EFFECTIVENESS RATING** **PROCESS & POLICY RATING*** **B** **PERFORMANCE RATING** **2**
No.	**2024 REVIEW REPORT EVIDENCE/ /VERIFICATION/FINDING/ACTION**		
1.1	**OBLIGATION: Asset management plan covers the processes in this table*** *Table 23 of the 2019 Audit and Review Guidelines – Electricity and Gas Licences	**Review Priority** **4**	**P&P* Rating:** **B** **Performance Rating:** **3**
	Finding: The WA Renewables Asset Management Plan (WARAMP) and the Emu Downs Asset Management System Manual (AMSM) provided a foundational framework for APA's asset management, focusing on the management and operation of renewable facilities. While this framework was robust, several gaps were identified that could impact the effectiveness of the asset management system. These gaps were specifically noted in comparison to the criteria outlined in Table 23 of the 2019 Audit and Review Guidelines – Electricity and Gas Licences. Identified Gaps Related to Table 23 Criteria: **Asset Disposal (3.1–3.4):** The asset management system lacked a formal and clear process for the disposal of obsolete or end-of-life assets. According to Table 23, under-utilised and under-performing assets should be regularly reviewed, and the disposal of such assets should be systematically addressed. However, no formal strategy for asset disposal was provided. Additionally, inconsistencies were identified between the AMS and the EDRF 2024/2025 Year Plan concerning the wind farm's design life. Notably the AMS Manual states end of life is 25 years, the 2024-2025 Year Plan states end of life is 20 years and the WARAMP states a range for asset life of 2026-2031. **Contingency Planning (9.1):** The AMS Manual referenced general risk management, but other than the year plans containing an annual review of EBoP assets with high level contingency plan, there were no detailed contingency plans for addressing critical asset failures. Further, there was no testing of critical risks control processes. Table 23 emphasises the need for documented, understood, and tested contingency plans to ensure continuity of service during unexpected asset failures.		

Comprehensive Review of AMS (12.1–12.2): The review process for the Asset Management System (AMS) was scheduled every five years, but Table 23 recommends more frequent reviews and independent assessments to ensure the AMS remains current. Other than the amendments made in March 2020 to reflect the change in O&M responsibilities for the solar farm from UGL to Vestas, the Licensee has not undertaken a management system review of the AMS during the audit period. Additionally, the contractor's AMS has not been reviewed by the Licensee during the audit period. It was noted that the O&M Contract made provision at the discretion of the Licensee for a quarterly Services Audit (refer Cl 8.3) however, this has not been undertaken during the audit period.

There was an absence of a process for verification of contractor controls and the management review for Vestas activities was primarily on operational performance. Additionally, the contractor, Vestas did not provide an asset management plan for EDWF or EDSF during the current audit and review period.. It was noted that at the end of the defects liability period, UGL ceased to be the O&M contractor for the EDSF from 27/3/2020. The O&M Contract executed for the management of the EDRF did not specifically require the contractor to develop an asset management plan. However it did detail a number of plans to be developed by Vestas which included the following:

- Annual Operating and Maintenance Plan
- Environmental Management Plan
- HSE Plan
- Quality Control Plan

Examples of reporting requirements included:

- Daily reports of plant operating data
- Monthly
- Annual
- Fault analysis reporting
- Condition Reports
- Incident reports

Documents/Evidence:

- 2.1.1 EDWF 33100101R5 - AMS Rev 5
- 2.1.2 33190101R EDWF Year Plan 2019-2020 Rev 1
- 2.1.3 33190102R1 EDRF Year Plan 2020-2021
- 2.1.4 33110101R1 EDRF Year Plan 2021-2022
- 2.1.5 33120101R2 EDRF Year Plan 2022-2023
- 2.1.6 33120102R1 EDRF Year Plan 2023-2024
- 2.1.7 33140101R0 - EDRF Year Plan 2024-25
- 4.2.5 EDWF_ WTG Generator Failures - Causes and Mitigations
- 7.2.1 Vestas Monthly Meeting July-December 2019
- 7.2.2 Vestas Monthly Report January-December 2020
- 7.2.3 Vestas Monthly Report January-December 2021
- 7.2.4 Vestas Monthly Report January-December 2022
- 7.2.5 Vestas Monthly Report January-December 2023
- 7.2.6 Vestas Monthly Report January-June 2024

	• 2.1.8 WA Renewables Asset Management Plan • 2.2.1 APA.WA.CA.699 EDRF Contract • 2.2.2 EDWF Vestas Report - October 2018 December 2019 Rev 1 • 2.2.3 EDWF Vestas Report -2020 v2 • 2.2.5 2022-Emu Downs RF - Annual Report (Rev 1) • 2.2.6 2023-Emu Downs RF - Annual Report • 2.2.7 2024-Emu Downs RF - Annual Plan v.1 • 7.2.7 Vestas Monthly Meeting January-December 2020 • 7.2.8 Vestas Monthly Meeting January-December 2021 • 7.2.9 Vestas Monthly Meeting January-December 2022 • 7.2.10 Vestas Monthly Meeting January-December 2023 • 7.2.10 Vestas Monthly Report January-December 2023 • 7.2.11 Vestas Monthly Report January-June 2024 **Observations:** ▪ Contingency plans for the wind turbines, solar farm and CBoP were not referenced in the EDRF Year Plans, only the EBoP and EBoP critical spares were included. ▪ It was understood that a wind turbine life extension study was currently underway, assessing future operational viability as the turbines near the end of their design life. This study will guide key decisions regarding asset longevity and contract renewals, including the Connection Agreement, Network Access Agreement, O&M Contract, and Power Purchase Agreement. These assessments will play a significant role in shaping the future strategic direction of the facility and are outside the scope of the audit period. ▪ The AMS Manual was reviewed in March 2020 following the change from UGL to Vestas in O&M duties for the solar farm. ▪ Vestas has been contracted since inception in 2006 to perform OM tasks for the Emu Downs Wind Farm and the current OM contract period commenced 6/10/2018. The contract was amended in March 2020 to perform O&M tasks for the Emu Downs Solar Farm following the departure of UGL. ▪ The EDRF O&M Contract, the WARAMP, the EDRF Year Plans and AMSM delineate the roles and responsibilities between APA, Vestas, and internal APA groups. ▪ There were discrepancies between the WARAMP, the AMS Manual and the Year Plans as to the end of life of the asset. ▪ The AMS was scheduled for review every five years, as outlined in the EDRF Yearly Plans. A review was not undertaken during the audit period. ▪ The previous audit and review report referenced Vestas's Contract Asset Management Plan (CAMP) which identified how Vestas delivered the Asset Management Services for the wind farm in accordance with both the Service Agreement and the ISO 55001 International Standard of Asset Management for the Emu Downs Wind Farm. However, during the current review period Vestas's AMP was not developed and as such not provided for review.	
	03/2024 Recommendation: To enhance the effectiveness of the WA Renewables Asset Management Plan (WARAMP) and the Asset Management System Manual (AMSM), APA should undertake the following corrective actions: 1. **Formalise a Structured Review Process for the AMS**: o Implement a more frequent review cycle for the AMS, with updates conducted annually or biennially, and additional reviews triggered by significant operational changes, regulatory updates, or risk assessments. Inclusion of a contractor verification process is recommended.	**Action:** Refer 2024 PRIP

- Establish a review committee with representatives from key departments (e.g., operations, compliance, risk management) to oversee and approve updates to the AMS.
- Develop a timeline for the next three review cycles to ensure proactive planning, with the first updated review completed by Q4 2024

2. **Establish a Comprehensive Asset Disposal and Replacement Strategy**:
   - Develop a clear asset disposal strategy that covers end-of-life management, including criteria for asset decommissioning, sale, or repurposing, and document this in the AMS.
   - Align the disposal strategy with regulatory requirements and operational frameworks, ensuring that all steps comply with environmental and safety standards.
   - Create a phased replacement strategy for assets nearing end-of-life, with specific timelines for each phase, and update the life cycle financial model accordingly.
   - Include an asset condition monitoring program to identify underperforming assets and plan for their timely replacement.
3. **Develop and Regularly Test Detailed Contingency Plans**:(Also Refer 9.1, Recommendation 06/2024)
   - Create comprehensive contingency plans for critical asset failures, addressing key risk scenarios such as major equipment breakdowns, extreme weather events, and cyberattacks. If required to be undertaken by Vestas, the AMS should specify this requirement and process.
   - Schedule semi-annual testing and drills for the contingency plans, with post-drill reviews to identify areas for improvement and ensure plans are understood by all personnel.
   - Integrate contingency planning into the AMS to ensure alignment with business continuity and disaster recovery frameworks.
4. **Review and Update the Requirement for Vestas to Develop a Contract Asset Management Plan (CAMP)**:
   - Reassess the requirement for Vestas to provide a Contract Asset Management Plan and ensure it aligns with current asset management standards and the ISO 55001 framework.
   - If a CAMP is deemed necessary, establish a timeline for Vestas to submit an updated plan by Q4 2024 and include provisions for annual reviews to ensure it remains current.
   - Incorporate requirements for Vestas to provide regular updates on key asset management activities, including maintenance schedules, performance reports, and compliance with the CAMP.
5. **Monitor and Report on the Implementation of Corrective Actions**:
   - Develop key performance indicators (KPIs) to track the progress and effectiveness of the corrective actions, such as review cycle adherence, completion of contingency plan tests, and asset disposal milestones. i.e. formalise Services Audit option in the O&M Contract to establish a contractor verification process.

	○ Provide quarterly updates to senior management on the status of these actions to ensure accountability and continuous improvement.			
1.2	**EFFECTIVENESS CRITERIA: Planning processes and objectives reflect the needs of all stakeholders and are integrated with business planning**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding: Asset planning was incorporated into the EDRF Yearly Plans and the Asset Management System Manual. The Yearly Plans identified key stakeholders and included a framework for stakeholder engagement and communication, primarily between APA's internal executive management and external stakeholders. Additionally, Vestas's Annual Operating and Maintenance Plans reflected alignment with the needs of stakeholders and ensured the delivery of services and addressing both technical and logistical challenges. **Documents/Evidence**: Refer 1.1 **Observations:** ▪ Stakeholders, including ERA, Western Power, AEMO, Vestas, and others, were identified in the EDRF Yearly Plans and engaged during the operational and planning stages. ▪ The OPEX and CAPEX budgets were defined in consultation with Vestas and the EDRF Asset Manager, ensuring financial alignment between the operational needs of the facility and the input from key operational stakeholders. ▪ Vestas were required to submit the annual operation and maintenance plan in advance of APA business planning cycle. ▪ It was noted the 2022 OM Plan raised issues relating to resourcing constraints in relation to availability. This was noted to be partly attributable to COVID.			
	Recommendation: None		**Action: Nil**	
1.3	**EFFECTIVENESS CRITERIA: Service levels are defined in the Asset Management Plan**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding: Service levels were clearly stated in the Asset Management System Manual (**AMSM**), the EDRF Yearly Plans, and were integrated into the performance parameters outlined in the Operations & Maintenance (O&M) Contracts for both the wind and solar farms. These service levels formed a core part of operational monitoring and were aligned with both internal asset management processes and external agreements, such as the Power Purchase Agreement (**PPA**) with Synergy.			

	The service levels specified in the O&M contracts set clear expectations for plant availability, generation performance ratios, and other key operational metrics. These parameters were regularly tracked and reported through monthly performance reports, which were reviewed by both APA and Vestas (the O&M Operator). The contracts ensured accountability for maintaining service levels in line with business objectives and regulatory requirements. **Documents/Evidence:** Refer 1.1 **Observations:** ▪ Service levels were well-defined within the O&M contracts and consistently tracked and reported via annual, monthly, weekly and daily operational reports. APA entered into a long-term Power Purchase Agreement (**PPA**) with Synergy, which included the supply of all energy generated by the Emu Downs Renewable Facility (**EDRF**), along with associated Large-scale Generation Certificates (**LGCs**) and capacity credits. This contractual arrangement ensured that service levels met the agreed performance criteria. ▪ Vestas, the O&M Operator, had service level obligations in the areas of plant measured availability and generation performance ratio, which were outlined in the O&M Agreements and reflected in the EDRF Yearly Plans. They were further supported by Vestas Asset Management Information Systems (**AMIS**), such as Vestas Online Business (**VOB**), Vestas Turbine Monitoring (**VTM)** system, Vestas Global Advisor (**VGA**), Blade Asset Management Portal. Power BI. ▪ The regular monitoring and reporting of these service levels through monthly reports provided a transparent mechanism for tracking operational performance against contractual obligations.			
	Recommendation: None		**Action:** Nil	
1.4	**EFFECTIVENESS CRITERIA: Non-asset options (e.g. demand management) are considered**	**Review Priority** **N/A**	**P&P* Rating:** **N/A**	**Performance Rating:** **N/A**
	Not applicable. Exclude from review scope as per the approved 2024 audit & review plan.			
	Recommendation: None		**Action: Nil**	
1.5	**EFFECTIVENESS CRITERIA: Lifecycle costs of owning and operating assets are assessed**	**Review Priority** **4**	**P&P* Rating:** **B**	**Performance Rating:** **1**

	Finding: Lifecycle costing was developed for the Emu Downs Renewable Facility (EDRF), with projections extending to 2043. The EDRF facility has maintained profitability, supported by ongoing assessments and regular maintenance schedules. Vestas, the O&M service provider, carries responsibility for the operational and maintenance costs, which are regularly reviewed and reported. Monthly and annual reports track O&M costs, ensuring that lifecycle costs are continuously monitored and adjusted based on operational performance and asset conditions. **Documents/Evidence:** • Refer 1.1 • EDRF_BRF Performance Reports _2021_to_2023 • Asset Management Report – 2019 to 2022 • FY2019 - FY2024 EDWF Budgets **Observations:** ▪ Lifecycle costing projections for the EDRF have been developed and extended to 2043, taking into account both current operational costs and future maintenance requirements. These projections are crucial for long-term planning, especially as the facility approaches key contract renewals and asset life extension assessments within 12-18 months. ▪ O&M maintenance schedules were comprehensive, with Vestas responsible for the operational and maintenance costs. These costs were tracked through monthly and annual reports to ensure operational efficiency and cost control. ▪ The windfarm and substation life extension study has commenced, assessing the feasibility of extending the operational life of key assets, such as wind turbines and substations. Although this study is outside the scope of the audit period, it will help inform future decisions on asset replacement or refurbishment. ▪ Cost performance monitoring occurs through monthly reporting, which ensured that any unexpected cost variations were identified and addressed as required. ▪ The annual reports detail comprehensive reviews of operational performance, O&M cost evaluations, and future budget projections.			
	Recommendation: None		**Action: Nil**	
1.6	**EFFECTIVENESS CRITERIA: Funding options are evaluated**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding: Funding for the Emu Downs Renewable Facility (EDRF) was primarily sourced from APA's Group portfolio, under the APA Pipeline division, of which EDRF represents only a minor portion. The facility was internally funded, with capital and operational expenditures covered through the group's financial mechanisms. This internal funding structure provided stability and aligns with APA's broader financial strategy.			

	The Authority for Expenditure (AFE) process was used to evaluate and justify all capital expenditures (CAPEX) related to the EDRF. APA's Base Case Asset Model projected revenue, operational costs, and EBITDA, ensuring that funding was aligned with the financial performance and operational needs of the EDRF. Additionally, the process was supported by annual financial audited statements, which provided transparency and accountability to the internal funding approach. **Documents/Evidence:** • Refer 1.1 • EDRF_BRF Performance Reports _2021_to_2023 • Asset Management Report – 2019 to 2022 • FY2019 - FY2024 EDWF Budgets • 14.1.1 Annual Financial Audited Statements FY 2019-2023 • 14.4 EDRF Base Case Asset Model • 14.7 Authority for Expenditure (AFE) Documentation **Observations:** ▪ The AFE process provided a structured financial justification model for CAPEX related to the EDRF, ensuring that all funding decisions were made with a sound financial rationale. ▪ The EDRF Base Case Asset Model provided accurate financial projections, incorporating long-term revenue and EBITDA, to guide future capital investments. This ensured alignment with the broader financial health and strategic objectives of the APA Group, supporting sustainable operations and profitability. ▪ Annual financial audited statements supported the transparency of the internal funding mechanisms, confirming that the necessary funding was available for both operational and capital needs throughout the audit period.			
	Recommendation: None		**Action: Nil**	
1.7	**EFFECTIVENESS CRITERIA: Costs are justified, and cost drivers identified**	**Review Priority 4**	**P&P* Rating: B**	**Performance Rating: 1**
	Finding: Costs related to the Emu Downs Renewable Facility (EDRF) were well identified and justified. Costs and cost drivers were monitored on a monthly and annual basis by APA. The cost data was reported to the executive management team, and corrective actions were undertaken by the EDRF Asset Manager when necessary. These actions ensured cost-efficiency and alignment with operational goals.			

	Vestas and UGL, as the O&M contractors, submitted yearly O&M costs in accordance with the terms of their respective O&M contracts. These costs were systematically reviewed and monitored, ensuring transparency and financial accountability. Furthermore, cost variations were addressed through regular reporting and management oversight. **Documents/Evidence:** • Refer 1.1 • EDRF_BRF Performance Reports _2021_to_2023 • Asset Management Report – 2019 to 2022 • FY2019 - FY2024 EDWF Budgets • 14.1.1 Annual Financial Audited Statements FY 2019-2023 • 14.4 EDRF Base Case Asset Model • 14.7 Authority for Expenditure (AFE) Documentation **Observations:** ▪ The EDRF Yearly Plans provided detailed breakdowns of operational expenses and identified cost drivers for each reporting period. ▪ It was noted that the operational strategy was updated to reflect ongoing assessments of asset life and future capital investment requirements. A similar review process is being applied to key infrastructure components such as the substation.			
	Recommendation: None		**Action: Nil**	
1.8	**EFFECTIVENESS CRITERIA: Likelihood and consequences of asset failure are predicted**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding: The Emu Downs Renewable Facility (EDRF) identified potential and actual asset failures through its Yearly Reports. These failures were systematically recorded and tracked within APA's Enterprise Risk Management System, including the Vigilant and Safety System - Safeguard. The data management systems used by Vestas, such as SAP and Salesforce, provided detailed performance reports on wind turbine generators (WTG) and solar panels, enabling comprehensive monitoring of critical assets. Critical spares were clearly identified, budgeted for, and monitored to ensure readiness in case of failures in accordance with the Licensee's risk appetite. In March 2023, Vestas transitioned from SAP to Salesforce for managing O&M activities, primarily for improved tracking and reporting of operational issues. There have been technical issues associated with its rollout. The EDRF Yearly Plans have provided clear identification and budgeting for critical spares, helping to mitigate risks associated with equipment failure. Vestas and APA have collaboratively investigated an increase in WTG failure rates, and corrective actions have been implemented to minimise future failures. These actions were captured in O&M monthly reports and meetings and ensured a structured approach to managing asset risks.			

	Documents/Evidence: • Vestas SAP/Salesforce Database Reports • 2.1.3 -2.1.7 EDRF Yearly Plans (2019-2024) • 7.1.1 -7.1.6 O&M Monthly Reports • 7.1.7 -7.1.12 Asset Performance Reports (2019-2024) • APA Enterprise Risk Management System (Vigilant & Safeguard) **Observations:** ▪ The Vestas SAP/Salesforce database provided a clear mechanism for tracking and reporting on the performance of critical assets, such as WTGs. The solar farm was not maintained in SAP or Salesforce and was maintained in an excel spreadsheet. This system has been effective in monitoring performance and detecting potential failures early. ▪ The EDRF Yearly Plans consistently identified critical spares and budgeted for their replacement, ensuring that asset failures are promptly addressed. ▪ An increase in WTG failure rates was detected, and both Vestas and APA have implemented corrective measures to mitigate future risks. This was documented and regularly reviewed during O&M monthly meetings. ▪ Transitioning from SAP to Salesforce in 2023 improved the tracking and reporting of O&M activities, contributing to better asset management and risk mitigation efforts.			
	Recommendation: None		**Action: Nil**	
1.9	**EFFECTIVENESS CRITERIA: Asset management plan is regularly reviewed and updated**	**Review Priority 5**	**P&P* Rating: B**	**Performance Rating: 3**
	Finding: The WA Renewables Asset Management Plan (WARAMP) and the Asset Management System Manual (AMSM) were reviewed only once during the audit period. According to Table 23 of the 2019 Audit and Review Guidelines, the asset management system should be regularly reviewed and updated to ensure it remains current and effective. The review frequency set by APA was every five years, which was not considered frequent enough to adapt to rapidly changing operational environment and regulatory landscape. Vestas did not have a formal Asset Management Plan (AMP) in place and instead relied on yearly plans, which were submitted to APA to form part of the Emu Downs Renewable Facility (EDRF) Yearly Plans. While the yearly plans were viewed for the audit period, they do not fulfil the requirement for a structured, long-term asset management plan review process. **Documents/Evidence:** Refer 1.1			

	Observations: ▪ APA's AMS was scheduled for review every five years, with the next review due in 2025. The WARAMP was last reviewed in August 2022, but the planned review for February 2024 was not sighted during the audit. ▪ Vestas, the contracted O&M operator, did not maintain a formal AMP and relied on yearly operation and maintenance plans for asset management as per the OM Contract. ▪ The previous asset management review referenced a Vestas AMP which was not provided for review during this review period. ▪ UGL transitioned out of its role as the operator of the solar farm in March 2020, and their documentation was not provided for review. However, operational and maintenance information for the solar farm was recorded in the Monthly Reports and year plans. ▪ KPI indicators were included in the AMS Manual (both historical performance and target performance). Due to the AMS Manual not being reviewed, the historical performance information was contained in OM Reports and other documentation.	
	04/2024 Recommendation: To ensure the Asset Management System (AMS) remains effective and responsive, APA should undertake the following actions: 1. **Adopt a More Frequent AMS Review Cycle**: o Reduce the AMS review cycle from five years to a more frequent schedule, such as every two years, or initiate reviews whenever significant changes in operations, technology, or regulatory requirements occur. o Establish a structured review process that includes interim updates (e.g., annual reviews) to address any emerging risks or regulatory changes. The first interim review should be completed by Q4 2024. o Form a cross-functional review committee to oversee the updates, consisting of representatives from risk management, compliance, operations, and asset management. 2. **Clarify and Formalise the Requirement for Vestas to Develop a Contractor Asset Management Plan (AMP)**: o Review the O&M Contract to determine if the requirement for Vestas to develop a Contractor AMP aligns with contractual and asset management standards, including ISO 55001. o If a Contractor AMP is required, set a deadline for Vestas to submit an updated plan by Q4 2024, ensuring it covers key asset management activities, including maintenance schedules, risk management practices, and compliance requirements. o Include provisions in the O&M Contract for regular reviews of the Contractor AMP (e.g., annually), with feedback from APA to ensure it remains current and aligned with the AMS. 3. **Integrate Monitoring and Reporting Mechanisms**: o Establish key performance indicators (KPIs) to monitor the responsiveness of the AMS to changes in risk, technology, and regulations, and track compliance with the new review cycle.	**Action: Refer 2024 PRIP**

	○ Implement a reporting process where progress on AMS updates and the development of the Contractor AMP are reviewed quarterly by senior management to ensure accountability. 4. **Implement Contractor Verification Processes**: ○ Develop a clear RACI framework to ensure Vestas understand the AMS requirements. ○ Utilise the provisions of the Services Audit clause in the O&M Contract.	

2. ASSET CREATION AND ACQUISITION	OVERALL EFFECTIVENESS RATING	
□ Assess the adequacy of policies and procedures covering the creation and acquisition of assets □ Select a sample of asset creations/ acquisitions over the review period and confirm adequate procedures have been followed and actual costs are as predicted **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.*	**PROCESS & POLICY RATING*** **A**	**PERFORMANCE RATING** **1**

No.	2024 REVIEW REPORT EVIDENCE/ /VERIFICATION/FINDING/ACTION			
2.1	**EFFECTIVENESS CRITERIA: Full project evaluations are undertaken for new assets, including comparative assessment of non-asset options**	**Review Priority** **4**	**P&P* Rating:** **A**	**Performance Rating:** **1**

Finding: For both the Wind Farm and Solar Farm, comprehensive project evaluations were conducted to determine the financial and operational viability of assets until their respective end-of-life periods in 2031[1] and 2043 during the previous audit period. These evaluations included detailed assessments of Revenue, CAPEX and OPEX costs. Additionally, financial modelling, including EBITDA projections, were conducted to ensure that all aspects of the project's lifecycle were accounted for, and provided a basis for long-term decision-making. There were no significant valued full project evaluations for new assets during the audit period.

Documents/Evidence:

- 2.1.1 EDWF 33100101R5 - AMS Rev 5
- 2.2.1 APA.WA.CA.699 EDRF Contract
- 2.2.2 EDWF Vestas Report - October 2018 December 2019 Rev 1
- 2.2.3 EDWF Vestas Report -2020 v2
- 2.2.5 2022-Emu Downs RF - Annual Report (Rev 1)
- 2.2.6 2023-Emu Downs RF - Annual Report
- 2.2.7 2024-Emu Downs RF - Annual Plan v.1
- 14.1 Financial Reports
- 14.2 Finance Processes - Reporting
- 14.3 EDRF Budgets
- 14.4 Base Case EDRF Asset Model
- 14.5 EDRF restoration provision 30 Jun 2024
- 14.6 Vestas Financial Communication
- 14.7 AFE Documentation

Observations:

	▪ APA's project evaluation process included a formal Accounting Policy and the Authority for Expenditure (AFE) model. The AFE model included thorough financial assessments, risks, and executive delegation authorities. This ensured that all CAPEX investments were aligned with long-term strategic goals and financial health. ▪ CAPEX requests were submitted annually by Vestas through their O&M plans, which were then reviewed and approved by APA based on the evaluations in the project financial models. ▪ The detailed project evaluations facilitated financial control and operational efficiency, ensuring both the Wind and Solar Farms remained viable and aligned with APA's overall asset management strategy. [1] Asset Management System Manual stated end of life for wind farm 2031 and the 2024-2025 EDRF Year Plan stated end of life 2026.			
	Recommendation: None		**Action: Nil**	
2.2	**EFFECTIVENESS CRITERIA: Evaluations include all life-cycle costs**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding: A life-cycle cost model formed part of the Authority for Expenditure (AFE) process. The asset acquisition framework incorporated operational and maintenance (O&M) costs into its life-cycle costings, provided a financial overview from asset creation through to the end of its useful life. This ensured that future costs, including CAPEX, OPEX, and potential disposal costs, were factored into the evaluation. **Documents/Evidence: Refer 2.1** **Observations:** ▪ Life-cycle cost models, including O&M costs, were part of the financial planning process. ▪ Financial monitoring and reporting ensured that asset costs were tracked against life-cycle budgets. ▪ The inclusion of life-cycle costs in the AFE process supported financial planning for asset acquisitions and upgrades. ▪ The replacement/refurbishment costs for EDWF were not completed within the audit period.			
	Recommendation: None		**Action: Nil**	
2.3	**EFFECTIVENESS CRITERIA: Projects reflect sound engineering and business decisions**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**

	Finding: The EDRF Asset Manager, along with APA and Vestas (as the O&M contractor), conducted comprehensive engineering and O&M risk assessments for projects. EDRF was responsible for integrating both business and risk considerations into the evaluation and approval process for each project. This ensured a balanced approach between technical feasibility and business viability. **Documents/Evidence:** • 2.1.1 EDWF 33100101R5 - AMS Rev 5 • 2.1.2 33190101R EDWF Year Plan 2019-2020 Rev 1 • 2.1.3 33190102R1 EDRF Year Plan 2020-2021 • 2.1.4 33110101R1 EDRF Year Plan 2021-2022 • 2.1.5 33120101R2 EDRF Year Plan 2022-2023 • 2.1.6 33120102R1 EDRF Year Plan 2023-2024 • 2.1.7 33140101R0 - EDRF Year Plan 2024-25 • 2.2.1 APA.WA.CA.699 EDRF Contract • 2.2.2 EDWF Vestas Report - October 2018 December 2019 Rev 1 • 2.2.3 EDWF Vestas Report -2020 v2 • 2.2.5 2022-Emu Downs RF - Annual Report (Rev 1) • 2.2.6 2023-Emu Downs RF - Annual Report • 2.2.7 2024-Emu Downs RF - Annual Plan v.1 • 14.1 Financial Reports • 14.2 Finance Processes - Reporting • 14.3 EDRF Budgets • 14.4 Base Case EDRF Asset Model • 14.5 EDRF restoration provision 30 Jun 2024 • 14.6 Vestas Financial Communication • 14.7 AFE Documentation **Observations:** ▪ Vestas submitted project proposals annually, which were outside of their O&M contract, for review and approval by EDRF. For instance, the uplifting of solar farm capacitor connection failures was assessed and approved after engineering and business evaluations were completed. ▪ The project approval process consistently included business risks and sound engineering principles to ensure long-term viability.			
	Recommendation: None		**Action: Nil**	
2.4	**EFFECTIVENESS CRITERIA: Commissioning tests are documented and completed**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding: Historically, the Wind Farm and Solar Farm commissioning tests were completed, with all relevant documentation for the EDWF was stored within Vestas' SAP/Salesforce database. As Vestas was the original O&M contractor for the Wind Farm, they also maintained access to the global database for all commissioning data. The Solar Farm commissioning data was readily available but was not integrated into the SAP/Salesforce system.			

	Documents/Evidence: • 2.1.2 33190101R EDWF Year Plan 2019-2020 Rev 1 • 2.1.3 33190102R1 EDRF Year Plan 2020-2021 • 2.1.4 33110101R1 EDRF Year Plan 2021-2022 • 2.1.5 33120101R2 EDRF Year Plan 2022-2023 • 2.1.6 33120102R1 EDRF Year Plan 2023-2024 • 2.1.7 33140101R0 - EDRF Year Plan 2024-25 • 3.2.18 EDRF - WP Interface Test Procedure SCGOO 20221010 • Vestas SAP/Salesforce Database • Solar Farm excel spreadsheet (not provided for review) • Vestas Global Adviser (VGM) **Observations:** ▪ The Wind Farm commissioning data was fully documented and maintained in the Vestas global database. ▪ It was understood that there was limited commissioning data during the review period aside from the Automatic Balancing Control system. ▪ Solar Farm commissioning data, while available, was not integrated into the SAP/Salesforce database and it was understood there were no plans for this to be undertaken. The Vestas Site Manager detailed the process but did not provide the spreadsheet for review. ▪ EDRF successfully commissioned and tested the Automatic Balancing Control system as per AEMO's request and it was understood the commissioning documentation was maintained by APA. ▪ The EDRF - WP Interface Test Procedure required systematic testing and verification of the integration of new systems with existing infrastructure, to ensure data accuracy, functionality, and operational readiness while maintaining compliance with performance standards. ▪ It was understood active power control was covered in an Automatic Balancing Control (**ABC**) Test Procedure document).			
	Recommendation: None		**Action: Nil**	
2.5	**EFFECTIVENESS CRITERIA: Ongoing legal / environmental / safety obligations of the asset owner are assigned and understood**	**Review Priority** **4**	**P&P* Rating:** **A**	**Performance Rating:** **1**

Finding: Ongoing legal, environmental, and safety obligations were well understood and managed by the Licensee. These obligations were addressed in the O&M agreements, EDRF Yearly Plans, and Compliance Manuals, and were reflected in documented procedures, comprehensive reporting, and monthly meetings. The Licensee proactively managed these obligations, escalating any relapses to the upper executive level for resolution. The Vigilant system was used to track and monitor compliance.

Documents/Evidence:

- 2.1.1 EDWF 33100101R5 - AMS Rev 5
- 2.2.1 APA.WA.CA.699 EDRF Contract
- 2.1.2 33190101R EDWF Year Plan 2019-2020 Rev 1
- 2.1.3 33190102R1 EDRF Year Plan 2020-2021
- 2.1.4 33110101R1 EDRF Year Plan 2021-2022
- 2.1.5 33120101R2 EDRF Year Plan 2022-2023
- 2.1.6 33120102R1 EDRF Year Plan 2023-2024
- 2.1.7 33140101R0 - EDRF Year Plan 2024-25
- 7.2 Contractor Meeting Minutes-Reports
- 8.1.7 APA Group Procedure - Compliance Management System Handbook
- Vigilant System

Observations:

- Vigilant, an enterprise risk, compliance, and assurance system, is actively used on-site to monitor safety, legal, and environmental compliance requirements.
- Monthly contractor and asset performance meetings regularly addressed legal, environmental, and safety obligations.
- Annual HSE audits are conducted internally by APA, with audit outcomes presented to the O&M team and tracked through the Vigilant system for implementation and monitoring.

Recommendation: None	**Action: Nil**

3. ASSET DISPOSAL	**OVERALL EFFECTIVENESS RATING**	
□ Assess the adequacy of policies and procedures covering the identification of under-performing assets, disposal of assets and replacement strategy □ Determine whether a regular review of the performance of assets is undertaken □ Select a sample of disposals over the review period and confirm adequate procedures have been followed **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.*	**PROCESS & POLICY RATING***	**PERFORMANCE RATING**
	B	**2**

No.	**2024 REVIEW REPORT EVIDENCE/ /VERIFICATION/FINDING/ACTION**			
3.1	**EFFECTIVENESS CRITERIA: Under-utilised and under-performing assets are identified as part of a regular systematic review process**	**Review Priority** **5**	**P&P* Rating:** **A**	**Performance Rating:** **1**

Finding: A systematic review of the wind and solar farm assets was conducted regularly, with performance monitored on a continual basis. APA had direct access to Vestas' Salesforce Dashboard, which enabled real-time monitoring of asset performance and generation. Under-performing assets were immediately reported by Vestas and reviewed monthly during performance meetings or as required. Incidents were investigated, and remedial actions were implemented promptly. APA also recorded these incidents in the Vigilant system for further monitoring and follow-up.

Documents/Evidence:

- 2.1.1 EDWF 33100101R5 - AMS Rev 5
- 2.2.1 APA.WA.CA.699 EDRF Contract
- 2.1.2 33190101R EDWF Year Plan 2019-2020 Rev 1
- 2.1.3 33190102R1 EDRF Year Plan 2020-2021
- 2.1.4 33110101R1 EDRF Year Plan 2021-2022
- 2.1.5 33120101R2 EDRF Year Plan 2022-2023
- 2.1.6 33120102R1 EDRF Year Plan 2023-2024
- 2.1.7 33140101R0 - EDRF Year Plan 2024-25
- 2.1.8 WA Renewables Asset Management Plan
- 7.2 Contractor Meeting Minutes-Reports
- 8.1.7 APA Group Procedure - Compliance Management System Handbook
- Vigilant System

	▪ SAP/Salesforce **Observations:** ▪ The Wind and Solar Farms were well-established, with effective monitoring processes in place. During the audit period, one asset disposal occurred due to the obsolescence of the 3G system. ▪ Both APA and Vestas proactively monitored asset performance, reporting under-performance through O&M Monthly Reports and Asset Performance Reports, taking appropriate remedial actions when necessary. ▪ It was noted, the adoption of tools like Power BI and PI Vision played a significant role in the transition to more integrated, continuous, and systematic monitoring practices noted during the current audit period compared to the component-focused approach of the previous audit period.			
	Recommendation: None		**Action: Nil**	
3.2	**EFFECTIVENESS CRITERIA: The reasons for under-utilisation or poor performance are critically examined and corrective action or disposal undertaken**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding: Monthly reports document the performance of assets, and any identified issues were addressed. Both APA and Vestas actively monitored asset performance in real time through their respective systems. In cases of poor performance, corrective maintenance actions were undertaken or assets were replaced, depending on the nature of the issue. **Documents/Evidence: Refer 3.1** ▪ 4.1.17 EDSF Grass Fire 29 Jan2024 Risk Assessment Mitigations V1 ▪ 4.2.5 EDWF_ WTG Generator Failures - Causes and Mitigations **Observations:** ▪ During the audit period, the Emu Downs Wind Farm (EDWF) was found to be performing below its contracted KPIs due to issues with the wind turbine generator (WTG) gearboxes, excluding curtailment factors. Vestas conducted a detailed investigation and produced a VGA Turbine Fault analysis report, identifying the root cause. Remedial actions were scheduled, and Vestas has been carrying out the required maintenance tasks. ▪ Similar analysis was carried out for the solar farm, where wire connectors were identified as a source of underperformance. Vestas dedicated a technician to implement the necessary corrective actions, ensuring that the issue was addressed.			
	Recommendation: None		**Action: Nil**	

3.3	**EFFECTIVENESS CRITERIA: Disposal alternatives are evaluated**	**Review Priority 4**	**P&P* Rating: B**	**Performance Rating: 1**
	Finding: No significant assets were removed or disposed of during the audit period. However, the wind farm is approaching the end of its design life. In FY23/24, APA commenced two significant projects: the Windfarm Life Extension Assessment and the Substation Midlife Assessment. These assessments will guide APA's decisions on decommissioning or extending the wind farm's operational life, following internal policies and procedures. The assessments were incomplete at the end of the review period. **Documents/Evidence: Refer 3.1** **Observations:** ▪ The evaluations to determine whether the wind farm should be decommissioned or extended were still are in progress, with final decisions expected early 2025. The decision-making process aligned with APA's internal Delegation Authority Policy, ensuring a thorough evaluation of all disposal or life-extension alternatives before a decision was made.			
	Recommendation: None		**Action: Nil**	
3.4	**EFFECTIVENESS CRITERIA: There is a replacement strategy for assets**	**Review Priority 4**	**P&P* Rating: B**	**Performance Rating: 3**
	Finding: During the review period, no clearly defined and consistent replacement strategy was established. APA developed a life cycle financial model for the wind and solar farms, including provisions for OPEX, CAPEX, and asset replacement. However, there were inconsistencies in the Asset Management System Manual (design life of 25 years to 2031) and the 2024-2025 EDRF Year Plan (design life of 20 years to 2026) regarding the end-of-life assumptions for the wind farm. The WA Renewables AMP (WARAMP) stated end of life range 2026-2031, This discrepancy could impact the effectiveness of asset replacement planning as the asset condition assessment for the wind farm was due to commence in FY23 and was delayed to FY25. It was noted that the EBoP Equipment Life Extension was initiated in 2021 and completed in 2023. **Documents/Evidence: Refer 3.1** ▪ 4.1.16 Emu Downs Life Extension EBoP ▪ 14.4 Base Case EDRF Asset Model			

	Observations: ▪ In early 2024, Vestas conducted an audit on the balance of plant assets, which was provided to APA for inclusion in the asset replacement schedule. Vestas developed and implemented comprehensive maintenance schedules for critical assets, which are reported to APA on a monthly and annual basis, ensuring alignment with the long-term asset replacement strategy. ▪ The EDRF Year Plan 2024-25 included a change to operating design life to 2026, which contradicted the AMS Manual design life of 2031. No specific explanation was included in the Year Plan. ▪ The Licensee was aware that the Emu Downs Wind Farm (EDWF) is approaching the end of its operational design life, with key contracts such as the O&M contract and the land lease also requiring review. Decisions regarding the future of the wind farm, whether to extend operations or decommission, need to be aligned with these timelines. The Emu Downs Solar Farm (EDSF), with a design life extending to 2043, is less immediately impacted by these timing considerations, but planning for both assets should consider the substation design life and alignment of lease, operational, and regulatory obligations.	
	05/2024 Recommendation: To ensure consistency and accuracy in asset replacement planning, it is recommended that APA: 1. **Resolve the Discrepancy in Design Life**: o Establish a unified end-of-life assumption for the Emu Downs assets (20 or 25 years) by the end of Q3 2024, ensuring that the AMSM, WARAMP, and Year Plans are updated accordingly. Clearly specify where assets have differing asset life spans, for example the wind turbines, EBoP, solar farm, etc. o Conduct stakeholder consultations (e.g., with Vestas, financial planners, and engineers) to determine the most feasible design life based on current asset conditions and projected performance. 2. **Update the Life Cycle Financial Model and Replacement Strategies**: o Revise the life cycle financial model if required and asset replacement strategies based on the agreed-upon design life, with updates completed by Q4 2024. o Incorporate provisions for phased replacements or upgrades to extend asset life where feasible, in line with industry standards for similar renewable facilities. 3. **Implement a Structured Review Process for the Replacement Strategy**: o Establish a biannual review cycle for the replacement strategy to ensure it remains aligned with the latest asset performance data, condition assessments, and industry developments. o Integrate findings from life extension studies (to be completed by early 2025) into the replacement strategy, allowing for dynamic adjustments in planning. o Include performance indicators in the review process to measure the effectiveness of the replacement strategy and adapt it to evolving operational and financial conditions. 4. **Document and Communicate All Changes Across Relevant Plans**:	**Action: Refer 2024 PRIP**

	○ Ensure that any updates to the design life, financial model, or replacement strategies are reflected in all relevant documents (AMSM, WARAMP, Year Plans) and communicated to key stakeholders by Q1 2025. ○ Implement a change management process to track updates across documents and develop a RACI framework where appropriate.	

4. ENVIRONMENTAL ANALYSIS	OVERALL EFFECTIVENESS RATING	
□ Review achievement of performance and service standards over the review period □ Investigate any statutory or regulatory breaches and assess corrective action taken □ Review the adequacy of reporting and monitoring tools **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.*	**PROCESS & POLICY RATING*** **A**	**PERFORMANCE RATING** **1**

No.	2024 REVIEW REPORT EVIDENCE/ /VERIFICATION/FINDING/ACTION			
4.1	**EFFECTIVENESS CRITERIA: Opportunities and threats in the asset management system environment are assessed**	**Review Priority** **4**	**P&P* Rating:** **B**	**Performance Rating:** **1**

Finding: APA, as the Licensee, has developed the WA Renewables Asset Management Plan (WARAMP) and the Emu Downs Renewable Facility (EDRF) Yearly Plans. The WARAMP included an environmental scan using a risk-based approach to assess both opportunities and threats within the asset management environment. This scan was grounded in APA's Risk Management Policy, Procedures, and Risk Summary documentation, addressing both internal and external factors that could impact the performance and sustainability of their renewable energy facilities.

Documents/Evidence:

- 2.1.1 EDWF 33100101R5 - AMS Rev 5
- 2.1.2 33190101R EDWF Year Plan 2019-2020 Rev 1
- 2.1.3 33190102R1 EDRF Year Plan 2020-2021
- 2.1.4 33110101R1 EDRF Year Plan 2021-2022
- 2.1.5 33120101R2 EDRF Year Plan 2022-2023
- 2.1.6 33120102R1 EDRF Year Plan 2023-2024
- 2.1.7 33140101R0 - EDRF Year Plan 2024-25
- 2.1.8 WA Renewables Asset Management Plan
- 2.2.1 APA.WA.CA.699 EDRF Contract
- 4.1.1 APA Policy - Risk Management
- 4.1.2 APA Risk Management System Processes 2022
- 8.1.7 APA Group Procedure - Compliance Management System Handbook
- Vigilant System

	Observations: ▪ The WARAMP Environmental Scan specifically addressed industry disrupters, regulatory changes, and evolving market conditions, such as adjustments to the Wholesale Electricity Market (WEM), which could influence the asset's operational and financial strategy. ▪ Key risks and opportunities were identified and incorporated into strategic decision-making, ensuring alignment with market dynamics. ▪ The EDRF Yearly Plans, which focused on site-specific risks and compliance issues, was used to monitor performance and ensure that opportunities are leveraged while threats are mitigated. These were regularly reported in the monthly updates and O&M meetings. ▪ APA utilised its Vigilant System to track risks and compliance, ensuring ongoing alignment with APA's strategic objectives and addressing potential operational threats.			
	Recommendation: None		**Action: Nil**	
4.2	**EFFECTIVENESS CRITERIA: Performance standards (availability of service, capacity, continuity, emergency response, etc.) are measured and achieved**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding: – Performance standards were clearly outlined in the O&M contract and were consistently monitored through monthly O&M reports provided by Vestas. APA maintained direct access to Vestas' Salesforce dashboard, allowing continuous oversight of key performance metrics, including service availability, capacity, and emergency response readiness. Both APA and Vestas had well-documented emergency response plans specific to the EDRF site. During the audit period, APA regularly reviewed the O&M contractor's performance and requested clarifications where necessary to ensure alignment with contractual obligations and performance standards. **Documents/Evidence: Refer 4.1** **Observations:** ▪ APA and Vestas demonstrated robust performance monitoring systems. Vestas submitted regular O&M reports detailing key performance indicators such as availability, capacity, and any service interruptions. APA had direct access to Vestas' Salesforce dashboard, which provided real-time visibility of operational performance. ▪ Emergency response was tested during a ground fire near the solar panels in January 2024. The Emergency Response Plan was enacted promptly, and the incident was recorded in APA's Vigilant System. A post-incident review was conducted, and both APA and Vestas collaborated on operational and technical corrective actions to prevent future occurrences. ▪ APA had an established Business Continuity Plan that integrated with Vestas' operational capabilities, to ensure minimal disruption during emergencies or operational downtimes. ▪ Several turbines experienced mechanical issues, primarily involving gearbox and generator components. Efforts to enhance fault diagnosis and to expedite the completion of maintenance activities to minimise downtime and ensure subsequent improved performance was noted.			

	Recommendation: Nil		**Action:** Nil	
4.3	**EFFECTIVENESS CRITERIA: Compliance with statutory and regulatory requirements**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding: Compliance with statutory and regulatory requirements was monitored and reported through APA's Vigilant system. The system tracked compliance obligations, reported incidents, and ensured that any potential regulatory issues were addressed in a timely manner. Regular reviews were conducted through monthly reports and meetings between APA and Vestas to ensure ongoing compliance with all relevant statutory obligations. **Documents/Evidence: Refer 4.1** **Observations:** ▪ The Vigilant system was utilised to monitor compliance with statutory and regulatory obligations. Compliance requirements were logged, tracked, and updated in real time. Any breaches or issues were escalated as necessary and discussed in regular monthly meetings between APA and Vestas. ▪ APA maintained strong relationships with key stakeholders, including regulators, and regularly monitored these engagements. Annual reviews were conducted to ensure that all statutory requirements were met, and these engagements were also reflected in the Vigilant system. ▪ No significant compliance breaches were identified during the audit period, indicating the effectiveness of the monitoring system in place.			
	Recommendation: None		**Action:**	
4.4	**EFFECTIVENESS CRITERIA: Service standard (customer service levels etc.) are measured and achieved.**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding: The SCADA system and WPC recorded performance metrics, with no significant service issues identified during the audit period. Customer service levels were well defined and consistently met by the Licensee as an unscheduled generator. All contractual and performance criteria were fulfilled to the satisfaction of APA's customers, including through a long-term Power Purchase Agreement (PPA) with Synergy. Customer service levels were regularly measured, monitored, and documented in the monthly and annual reports to APA. **Documents/Evidence: Refer 4.1**			

	Observations: ▪ Vestas Online Business (**VOB**) was used onsite and is Vestas's fully integrated SCADA system which was focused on avoiding downtime and achieving production and contract goals. ▪ Service levels were clearly defined and monitored, with ongoing compliance documented in the monthly Asset Performance Reports and annual reports. ▪ APA's long-term PPA with Synergy ensured the supply of all energy generated by the wind farm, including the associated Large-scale Generation Certificates (**LGCs**) and capacity credits. ▪ Vestas' performance levels were clearly defined in the O&M Contract and were regularly reported and monitored by APA on a monthly and annual basis.	
	Recommendation: None	**Action: Nil**

5. ASSET OPERATIONS			**OVERALL EFFECTIVENESS RATING**	
□ Assess the adequacy of policies and procedures covering operations functions □ Assess the adequacy of staff resourcing and training □ Confirm the policies and procedures have been followed during the review period by examining the asset register, observing operational procedures, analysing costs, etc. □ Assess the significance of exceptions identified and whether adequate corrective action has been taken **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.*			**PROCESS & POLICY RATING*** **A**	**PERFORMANCE RATING** **1**
No.	**2024 REVIEW REPORT EVIDENCE/ /VERIFICATION/FINDING/ACTION**			
5.1	**EFFECTIVENESS CRITERIA: Operational policies and procedures are documented and linked to service levels required**	**Review Priority** **5**	**P&P* Rating:** **A**	**Performance Rating:** **1**
	Finding: Operational policies and procedures for the wind farm were well documented, reviewed, and aligned with the operational requirements. The operational policies were outlined in documents such as the Asset Management System (AMS) manual and Yearly Plans. These documents defined service expectations, key performance indicators (KPIs), and maintenance schedules tied directly to service levels. Vestas's operational policies and procedures were accessed through their document control system, Tech Docs. The documentation for the solar farm was maintained in Excel spreadsheets as this was the system used by the previous solar farm contractor UGL (i.e. until March 2020). **Documents/Evidence** • 2.1.1 EDWF 33100101R5 - AMS Rev 5 • 2.2.1 APA.WA.CA.699 EDRF Contract • 2.1.2 33190101R EDWF Year Plan 2019-2020 Rev 1 • 2.1.3 33190102R1 EDRF Year Plan 2020-2021 • 2.1.4 33110101R1 EDRF Year Plan 2021-2022 ▪ Vestas SAP/Salesforce system (operational documents) ▪ Sapphire software (performance monitoring) ▪ CMP system (reporting mechanism, to be replaced by GMP) ▪ Vestas Global Adviser (VGM) ▪ Vestas Turbine Monitoring (VTM)			

	• 2.1.5 33120101R2 EDRF Year Plan 2022-2023 • 2.1.6 33120102R1 EDRF Year Plan 2023-2024 • 2.1.7 33140101R0 - EDRF Year Plan 2024-25 ▪ VestasOnline Busines (VOB) ▪ APA's Geo SCADA system **Observations:** ▪ Contracts with O&M providers, such as Vestas and UGL, contained specific clauses regarding availability and performance metrics for both the wind and solar farms. ▪ EDRF Year Plan's identified key performance requirements (safety, environmental, production, financial) that were directly linked to the service levels expected by stakeholders. ▪ Vestas upgraded its Sapphire software in November 2023 to monitor performance. ▪ Performance was monitored through Western Power systems and VOB. Additionally, APA and Vestas utilised PI Vision and Power BI to ensure service levels were achieved. ▪ CMP is used as a reporting mechanism, but APA is negotiating the transition to the Generator Monitoring Report (GMR) with AEMO and Western Power. ▪ It was understood that there was an ongoing project to ensure the documentation relating to the solar farm was transferred from the excel spreadsheets into Tech Docs.			
	Recommendation: None		**Action: Nil**	
5.2	**EFFECTIVENESS CRITERIA: Risk management is applied to prioritise operations tasks**	**Review Priority** **5**	**P&P* Rating:** **A**	**Performance Rating:** **1**
	Finding: Operational tasks at the wind and solar farms were minimal. However, risk management was actively integrated into the prioritisation of operations tasks and demonstrated at the operational, maintenance and management levels. **Documents/Evidence: Refer 5.1** **Observations:** ▪ Vestas used the Vestas Turbine Monitoring (VTM) system and SCADA to track operational alarms and apply risk analysis for remedial actions. ▪ APA used the Geo SCADA system to monitor performance e-metrics in real-time. ▪ Risk management was systematically applied to operational tasks using the hierarchy of controls (elimination, substitution, engineering controls, administrative controls, and personal protective equipment).			

	▪ Each site maintained a risk register, where operational risks were assessed, categorised, and managed based on their likelihood and impact. The Solar Farm risks were not yet all loaded into Vigilant.			
	Recommendation: None		**Action: Nil**	
5.3	**EFFECTIVENESS CRITERIA: Assets are documented in an asset register including asset type, location, material, plans of components, and an assessment of assets' physical/structural condition**	**Review Priority 4**	**P&P* Rating: B**	**Performance Rating: 1**
	Finding: The asset register for the EDRF was maintained in several parts: APA's financial asset register, Vestas' technical asset register within Salesforce/SAP systems and the technical drawings. Each system records relevant asset data for financial, operational, and maintenance purposes, but there is no fully integrated asset management system that connects these different data sources. **Documents/Evidence:** ▪ 2.1.1 EDWF 33100101R5 - AMS Rev 5 ▪ 3.2.2 EDSF Spares Apr 24 ▪ 3.2.4 Emu Downs Sub Station Spares Apr 24 ▪ 14.1.2 Asset Register_EDSF ▪ 14.1.3 Asset Register_EDWF **Observations:** ▪ The Vestas Global System provided access to equipment information for fault analysis. ▪ There was no fully integrated asset management system that connected these different data sources, however the common identifier for the asset (i.e. Asset Number) was referenced in all systems. ➢ Assets were categorised by type (e.g., wind turbine generators, substation equipment) and clearly documented with their respective locations (e.g., EDWF or EDSF). Detailed layout drawings and single-line diagrams provided further clarity on asset location and configuration. ➢ Specific components of the assets were documented, including transformers, cables, SCADA systems, and inverters. Information about the material of these components was maintained, ensuring that all physical elements of the assets were traceable. ➢ The contractors CMMS included maintenance schedules and assessment protocols for physical and structural conditions, ensuring regular updates on the condition of assets and adherence to service level requirements.			

	Recommendation: None		**Action:** Refer PRIP.	
5.4	**EFFECTIVENESS CRITERIA: Accounting data is documented for assets**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding: Wind and solar farm assets were well-documented in APA's financial reports, summarised monthly and annually, and submitted to APA's Executive Management. **Documents/Evidence: Refer 5.3** **Observations:** ▪ Financial information was reported by APA management to the Executive and Board. ▪ Annual audited accounts and accompanying notes provided comprehensive financial documentation.			
	Recommendation: None		**Action: Nil**	
5.5	**EFFECTIVENESS CRITERIA: Operational costs are measured and monitored**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding: Operational costs were regularly measured, recorded, and monitored on both a monthly and annual basis. Unscheduled O&M costs were tracked and reported in accordance with the O&M contracts, with details included in monthly and annual reports. This ensured that accounting data for all assets was consistently documented and integrated into the broader asset management and financial reporting system. **Documents/Evidence:** ▪ 2.1.1 EDWF 33100101R5 - AMS Rev 5 ▪ 2.2.1 APA.WA.CA.699 EDRF Contract ▪ 14.1 Financial Reports ▪ 14.2 Finance Process - Reporting ▪ 14.3 EDRF Budgets ▪ 14.6 Vestas Financial Communication **Observations:**			

	▪ Reporting by Vestas primarily focused on operational performance, with financials reported separately by APA. ▪ Actual asset performance was reported monthly and reviewed at the monthly Management Committee Meetings (MCM). In addition, these monthly reports were compiled into a yearly report ▪ The asset registers documented asset details, including asset status which ensured a comprehensive overview of the operational status of assets. ▪ The asset registers captured accounting periods, asset financials, and depreciation details, allowing for the tracking of asset value over time, in line with financial reporting and asset management standards.			
	Recommendation: None		**Action: Nil**	
5.6	**EFFECTIVENESS CRITERIA: Staff resources are adequate, and staff receive training commensurate with their responsibilities**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding: Vestas staff are competent and familiar with operations and plant requirements. Vestas manages training and resource needs through its annual O&M plans submitted to APA. **Documents/Evidence:** ▪ 2.1.1 EDWF 33100101R5 - AMS Rev 5 ▪ 2.2.1 APA.WA.CA.699 EDRF Contract ▪ 6.2.2 Vestas Training Records Export 26 Aug 2024 **Observations:** ▪ Vestas manages its resourcing needs under its O&M contracts and can access global resources for additional expertise. ▪ The contractor was required to ensure that all personnel, including subcontractors, had the necessary competencies and qualifications to perform their work safely and effectively. This included maintaining an adequate number of trained staff for operational continuity and compliance with safety standards. ▪ Comprehensive training was mandated for all staff members in areas such as site-specific inductions, safety procedures, and operational tasks. Staff were required to undergo regular training and refresher programs commensurate with their responsibilities to ensure that their knowledge and skills remained current. High-risk activities, including working at heights or operating specific equipment, required certified training through accredited programs ▪ Staffing shortages occurred during the COVID-19 pandemic but have improved since. APA does not provide staff to Vestas but can access wind farm expertise within the APA Renewables group.			
	Recommendation: None		**Action: Nil**	

6. ASSET MAINTENANCE	**OVERALL EFFECTIVENESS RATING**	
□ Assess the adequacy of policies and procedures covering maintenance functions □ Confirm the policies and procedures have been followed during the review period by examining maintenance schedules, analysing costs, etc. □ Assess the significance of exceptions identified and whether adequate corrective action has been taken **Key Process** – *Asset maintenance is the upkeep of assets.* **Outcome** – *The asset maintenance plans cover the scheduling and resourcing of the maintenance tasks so work can be done on time and on cost.*	**PROCESS & POLICY RATING*** **A**	**PERFORMANCE RATING** **1**

No.	2024 REVIEW REPORT EVIDENCE/ /VERIFICATION/FINDING/ACTION			
6.1	**EFFECTIVENESS CRITERIA: Maintenance policies and procedures are documented and linked to service levels required**	**Review Priority** **4**	**P&P* Rating:** **A**	**Performance Rating:** **1**

Finding: Maintenance policies and procedures were well-documented. Comprehensive monthly and annual reports were provided to APA, who also documented monthly asset performance reports for its executive team.

Documents/Evidence:

- 2.1.1 EDWF 33100101R5 - AMS Rev 5
- 2.2.1 APA.WA.CA.699 EDRF Contract
- 2.2.2 EDWF Vestas Report - October 2018 December 2019 Rev 1
- 2.2.3 EDWF Vestas Report -2020 v2
- 2.2.4 2021 O&M - NOT PROVIDED
- 2.2.5 2022-Emu Downs RF - Annual Report (Rev 1)
- 2.2.6 2023-Emu Downs RF - Annual Report
- 2.2.7 2024-Emu Downs RF - Annual Plan v.1
- 2.2.8 EDWF BAM - Asset Condition Assessments Blades
- 2.2.9 Vestas Eng Pyramid
- 2.2.10 EDWF Contractor Availability 2023
- 3.2.7 V82 1.65MW Emu Park Major Component Failure Rate
- 3.2.8 SVC Buss Fuse Installation 2021 - Example of Operation Issue and Solution
- 3.2.9 Statutory Checks - Service ANZ Activity Planner Rev.0
- 3.2.10 Emu Downs Solar Farm RTU Upgrade V004
- 3.2.11 EDWF SVC Arc Flash Study
- 3.2.12 Emu Downs Annual Shutdown Report 2023
- 3.2.13 Emu Downs Solar Park fortnightly Inspections 15-Mar-2024-EDSF
- 3.2.14 Emu Downs Solar Park fortnightly Inspections 28-Jun-2024-EDSF
- 3.2.15 EDWF V82 Service_plan_and_checklist
- 3.2.16 EDRF_BRF Pi Target Deadbands - Email improvement perf monitoring capability
- 3.2.17 EDRF_ V82 Service Manual Extract

- 2.2.11 Screenshot Asset Performance Monitoring Portal - AP Reports
- 2.2.12 APA Review of Vestas Annual Plan Email
- 3.2.1 EDRF Scheduled Maintenance
- 3.2.2 EDSF Spares Apr 24
- 3.2.3 EDWF Substation Scheduled Maintenance Rev 4 19-08-20
- 3.2.4 Emu Downs Sub Station Spares Apr 24
- 3.2.5 Emu Downs Solar Park fortnightly Inspections 1-Feb-2024
- 3.2.6 Vestas Quote_LiDAR_EDWF-221102
- 3.2.18 EDRF - WP Interface Test Procedure SCGOO 20221010
- 3.2.19 EDRF - AEMO ADDITIONAL SCADA IO Test Plan 14 Sept 22
- 3.2.20 EDPV_ScopeRisk_22.11.2022 Pi Dashboard
- Vestas Salesforce/SAP system
- Tech Docs (maintenance documentation)
- SCADA

Observations:

- Vestas utilised its global experience, databases, and reputable OEM suppliers to ensure comprehensive maintenance procedures were in place.
- Maintenance schedules for the Balance of Plant were documented, while solar farm maintenance schedules were in a standalone spreadsheet. It was understood there were no plans for these to be integrated into Salesforce/SAP.
- Tech Docs allowed maintenance personnel easy access via mobile devices
- Whilst there were periods where operational availability for EDWF during the review period was below target levels, subsequent years have seen improvements due to enhanced maintenance strategies and operational adjustments. The delays in scheduled maintenance from prior periods have been resolved, with maintenance activities now fully aligned to meet future operational targets and performance standards.
- Vestas was required to submit a comprehensive annual plan detailing scheduled maintenance, component replacement, and staffing requirements. This plan aligned with the service levels necessary for optimal operation of EDRF. Any deviations from this plan required approval from APA, ensuring that maintenance procedures were clearly documented and directly linked to the service performance expectations.
- Vestas was responsible for maintaining accurate records of maintenance activities and service reports, which were subject to review. This documentation requirement ensured that the maintenance procedures were consistently followed and aligned with the necessary service levels, reinforcing the connection between operational practices and performance standards.

Recommendation: None	**Action: Nil**

6.2	**EFFECTIVENESS CRITERIA: Regular inspections are undertaken of asset performance and condition**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding: Maintenance inspections and procedures were well defined in the O&M Contract. These inspections were scheduled and actioned through Salesforce/SAP, with performance being continuously monitored via SCADA and PI systems. Monthly and annual performance reports continue to provide reliable data. **Documents/Evidence: Refer 6.1** **Observations:** ▪ Regular visual inspections and specific condition checks were scheduled for various components, such as electrical systems, turbines, and other critical assets. These inspections were conducted at defined intervals (monthly, quarterly, annually) to assess asset condition, identify potential wear or damage, and ensure optimal performance. ▪ In addition to visual inspections, performance data was monitored through automated systems to track operational efficiency and identify any anomalies in real-time. Condition assessments, such as thermographic surveys and vibration analysis, were carried out as part of preventative maintenance to evaluate the health of critical assets and address issues before they escalated. ▪ Use of continuous monitoring via SCADA and PI systems, and enhanced data granularity through refined deadbands ensured asset performance and condition were maintained effectively. ▪ Key elements, including thermographic inspections, oil analysis, and winding resistance tests, were part of a structured maintenance plan to regularly evaluate asset performance. These periodic assessments provided insights into the operational condition of critical equipment, ensuring that performance issues were identified and addressed in a timely manner. ▪ Backlogs were cleared during the audit period, with maintenance rescheduled to maximise generation capacity, particularly during scheduled outages in October annually.			
	Recommendation: None		**Action: Nil**	
6.3	**EFFECTIVENESS CRITERIA: Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**

	Finding: Maintenance plans, including emergency, corrective, and preventative measures, were documented and completed according to the contractual schedule, aligning with asset performance and operational reliability goals. Maintenance activities were regularly reported to APA, and Salesforce/SAP was used to generate and track maintenance tickets. **Documents/Evidence: Refer 6.1** **Observations:** ▪ Regular meetings between APA and Vestas reviewed ongoing and upcoming maintenance tasks. ▪ Salesforce/SAP enabled the tracking and scheduling of maintenance activities, including planning for outages. Maintenance plans were developed annually and reviewed on an ongoing basis. ▪ The OM contract required the contractor to follow a documented service schedule, which included routine tasks, emergency procedures, and corrective actions. The schedule outlined key intervals (monthly, quarterly, annually) for various maintenance tasks, ensuring the timely completion of planned activities. ▪ With respect to emergency and corrective maintenance, specific response times and protocols were established to address defects or failures as they arose. The contractor was required to initiate corrective actions within agreed timeframes commensurate with risk, ensuring maintenance is carried out promptly to prevent prolonged disruptions.			
	Recommendation: None		**Action: Nil**	
6.4	**EFFECTIVENESS CRITERIA: Failures are analysed, and operational/maintenance plans adjusted where necessary**	**Review Priority** **4**	**P&P* Rating:** **A**	**Performance Rating:** **1**
	Finding: Failures were systematically recorded, investigated, and analysed, with corrective actions taken where necessary. These failures, including major component issues, were analysed in detail through reports for example "Emu Park Major Component Failure Rate" analysis. Monthly and annual reports contained detailed failure histories and subsequent adjustments to operational and maintenance plans, ensuring operational continuity and minimising further disruptions. **Documents/Evidence: Refer 6.1** **Observations:**			

	▪ Vestas and APA collaborated closely in tracking asset performance through systems like Salesforce/SAP, with comprehensive failure analysis and reporting mechanisms in place. For example, the V82 1.65MW Emu Park Major Component Failure Rate report (reviewed during this audit) detailed historical failure data and corrective actions taken to address those issues. ▪ When a component failure or performance issue occurred, the contractor was required to perform a detailed analysis to identify the root cause, determine necessary repairs or replacements, and recommend measures to prevent recurrence. ▪ Failure analysis results informed the adjustment of operational and maintenance strategies, ensuring that lessons learned were effectively integrated into both short-term fixes and long-term operational plans.			
	Recommendation: None		**Action: Nil**	
6.5	**EFFECTIVENESS CRITERIA: Risk management is applied to prioritise maintenance tasks**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding: Maintenance tasks were prioritised based on a structured risk management process, aligning maintenance activities with operational safety and performance requirements. The hierarchy of controls was applied to mitigate risks to a level that is as low as reasonably practicable (ALARP). High-risk activities were identified, assessed, and managed before commencement to ensure that critical maintenance tasks were given priority based on their risk profile. Salesforce/SAP was used to categorise and manage both scheduled and unscheduled maintenance tasks. **Documents/Evidence: Refer 6.1** **Observations:** ▪ Salesforce/SAP was used to categorise maintenance tasks based on priority (e.g., "Normal" or "High"). ▪ Job Safety Assessments (JSAs) and risk assessments were available in the system, and O&M procedures were updated upon task completion. ▪ Substation components, including the SVC and SCADA UPS systems, were subject to scheduled maintenance and assessment. Plans were being undertaken to replenish critical spare components and ensure timely replacement of key elements.			
	Recommendation: None		**Action: Nil**	
6.6	**EFFECTIVENESS CRITERIA: Maintenance costs are measured and monitored**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**

	Finding: Maintenance costs were measured, monitored, and recorded on a monthly and annual basis. Most reporting by Vestas focused on operational performance, with financial reporting handled separately by APA. The contractor was required to provide regular reports, including monthly and annual financial statements, detailing costs related to scheduled and unscheduled maintenance. **Documents/Evidence: Refer 6.1** **Observations:** ▪ O&M costs were included in the contracts and reported regularly, with unscheduled maintenance costs also tracked and reported. These reports included purchase orders, invoices, and spare parts usage, ensuring ongoing monitoring of maintenance expenditures. ▪ Maintenance costs and budgets were recorded monthly with an additional six-month forecast, and financials were reviewed and audited annually. ▪ Maintenance activities, such as inspections and repairs, were linked to performance KPIs and cost outcomes, ensuring that both operational and financial metrics were reviewed together and providing insight into how maintenance efforts and associated costs aligned with the performance of the facility.	
	Recommendation: None	**Action: Nil**

7. ASSET MANAGEMENT INFORMATION SYSTEM	**OVERALL EFFECTIVENESS RATING**	
	PROCESS & POLICY RATING*	**PERFORMANCE RATING**
□ Assess the adequacy of policies and procedures covering the general control and security of the computer systems used to provide management information on compliance with service standards / licence obligations □ Confirm management reports on service standards / licence obligations are reviewed and substantial exceptions to service standards / licence obligations are promptly followed up and implemented **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.*	**A**	**1**

No.	**2024 REVIEW REPORT EVIDENCE/ /VERIFICATION/FINDING/ACTION**			
7.1	**EFFECTIVENESS CRITERIA: Adequate system documentation for users and IT operators**	**Review Priority** **4**	**P&P* Rating:** **A**	**Performance Rating:** **1**
	Finding: APA had well-understood IT systems in place. The focus was on ensuring that the IT systems at EDRF remained resilient to both internal and external risks while complying with operational and regulatory standards. Specifically, adequate system documentation for users and IT operators was met through several key provisions: ➢ Detailed System Recovery Documentation: The System Recovery Document (SRD) and System Recovery Sheet (SRS), as outlined in the recovery plans, provided comprehensive steps for IT operators to restore systems in the event of failure. This included detailed procedures for database failover, application recovery, and manual processes for restarting critical services. ➢ Backup Standards and Procedures: The IT Backup Standard ensured that backup and recovery documentation was maintained and regularly tested. The backup procedures identified critical data, retention policies, and recovery steps, which were essential for IT operators to restore systems during outage. ➢ Disaster Recovery Testing: Disaster recovery tests, such as those described in the DR Recovery document, included specific scenarios for data recovery and system restoration. These tests verified that IT operators could effectively recover lost data and validate system availability.			

- Service Continuity Management: The Service Continuity Management Standard outlined the principles and processes for maintaining and restoring system functionality, ensuring that both users and IT operators had clear guidelines on handling disruptions. This included continuity plans, backup procedures, and roles for managing service recovery.

The key operational risks identified across the documents related to IT asset management for the Emu Downs Wind Farm (EDWF) include the following:

1. Data Loss and Recovery
2. System Downtime:
3. Security and Unauthorised Access:
4. Compliance with Backup Standards:

Mitigation strategies identified include:

- Routine Backups
- Secure Offsite Storage
- Disaster Recovery Testing:
- Monitoring and Regular Updates

Documents/Evidence:

- 13.1.1 EDRF Sapphire Certificate 2023
- 13.1.2 EDRF Sapphire Licence Renewal 2023
- 13.1.3 EDWF System Recovery Document 2019
- 13.1.4 EDWFS _ Business Impact Analysis 2018
- 13.1.5 EDWFS System Recovery Sheet 2019
- 13.1.6 IM-090_INSTALLATION_INSTRUCTIONS
- 13.1.7 IT Backup Standard v1.2
- 13.1.8. Linux Environment and Oracle Database_SRD
- 13.1.9 MD70 Wind Forecast System
- 13.1.10 EDWFS - Business Impact Analysis_Nov 2022
- 13.1.11 Service Continuity Management Standard
- 13.1.12 Configuration Management - Database Security Baseline
- 13.1.13 Configuration Management - Server Security Baseline
- 13.1.14 EmuDowns_Unitrends_BackupReport.pdf
- 13.1.15 EDWF WFS - IT support model 2020_01
- 13.1.16 APA Consolidated DR Test 2024 Master
- 13.1.17 DR Recovery APA v1.0
- 13.1.18 Copy of AESCSF SP1
- 13.1.19 cmdb_ci_appl
- 13.2.1 EDRF SCADA Backup Vestas
- 13.2.2 EDRF ERA Audit - Vestas response to IT-OT Security questions - 18 September 2024

Observations:

- Data loss and system downtime were identified as key risks, with mitigation strategies in place, such as routine backups and secure offsite storage.

	▪ Significant IT system restructuring was undertaken by both APA and Vestas. ▪ SCADA system automated operations and IT documentation was accessible to staff. ▪ Vestas confirmed they had a change management register and process in place, it was noted not all changes were consistently deemed within scope to follow the formal change management process.			
	Recommendation: None		**Action: Nil**	
7.2	**EFFECTIVENESS CRITERIA: Input controls include suitable verification and validation of data entered into the system**	**Review Priority** **4**	**P&P* Rating:** **A**	**Performance Rating:** **1**
	Finding: APAs system implemented input controls through regular verification and validation processes, including backup log reviews, data recovery validation, and compliance with Operational Level Agreements (OLAs), ensuring the accuracy and integrity of data entered into the system. **Documents/Evidence:** ▪ Refer 7.1 ▪ SCADA **Observations:** ▪ The data restoration process included steps to ensure that the recovered data matched the required inputs and outputs, further validating the integrity of the system's data. ▪ OLAs ensured that data to be backed up and restored was properly defined and validated, with specific requirements for critical business data, including accounting and system configurations. ▪ Reporting based on outputs from SCADA systems which included the Automatic balancing Control (ABC) implemented in 2022 to accommodate AEMO requirements. ▪ Financial reporting was automated. ▪ Sharepoint utilised with different levels of access permissible as per the Delegation Authority. ▪ The PI system served as a core part of the asset management information system (AMIS), and efforts to improve deadband settings was directed at improving the quality and accuracy of data stored in the system.			
	Recommendation: None		**Action: Nil**	
7.3	**EFFECTIVENESS CRITERIA: Security access controls appear adequate, such as passwords**	**Review Priority** **4**	**P&P* Rating:** **A**	**Performance Rating:**

				1
	Finding: Security access controls, including firewalls and password protection, were adequate, with the IT framework designed to comply with the Security of Critical Infrastructure (**SOCI**) requirements. The SOCI reforms have heightened APA's responsibilities to manage security risks as an Australian Critical Infrastructure entity. To comply with the Australian Energy Sector Cyber Security Framework (**AESCSF**), APA has implemented Security Configuration Baselines. These baselines set minimum security measures for configuring assets to safeguard against cyber threats, aligning with APA's Asset Change and Configuration Management objectives. **Documents/Evidence:** ▪ Refer 7.1 **Observations:** ▪ Both the Vestas and APA IT systems required users to access terminals with a valid account and password. These terminals were restricted to authorised personnel only and were located in secure, lockable buildings, ensuring that unauthorised access was prevented. ▪ Backup data was encrypted both at rest and in transit, further enhancing the security of sensitive information. This included measures such as tamper-evident labels and environmental protection controls for storage and storage of an immutable backup, which were key to maintaining data confidentiality. ▪ Extensive IT policies ensured system resilience to cyber-attacks, with password rotation mandated on a monthly basis. ▪ It was confirmed APA utilised a secure DMZ (demilitarised zone) interface, provided by Vestas, for controlled network access through the SCADA WAN Router which ensured proper access control measures were in place, safeguarding network interactions between APA and Vestas.			
	Recommendation: None		**Action: Nil**	
7.4	**EFFECTIVENESS CRITERIA: Physical security access controls appear adequate**	**Review Priority** **4**	**P&P* Rating:** **A**	**Performance Rating:** **1**
	Finding: The physical security of EDRF assets was reinforced through secure access controls, such as gated facilities, restricted entry points, CCTV and mandatory sign-in/out procedures for staff, contractors, and visitors. These measures ensured that only authorised personnel can access high-risk areas. **Documents/Evidence:** ▪ Refer 7.1 ▪ 6.1.1 33120101S3 EDRF Farm Rules			

	Observations: ▪ Site access was controlled by gates, and WTG tower doors were locked. CCTV was installed at the solar farm, and the site was routinely monitored by staff and contractors. ▪ Awareness to the Australian Energy Sector Cyber Security Framework (AESCSF) was also noted. ▪ Regular monitoring and review of security procedures were in place to identify vulnerabilities and ensure that physical security measures remained robust and up to date. This included routine inspections and audits to assess compliance with physical security standards. ▪ The Farm Rules specified that only authorised personnel were allowed on-site, and all personnel must complete an induction process before being granted access.			
	Recommendation: None		**Action: Nil**	
7.5	**EFFECTIVENESS CRITERIA: Data backup procedures appear adequate, and backups are tested**	**Review Priority** **4**	**P&P* Rating:** **A**	**Performance Rating:** **1**
	Finding: Comprehensive data backup procedures were established, including daily automated backups of the SCADA system, stored both on internally and externally. Regular testing of recovery procedures ensured operational continuity in the event of system failure or disaster. **Documents/Evidence:** ▪ Refer 7.1 **Observations:** ▪ The IT Backup Standard outlined procedures for data backups, including daily, weekly, and monthly backups of critical systems. These backups were stored both on-site and off-site to ensure redundancy and were protected through encryption to safeguard data integrity. ▪ The Licensee confirmed, backup and recovery procedures were regularly tested, as outlined in the Disaster Recovery (DR) Plan and Service Continuity Management Standard. Testing included verifying data recovery accuracy and meeting Recovery Point Objectives (RPO) and Recovery Time Objectives (RTO), ensuring that backups were functional and reliable in the event of a failure. ▪ It was understood backup logs were reviewed regularly, and any backup failures were investigated and corrected to maintain the integrity of the backup system. ▪ Vestas's backup solution ran as a dedicated virtual machine (VM) with automated alerts generated if a backup job fails, ensuring prompt action and minimal data loss. Backup and redundancy procedures were designed to ensure that system recovery could be achieved in case of hardware or software failures.			
	Recommendation: None		**Action: Nil**	

7.6	**EFFECTIVENESS CRITERIA: Computations for licensee performance reporting are accurate**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding: Performance reporting was automated and subject to verification to ensure accuracy in computations. The accuracy of computations for licensee performance reporting was ensured through the use of SCADA systems and real-time data logging, supported by Vestas PowerForecast systems. These systems, along with compliance with financial and audit standards, guaranteed accurate and reliable performance reporting. **Documents/Evidence:** ▪ Vestas SCADA Monthly Reports ▪ 7.1.7-7.1.12 APA Performance Monitoring Reports ▪ Vestas PowerForecast **Observations:** ▪ SCADA outputs and O&M monthly reports were verified internally and externally by APA for accuracy in performance assessments.			
	Recommendation: None		**Action: Nil**	
7.7	**EFFECTIVENESS CRITERIA: Management reports appear adequate for the licensee to monitor licence obligations**	**Review Priority 5**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding: Management reports included mechanisms to ensure that they were comprehensive and adequate for the licensee to track and meet license obligations, particularly in the areas of operational continuity and data integrity. Specifically, these reports included: ➢ Backup and Recovery Reports ➢ Disaster Recovery Test Reports ➢ Business Impact Analysis (BIA) Reports: ➢ Service Continuity and Performance Reports ➢ IT System Availability and Support Reports			

	Documents/Evidence: ▪ Refer 7.1 **Observations:** ▪ Reporting was adequate, with APA and Vestas conducting monthly and annual performance reviews to ensure compliance with service standards and obligations.			
	Recommendation: None		**Action: Nil**	
7.8	**EFFECTIVENESS CRITERIA: Adequate measures to protect asset management data from unauthorised access or theft by persons outside the organisation**	**Review Priority** **4**	**P&P* Rating:** **A**	**Performance Rating:** **1**
	Finding: Adequate security measures were in place to prevent unauthorised access to asset management data, complying with the Australian Energy Sector Cyber Security Framework (AESCSF). **Documents/Evidence:** ▪ Refer 7.1 ▪ AEMO Website **Observations:** ▪ Firewalls, secure access protocols, and data encryption were implemented to protect against external threats. ▪ APA complied with AESCSF guidelines and had implemented a master Recovery Schedule for IT Crisis management. ▪ The licensee was aware of Australian Energy Sector Cyber Security Framework (AESCSF) and actively implemented measures to improve cyber security during the review period. ▪ Vestas conducted regular vulnerability scans and penetration tests on different SCADA systems in controlled environments and used the results to mitigate vulnerabilities. ▪ Vestas confirmed they followed industry-standard guidelines, including ISO/IEC 27001, ISO 31000, and ISO/IEC 62443, to manage security risks, conduct regular gap analyses, and address vulnerabilities through a comprehensive risk-based strategy and patch management program.			
	Recommendation: None		**Action: Nil**	

8. RISK MANAGEMENT	OVERALL EFFECTIVENESS RATING	
□ Assess whether the risks that most affect the management and performance of the assets have been identified □ Assess the adequacy of policies and procedures covering risk management □ Assess whether the risk management policies and procedures have been applied in practice □ Assess the adequacy of staff understanding and training on risk management **Key Process** – *Risk management involves the identification of risks and their management within an acceptable level of risk.* **Outcome** – *The risk management framework effectively manages the risk that the licensee does not maintain effective service standards*	**PROCESS & POLICY RATING*** **B**	**PERFORMANCE RATING** **2**

No.	2024 REVIEW REPORT EVIDENCE/ /VERIFICATION/FINDING/ACTION			
8.1	**EFFECTIVENESS CRITERIA: Risk management policies and procedures exist and are applied to minimise internal and external risks**	**Review Priority** **4**	**P&P* Rating:** **B**	**Performance Rating:** **2**

Finding: APA Group has well-established risk management policies, procedures, and systems. In 2022/2023, APA implemented a new Enterprise Risk Management system, Vigilant, which is now used by EDRF to monitor risks, compliance, and assurance across the wind and solar farms. Previously, EDRF used Excel spreadsheets, and these were being integrated into Vigilant.

Documents/Evidence:

- 4.1.1 APA Policy - Risk Management
- 4.1.2 APA Risk Management System Processes 2022
- 4.1.3 EDRF Risk Assessment - 12 July 2024
- 4.1.4 EDRF Risk Assessments - 2023
- 4.1.5 EDRF Risk Register 2024
- 4.1.7 320-GD-R-0003 Operations Risk Management process - Draft
- 4.1.8 APA - Business Continuity Plan - Operations - v1.0 - FINAL
- 4.1.9 APA Group Procedure - Compliance Management System Handbook
- 4.1.10 APA Group Standard - Assurance
- 4.1.13 EDRF Risk Archived from Vigilant
- 4.1.14 EDRF Risk Register - Vigilant Extract 240806
- 4.1.15 Vigilant Actions for Upload - EDRF
- 4.1.16 Emu Downs Life Extension EBoP
- 4.1.17 EDSF Grass Fire 29 Jan2024 Risk Assessment Mitigations V1
- 4.1.18 EDSF Grass Fire 29 Jan2024 Maximo Incident Report
- 4.2.1 EDWF EDSF BSF Extended Sustainability Risk Register 20220111
- 4.2.2 Vestas Investigation Report - Grass Fire EDSF
- 4.2.4 0091-1612 - EDWF EDSF BSF ANZ Service HSE Risk Register_V00
- 4.2.5 EDWF_ WTG Generator Failures - Causes and Mitigations

	▪ 4.1.11 APA Group Standard - Risk and Compliance ▪ 4.1.12 Controls Assurance Framework Nov 2020 ▪ 4.2.6 20240101-Emu Downs Main Components Field Failure Reports (Jun-Dec 2023) ▪ Vigilant System **Observations:** ▪ Risk management was used across the EDRF facility by APA and Vestas. Policies and procedures were regularly reviewed as defined in the EDRF Controlled Document Risk Register. ▪ Internal audits, including annual HSE audits conducted by APA of Vestas, were scheduled and executed, demonstrating effective use of the risk management system. ▪ Risk management policies were established and documented in a risk register. Mitigation strategies were identified and monitored, ensuring both internal and external risks were managed.			
	Recommendation: None		**Action:** Nil	
8.2	**EFFECTIVENESS CRITERIA: Risks are documented in a risk register and treatment plans are implemented and monitored**	**Review Priority 4**	**P&P* Rating: B**	**Performance Rating: 2**
	Finding: Risks are documented in Vigilant, which included operational and maintenance risks identified by Vestas and APA. Strategic and business risks associated with EDRF and the entire APA Group were also identified, monitored, and escalated where necessary. **Documents/Evidence: Refer 8.1** **Observations:** ▪ Risks related to WTGs, solar panels, and balance of plant are assessed and monitored at monthly contractor and asset performance meetings. Incident reports, such as the Grass Fire at EDSF, were recorded, corrective actions were tracked in Vigilant, and incidents were escalated as per delegation authority. ▪ Without thorough planning for EDWF assets, end-of-life failures could lead to significant operational and financial impacts. Integrating aging asset management into end-of-life strategies would help mitigate these risks and ensure smooth transitions as infrastructure reaches the end of its useful life. ▪ Solar farm risks were not well captured in the risk registers. ▪ While most critical risks were documented, the civil balance of plant and long-term maintenance planning for aging assets may need further attention.			
	Recommendation: None		**Action: Nil**	

8.3	**EFFECTIVENESS CRITERIA: Probability and consequences of asset failure are regularly assessed**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding: The probability and consequences of asset failure were regularly assessed and also continuously addressed through proactive maintenance, data-driven insights, and ongoing technical support. APA and Vestas conducted annual internal audits and reviewed the risk register concerning EDRF facilities. The specific failure rates for various components were analysed to assess the reliability and potential operational impact on maintenance schedules and turbine availability. **Documents/Evidence: Refer 8.1** ▪ 2.2.9 Vestas Eng Pyramid ▪ 3.2.7 V82 1.65MW Emu Park Major Component Failure Rate **Observations:** ▪ Critical spares and balance of plant components were well sourced and accounted for in the risk management system. Supply chain disruptions caused by COVID-19 have been mitigated. ▪ Vestas' risk framework included addressing forced outages and root cause analysis of failures (e.g., gearbox and generator failures) ▪ Availability and production data were key indicators of how well the assets are performing and whether there are risks to asset failure. ▪ Vestas' risk register focused primarily on Health, Safety, and Environment (HSE) risks across the EDRF site. Annual risk assessments were reviewed and incorporated into monthly and annual reports, and related projects were monitored through monthly Asset Performance meetings. ▪ The multi-tiered Vestas Engineering Support Framework illustrated a structured approach to root cause analysis and continuous improvement management (CIM), particularly for Tier 4 and Tier 3 activities. This framework underpinned the strategies for assessing and improving asset performance, lowering the risk of future failures.			
	Recommendation: None		**Action: Nil**	

9. CONTINGENCY PLANNING			OVERALL EFFECTIVENESS RATING	
□ Determine whether contingency plans have been developed and are current □ Determine whether contingency plans have been tested. If so, review the results to confirm any improvements identified have been implemented. **Key Process** – *Contingency plans document the steps to deal with the unexpected failure of an asset.* **Outcome** – *Contingency plans have been developed and tested to minimise any major disruptions to service standards.*			**PROCESS & POLICY RATING***	**PERFORMANCE RATING**
			B	**3**
No.	**2024 REVIEW REPORT EVIDENCE/ /VERIFICATION/FINDING/ACTION**			
9.1	**EFFECTIVENESS CRITERIA: Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks**	**Review Priority 4**	**P&P* Rating: B**	**Performance Rating: 3**

Finding: Contingency and Emergency Response Plans were established for the Emu Downs Renewable Facility (EDRF) site. APA Group also had comprehensive Business Continuity and Disaster Recovery Plans to address strategic and operational needs. However, there was limited evidence of testing and personnel training for the specific contingency plans.

Documents/Evidence:

- APA - Business Continuity Plan - Operations - v1.0 - FINAL
- 6.1.9 QRG_Process - Emergency MOC
- 9.1.1 320-PR-ER-0094.pdf
- 9.2.1 0085-4679 - Emergency Response Plan EDWF EDSF BSF
- 9.2.2 ERP Exercise 16.6.2023
- 13.1.11 Service Continuity Management Standard
- 13.1.17 DR Recovery APA v1.0

Observations:

- Critical spares for operational continuity were identified, accessible, and monitored effectively. These plans ensured readiness in the event of equipment failure or adverse conditions such as extreme weather.
- Curtailment by Western Power Corporation (WPC) due to external factors was beyond APA's control but was monitored and reported on a monthly and annual basis by both APA and Vestas.

	▪ High-risk scenarios were well identified and included in monthly and annual performance reviews, but there was no evidence of recent testing or drills for contingency plans. ▪ It was understood there was some contingency plan testing in relation the IT risks associated with the facility.	
	06/2024 Recommendation: To strengthen the effectiveness of contingency planning, APA should undertake the following actions: 1. **Enhance Documentation of Contingency Plans**: o Review and update all existing contingency plans to ensure they are comprehensive, covering various high-risk scenarios, including equipment failures, extreme weather events, and cybersecurity threats. o Standardise the format for contingency plans, including clear roles, responsibilities, and step-by-step response procedures. Complete this update by Q4 2025. 2. **Implement a Regular Testing and Training Schedule**: o Schedule semi-annual testing and drills for each contingency plan to ensure they remain effective and actionable. The first drill should take place by Q4 2025. o After each drill, conduct a debrief session to identify any gaps or improvements needed in the plans and document the outcomes in an action log. o Develop a training schedule for all relevant personnel, ensuring they receive refresher training at least once a year or more frequently for high-risk roles. 3. **Establish a Compliance and Monitoring Program**: o Assign a contingency planning coordinator responsible for ensuring all plans are tested on schedule and that any identified improvements are implemented promptly. o Monitor and report on the progress of training and testing activities, using key performance indicators (KPIs) such as the percentage of staff trained, number of drills conducted, and time taken to complete corrective actions. o Submit quarterly updates to senior management on the status of contingency planning activities, including the results of tests and training outcomes. 4. **Integrate Contingency Plans with the AMS and Business Continuity Plan**: o Ensure contingency plans are linked to the Asset Management System (AMS) and Business Continuity Plan (BCP) to provide a cohesive response strategy. o Update the AMS and BCP whenever significant changes are made to contingency plans, ensuring consistency across documents.	**Action: Refer 2024 PRIP**

10. FINANCIAL PLANNING			OVERALL EFFECTIVENESS RATING	
			PROCESS & POLICY RATING*	PERFORMANCE RATING
Obtain a copy of the financial planning, budgeting and reporting process and assess its effectiveness Obtain a copy of the current financial plan (including budget/actual) and assess whether the process is followed **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.*			**A**	**1**
No.	**2024 REVIEW REPORT EVIDENCE/ /VERIFICATION/FINDING/ACTION**			
10.1	**EFFECTIVENESS CRITERIA: The financial plan states the financial objectives and identifies strategies and actions to achieve those**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**

Finding: APA had well-established financial planning, budgeting, and reporting processes for the EDRF. Both CAPEX and OPEX budgets were reviewed annually, and objectives were either marked as completed or in progress. Financial planning was aligned with the lifecycle of the wind and solar farms and the balance of plant to ensure long-term financial viability.

Documents/Evidence:

- 2.1.1 EDWF 33100101R5 - AMS Rev 5
- 2.1.2 – 2.1.7 EDRF Year Plans
- 2.2.1 APA.WA.CA.699 EDRF Contract
- 14.1 Financial Reports
- 14.2 Finance Process - Reporting
- 14.3 EDRF Budgets
- 14.6 Vestas Financial Communication

Observations:

- Financial plans were prepared annually, setting budgets in line with projected cash flows and lifecycle costs. The WARAMP clearly outlined the Asset Management Framework and strategic objectives, inclusive of EDRF-specific goals.
- Budgets and objectives were aligned with the performance metrics of the wind and solar farms.

	Recommendation: None		**Action: Nil**	
10.2	**EFFECTIVENESS CRITERIA: The financial plan identifies the source of funds for capital expenditure and recurrent costs**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding: The EDRF base financial model identified revenue, OPEX, and EBITDA for the entire lifecycle of the wind and solar farms. Annual CAPEX requirements were jointly identified by APA and Vestas. **Documents/Evidence: Refer 10.1** **Observations:** ▪ Funding sources were documented in financial plans and approved through the AFE process. Additional funding required approvals from relevant delegation authorities within APA Group. ▪ Financial plans ensured that funding sources for capital and operational costs were clearly defined and managed effectively			
	Recommendation: None		**Action: Nil**	
10.3	**EFFECTIVENESS CRITERIA: The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets)**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding: Profit and Loss (P&L) statements and Balance Sheets were provided annually and aligned with financial forecasts for the lifecycle of the assets. Detailed financial modelling, including revenue, OPEX, and EBITDA, was conducted. **Documents/Evidence: Refer 10.1** **Observations:** ▪ Financial projections for the lifecycle of the wind and solar farms were modelled. Financial reports were audited annually by an independent third party, with unqualified audit opinions provided.			
	Recommendation: None		**Action: Nil**	

10.4	**EFFECTIVENESS CRITERIA: The financial plan provides firm predictions on income for the next five years and reasonable predictions beyond this period**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding: Financial plans provided firm income predictions for the next five years and reasonable predictions beyond that. Financial modelling covered the wind farm up to 2030 and the solar farm up to 2043. **Documents/Evidence: Refer 10.1** **Observations:** ▪ The PPA with Synergy was in place with options for extension. The financial plan accounted for income generation aligned with asset lifecycles.			
	Recommendation: None		**Action: Nil**	
10.5	**EFFECTIVENESS CRITERIA: The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding: Comprehensive financial modelling was carried out for the lifecycle of both farms, including operational, maintenance, administration, and CAPEX requirements. **Documents/Evidence: Refer 10.1** **Observations:** ▪ O&M contracts clearly outlined the cost responsibilities of both Vestas and APA. APA was responsible for meeting CAPEX requirements, which were reviewed and approved through the AFE process. ▪ Financial monitoring was ongoing, ensuring adequate resources for CAPEX and O&M costs.			
	Recommendation: None		**Action: Nil**	
10.6	**EFFECTIVENESS CRITERIA: Large variances in actual/budget income and expenses are identified and corrective action taken where necessary**	**Review Priority**	**P&P* Rating: A**	**Performance Rating: 1**

		4		
	Finding: Variances in income and expenses were identified, and comparisons were made with previous budgets and forecasts on a monthly basis. **Documents/Evidence: Refer 10.1** **Observations:** ▪ Monthly and annual financial reviews were conducted between APA and Vestas, with corrective actions implemented where necessary. OPEX and CAPEX costs were monitored in monthly contractor meetings, and APA's Asset Performance meetings included more detailed financial analysis. ▪ Liquidity damages and other financial performance metrics were monitored closely			
	Recommendation: None		**Action: Nil**	

11. CAPITAL EXPENDITURE PLANNING	**OVERALL EFFECTIVENESS RATING**	
□ Understand the capital expenditure planning process and assess its effectiveness □ Obtain a copy of the capital expenditure plan for the current year and assess whether the process is being followed **Key Process** – *The capital expenditure plan provides a schedule of new works, rehabilitation and replacement works, together with estimated annual expenditure for these works over the next five or more years. Since capital investments tend to be large and lumpy, projections would normally be expected to cover at least 10 years, preferably longer. Projections over the next five years would usually be based on firm estimates.* **Outcome** – *The capital expenditure plan provides reliable forward estimates of capital expenditure and asset disposal income. Reasons for the decisions and for the evaluation of alternatives and options are documented.*	**PROCESS & POLICY RATING***	**PERFORMANCE RATING**
	A	**1**

No.	2024 REVIEW REPORT EVIDENCE/ /VERIFICATION/FINDING/ACTION			
11.1	**EFFECTIVENESS CRITERIA: There is a capital expenditure plan covering works to be undertaken, actions proposed, responsibilities and dates**	**Review Priority** **5**	**P&P* Rating:** **A**	**Performance Rating:** **1**

Finding: APA conducted financial modelling for the lifecycle of both the wind and solar farms. The potential extension of the wind farm's life was currently under evaluation, with CAPEX planning forming a critical part of the ongoing budgeting process.

Documents/Evidence:

- 2.1.1 EDWF 33100101R5 - AMS Rev 5
- 2.1.2 – 2.1.7 EDRF Year Plans
- 2.2.1 APA.WA.CA.699 EDRF Contract
- 3.2.6 Vestas Quote_LiDAR_EDWF-221102
- 14.1 Financial Reports
- 14.2 Finance Process - Reporting
- 14.3 EDRF Budgets
- 14.4 Base Case EDRF Asset Model
- 14.6 Vestas Financial Communication
- 14.7 AFE Documentation

Observations:

- APA projected CAPEX annually as part of its financial budgeting process. Vestas submitted annual CAPEX requests to APA, which were then reviewed, accepted, or rejected.
- Provisions were made for sustaining CAPEX and potential equipment upgrades, particularly for the balance of plants.
- No major CAPEX was identified during the audit period.

	Recommendation: None		**Action: Nil**	
11.2	**EFFECTIVENESS CRITERIA: The capital expenditure plan provides reasons for capital expenditure and timing of expenditure**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Findings – The financial plan focuses on revenue, OPEX, and EBITDA. A moderate allowance for annual CAPEX expenditure for the wind and solar farms was included, though larger CAPEX decisions are currently pending the outcome of the wind farm life extension study. **Documents/Evidence: Refer 11.1** **Observations:** ▪ The O&M contractor (Vestas) may propose capital expenditure on an annual basis to maintain the performance of the EDRF. All CAPEX decisions are reviewed and approved by APA through an Authority for Expenditure (AFE) process, with final approval given by the appropriate executive authority.			
	Recommendation: None		**Action: Nil**	
11.3	**EFFECTIVENESS CRITERIA: The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding: OPEX and CAPEX budgeting aligned with the lifecycle asset plans for the wind and solar farms. CAPEX budgeting was reviewed annually, taking into account the asset's life and condition. **Documents/Evidence: Refer 11.1** **Observations:** ▪ As the wind farm approaches the end of its life, CAPEX spending was minimised pending the outcome of the wind farm extension assessment. ▪ In relation to the solar farm, moderate CAPEX provisions were made based on its projected lifecycle costs			

	Recommendation: None		**Action: Nil**	
11.4	**EFFECTIVENESS CRITERIA: There is an adequate process to ensure the capital expenditure plan is regularly updated and implemented**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding: The capital expenditure planning process was part of the broader APA Group budgeting process. The CAPEX plan was regularly updated and monitored through monthly and annual reports, with budget outcomes approved by relevant delegated authorities. **Documents/Evidence: Refer 11.1** **Observations:** ▪ APA's CAPEX process ensures that plans were aligned with ongoing operational needs. ▪ No significant CAPEX was anticipated for the wind farm, pending the wind farm extension assessment, moderate CAPEX provisions were made for the solar farm and balance of plants.			
	Recommendation: None		**Action: Nil**	

12. REVIEW OF AMS	**OVERALL EFFECTIVENESS RATING**	
□ Determine when the asset management plan was last updated and assess whether any substantial changes have occurred □ Determine whether any independent reviews have been performed. If so, review the results and action taken □ Consider the need to update the asset management plan based on the results of this review □ Determine when the asset management system was last reviewed. **Key Process** – *The asset management system is regularly reviewed and updated.* **Outcome** – *The asset management system is regularly reviewed and updated.*	**PROCESS & POLICY RATING***	**PERFORMANCE RATING**
	B	**3**

No.	**2024 REVIEW REPORT EVIDENCE/ /VERIFICATION/FINDING/ACTION**			
12.1	**EFFECTIVENESS CRITERIA: A review process is in place to ensure the asset management plan and the asset management system described in it remain current**	**Review Priority** **5**	**P&P* Rating:** **B**	**Performance Rating:** **3**
	Finding: APA has a documented Asset Management System Manual (AMSM) and WA Renewables Asset Management Plan (WARAMP) that complied with ERA Guidelines. The AMSM and WARAMP included a review process, supported by a Controlled Document Register which listed the review dates for all relevant documentation. However, while the AMSM was reviewed in 2020 and was scheduled for a five-year review cycle and the WARAMP was scheduled for 2 year review in February 2024 which did not occur, it was observed that significant changes, such as the transition of risk management processes from Excel spreadsheets to the Vigilant system, were not reflected in the AMSM or associated documents. Failure to regularly update the AMSM and WARAMP could result in significant operational or regulatory changes going unaddressed, potentially leading to unmitigated risks, compliance issues, or asset underperformance. For instance, there were conflicting design life references for the Emu Downs Wind Farm (EDWF) between the AMS Manual and the 2024-2025 Emu Downs Renewable Facility (EDRF) Year Plan. **Documents/Evidence:** ▪ 2.1.1 EDWF 33100101R5 - AMS Rev 5 ▪ 2.1.8 WA Renewables Asset Management Plan ▪ 2.2.1 APA.WA.CA.699 EDRF Contract ▪ 4.1.1 APA Policy - Risk Management			

	▪ 4.1.9 APA Group Procedure - Compliance Management System Handbook ▪ 10.2.1 0089-8380 Australia Service WHSEMP V02 **Observations:** ▪ The last formal review of the AMSM was conducted in 2020, with the next review scheduled for 2025. ▪ Changes to key processes, such as the adoption of the Vigilant system for risk management, have not been documented in the AMSM, leading to a gap in the currency of the system. ▪ The Controlled Document Register indicated the review cycles but did not capture the latest operational changes. ▪ Five yearly review cycle was lengthy, which could allow new risks or unforeseen issues to arise without adequate provisions in place to mitigate them. ▪ It was noted that Vestas did not develop a Contractor AMP during the current review period the last review of the document was 2018 (refer 2019 Performance Audit and Asset Management Review report) and it was not provided for review during the 2024 asset management review.	
	07/2024 Recommendation: To ensure that key operational changes are not overlooked and the Asset Management System Manual (AMSM) remains up-to-date, APA should implement the following changes: 1. **Adopt a More Frequent Review Cycle:** o Reduce the review cycle for the AMSM and key supporting documents from five years to a shorter interval, such as every two to three years, to ensure that operational changes and new risks are incorporated promptly. 2. **Update the AMSM and WARAMP to Reflect Current Practices**: o Revise the AMSM and WA Renewables Asset Management Plan (WARAMP) to incorporate current asset management practices, such as the adoption of the Vigilant system for risk management, and the updated design life of the Emu Downs Wind Farm (EDWF). o Establish a timeline for incorporating these updates, with the revisions completed by Q1 2025, ensuring the documents reflect all significant operational adjustments. o Develop a change management procedure for documenting new updates and revisions to ensure all stakeholders are informed of changes and the impact on operations. 3. **Incorporate a Review of Vestas' Asset Management Practices**: o Include a formal review of Vestas' asset management practices in the updated AMSM and WARAMP. This should address any gaps resulting from the absence of a Contractor Asset Management Plan (AMP) and align with ISO 55001 standards. Utilise the provisions of the Services Audit clause in the O&M Contract.	**Is Action: Refer 2024 PRIP**

	○ Set up a process for Vestas to provide regular updates on their asset management activities, including maintenance schedules, performance reports, and compliance with AMS requirements, with the first review to be completed by Q4 2024. ○ Establish requirements for Vestas to develop a simplified Contractor AMP, if deemed necessary, and align it with the overall AMSM. 4. **Strengthen Monitoring and Accountability**: ○ Establish clear accountability using a RACI framework for overseeing updates to the AMSM and WARAMP. Assign a dedicated team or individual as Responsible for managing updates, with senior management Accountable for review and approval. Ensure key stakeholders are Consulted and Informed as appropriate. ○ Implement key performance indicators (KPIs) to measure the timeliness, quality, and completeness of updates to the AMSM and WARAMP. Include metrics for incorporating significant operational changes, such as those involving the Vigilant system. ○ Report progress to senior management quarterly, focusing on: ➢ Updates made to the AMSM and WARAMP. ➢ Significant operational changes and their integration. ➢ Status of Vestas' asset management reviews. ○ Ensure relevant personnel are Informed of updates and changes through clear communication channels. Facilitate awareness of their roles in implementing and adhering to revised asset management practices. ○ ○ e.			
12.2	**EFFECTIVENESS CRITERIA: Independent reviews (e.g., internal audit) are performed of the asset management system**	**Review Priority 5**	**P&P* Rating: B**	**Performance Rating: 3**
	Finding: APA conducted internal audits of the O&M Contractor's Health, Safety, and Environmental (HSE) policies and procedures in line with the O&M contract requirements. However, independent internal audits specifically focused on the Emu Downs Renewable Facility (EDRF). Asset Management System (AMS) audits were not carried out during the audit period. APA's internal audits were primarily related to its HSE performance rather than EDRF overall business systems and asset management performance. **Documents/Evidence:** ▪ 2.1.1 EDWF 33100101R5 - AMS Rev 5			

	▪ 2.2.1 APA.WA.CA.699 EDRF Contract ▪ 4.1.9 APA Group Procedure - Compliance Management System Handbook ▪ 10.2.1 0089-8380 Australia Service WHSEMP V02 **Observations:** ▪ Internal audits were primarily focused on group-wide business systems and general HSE compliance, rather than EDRF-specific asset management practices. ▪ Independent reviews of the AMS were limited, and regular internal audits of the O&M contract were not conducted even though the OM Contract provided for a services audit to be undertaken. ▪ Both APA and Vestas carried out internal reviews of wind, solar, and balance of plant assets, identifying opportunities for improvement. However, these reviews were not formalised as part of a structured internal audit process. ▪ It was noted that internal reviews of the O&M contract were not triggered when performance did not meet contracted Key Performance Indicators (KPIs) during the review period.	
	08/2024 Recommendation: To improve the accuracy, compliance, and operational effectiveness of the Asset Management System (AMS) at the Emu Downs Renewable Facility (EDRF), APA should implement the following actions: 1. **Formalise Regular Independent or Third-Party Reviews of the AMS**: o Establish a schedule for independent or third-party reviews of the AMS at least every two years, regardless of Key Performance Indicators (KPIs), to ensure continuous improvement and compliance with regulatory requirements. o Conduct the first review by Q1 2025 and include a comprehensive assessment of asset management practices, documentation, and regulatory compliance specific to the EDRF. o Incorporate a process for tracking corrective actions identified during the reviews, with quarterly updates to senior management on the progress of implementing these actions. 2. **Improve verification of contractor controls**: o Integrate a Formal Schedule for Service Audits as permitted in the O&M Contract. o Begin conducting service audits by Q4 2024, with the results reviewed by both APA and Vestas to develop joint corrective action plans aimed at improving operational performance. o Establish a process for documenting audit outcomes and tracking the resolution of any identified issues, with regular reports submitted to APA's senior management. o 3. **Establish a Process for Regular Internal and Third-Party Audits of the AMS and O&M Contract Performance**:	**Action: Refer 2024 PRIP**

	○ Implement a formal schedule for regular internal and third-party audits of the AMS and O&M contract performance, with the first internal audit scheduled by Q4 2024 and subsequent third-party audits every two years. ○ Set up an audit committee to review findings and oversee the implementation of corrective actions, ensuring that audit results lead to measurable improvements in the AMS. ○ Develop Key Performance Indicators (KPIs) to track compliance with the audit schedule, the timeliness of corrective actions, and the impact on asset management effectiveness. 4. **Establish Accountability and Responsibility for Compliance and Audit Procedures**: ○ Develop RACI framework for the new audit schedule, requirements, and procedures, including the importance of addressing discrepancies and the role of service audits in maintaining operational effectiveness.	

APPENDIX 3 – AUDIT & REVIEW DOCUMENT LISTING

Documents Reviewed

TABLE 20 Documents Reviewed and Assessment of Effectiveness

Number	**Emu Downs Joint Venture** Electricity Generation Licence – EGL1	ASSET PLANNING	ASSET CREATION & AQUISITION	ASSET DISPOSAL	ENVIRONENTAL ANALYSIS	ASSET OPERATIONS	ASSET MAINTENANCE	A M INFORMATION SYSTEM	RISK MANAGEMENT	CONTINGENCY PLLANNING	FINANCIAL PLANNING	CAPITAL EXPENDITURE PLANNING	REVIEW OF AMS	PERFORMANCE AUDIT
1.1	Company Structure													
	• 1.1.1 EDRF Company Structure 2024	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 1.1.2 APA-Group-Organisational-Chart_31-May-2024--US-entities-dissolution-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2.1	Licensee AMS													
	• 2.1.1 EDWF 33100101R5 - AMS Rev 5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 2.1.2 33190101R EDWF Year Plan 2019-2020 Rev 1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 2.1.3 33190102R1 EDRF Year Plan 2020-2021	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 2.1.4 33110101R1 EDRF Year Plan 2021-2022	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 2.1.5 33120101R2 EDRF Year Plan 2022-2023	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 2.1.6 33120102R1 EDRF Year Plan 2023-2024	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 2.1.7 33140101R0 - EDRF Year Plan 2024-25	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 2.1.8 WA Renewables Asset Management Plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 2.1.9 EDRF Protection Settings Rev 11					✓	✓							
	• 2.1.10 EDWF-E-5212 Switchroom Layout Rev 03					✓	✓							
	• 2.1.11 EDWF-E-5213-1 Main Distribution Board Rev 03					✓	✓							
	• 2.1.12 EDWF-E-5213-4 SVC Distribution Board Rev 04					✓	✓							
	• 2.1.13 EDRF & BSF - Contractor Performance - Email to Vestas	✓				✓	✓				✓	✓	✓	✓
	• 2.1.14 Extract from Appendix 3 Data File for EDWF year plan	✓				✓	✓							
2.2	Contractor AMS													
	• 2.2.1 APA.WA.CA.699 EDRF Contract	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 2.2.2 EDWF Vestas Report - October 2018 December 2019 Rev 1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 2.2.3 EDWF Vestas Report -2020 v2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 2.2.4 2021 O&M - NOT PROVIDED													
	• 2.2.5 2022-Emu Downs RF - Annual Report (Rev 1)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 2.2.6 2023-Emu Downs RF - Annual Report	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 2.2.7 2024-Emu Downs RF - Annual Plan v.1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 2.2.8 EDWF BAM - Asset Condition Assessments Blades	✓				✓	✓							✓
	• 2.2.9 Vestas Eng Pyramid	✓				✓	✓							✓
	• 2.2.10 EDWF Contractor Availability 2023	✓				✓	✓							✓
	• 2.2.11 Screenshot Asset Performance Monitoring Portal - Asset Performance Reports	✓				✓	✓							✓
	• 2.2.12 APA Review of Vestas Annual Plan Email	✓				✓	✓							✓

Number	**Emu Downs Joint Venture** Electricity Generation Licence – EGL1	ASSET PLANNING	ASSET CREATION & AQUISITION	ASSET DISPOSAL	ENVIRONENTAL ANALYSIS	ASSET OPERATIONS	ASSET MAINTENANCE	A M INFORMATION SYSTEM	RISK MANAGEMENT	CONTINGENCY PLLANNING	FINANCIAL PLANNING	CAPITAL EXPENDITURE PLANNING	REVIEW OF AMS	PERFORMANCE AUDIT
3.0	Maintenance													
	• 3.2.1 EDRF Scheduled Maintenance	✓					✓				✓	✓	✓	✓
	• 3.2.2 EDSF Spares Apr 24	✓					✓				✓	✓	✓	✓
	• 3.2.3 EDWF Substation Scheduled Maintenance Rev 4 19-08-20	✓					✓				✓	✓	✓	✓
	• 3.2.4 Emu Downs Sub Station Spares Apr 24	✓					✓				✓	✓	✓	✓
	• 3.2.5 Emu Downs Solar Park fortnightly Inspections 1-Feb-2024	✓					✓				✓	✓	✓	✓
	• 3.2.6 Vestas Quote_LiDAR_EDWF-221102	✓					✓				✓	✓	✓	✓
	• 3.2.7 V82 1.65MW Emu Park Major Component Failure Rate	✓					✓				✓	✓	✓	✓
	• 3.2.8 SVC Buss Fuse Installation 2021 - Example of Operation Issue and Solution	✓					✓				✓	✓	✓	✓
	• 3.2.9 Statutory Checks - Service ANZ Activity Planner Rev.0	✓					✓				✓	✓	✓	✓
	• 3.2.10 Emu Downs Solar Farm RTU Upgrade V004	✓					✓				✓	✓	✓	✓
	• 3.2.11 EDWF SVC Arc Flash Study	✓					✓				✓	✓	✓	✓
	• 3.2.12 Emu Downs Annual Shutdown Report 2023	✓					✓				✓	✓	✓	✓
	• 3.2.13 Emu Downs Solar Park fortnightly Inspections 15-Mar-2024-Alan-Almond EDSF	✓					✓				✓	✓	✓	✓
	• 3.2.14 Emu Downs Solar Park fortnightly Inspections 28-Jun-2024-Alan-Almond (002) EDSF	✓					✓				✓	✓	✓	✓
	• 3.2.15 EDWF V82 Service_plan_and_checklist	✓					✓				✓	✓	✓	✓
	• 3.2.16 EDRF_BRF Pi Target Deadbands - Email improvement perf monitoring capability	✓					✓				✓	✓	✓	✓
	• 3.2.17 EDRF_ V82 Service Manual Extract	✓					✓				✓	✓	✓	✓
	• 3.2.18 EDRF - WP Interface Test Procedure SCGOO 20221010	✓					✓				✓	✓	✓	✓
	• 3.2.19 EDRF - AEMO ADDITIONAL SCADA IO Test Plan 14 Sept 22	✓					✓				✓	✓	✓	✓
	• 3.2.20 EDPV_ScopeRisk_22.11.2022 Pi Dashboard	✓					✓				✓	✓	✓	✓
4.0	Risk Management													
	• 4.1.1 APA Policy - Risk Management	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 4.1.2 APA Risk Management System Processes 2022	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 4.1.3 EDRF Risk Assessment - 12 July 2024	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 4.1.4 EDRF Risk Assessments - 2023	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 4.1.5 EDRF Risk Register 2024	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 4.1.6 SVC Arc Flash RA 18 Oct 2021 Final	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 4.1.7 320-GD-R-0003 Operations Risk Management process - Draft	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 4.1.8 APA - Business Continuity Plan - Operations - v1.0 - FINAL	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 4.1.9 APA Group Procedure - Compliance Management System Handbook	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Number	**Emu Downs Joint Venture** Electricity Generation Licence – EGL1	ASSET PLANNING	ASSET CREATION & AQUISITION	ASSET DISPOSAL	ENVIRONENTAL ANALYSIS	ASSET OPERATIONS	ASSET MAINTENANCE	A M INFORMATION SYSTEM	RISK MANAGEMENT	CONTINGENCY PLLANNING	FINANCIAL PLANNING	CAPITAL EXPENDITURE PLANNING	REVIEW OF AMS	PERFORMANCE AUDIT
	• 4.1.10 APA Group Standard - Assurance	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 4.1.11 APA Group Standard - Risk and Compliance	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 4.1.12 Controls Assurance Framework Nov 2020	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 4.1.13 EDRF Risk Archived from Vigilant	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 4.1.14 EDRF Risk Register - Vigilant Extract 240806	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 4.1.15 Vigilant Actions for Upload - EDRF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 4.1.16 Emu Downs Life Extension EBoP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 4.1.17 EDSF Grass Fire 29 Jan2024 Risk Assessment Mitigations V1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 4.1.18 EDSF Grass Fire 29 Jan2024 Maximo Incident Report	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 4.2.1 EDWF EDSF BSF Extended Sustainability Risk Register 20220111	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 4.2.2 Vestas Investigation Report - Grass Fire EDSF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 4.2.4 0091-1612 - EDWF EDSF BSF ANZ Service HSE Risk Register_V00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 4.2.5 EDWF_ WTG Generator Failures - Causes and Mitigations	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 4.2.6 20240101-Emu Downs Main Components Field Failure Reports (Jun-Dec 2023)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5.0	Policies													
	• 5.1.1 APA Policy - Health Safety Environment and Heritage	✓									✓	✓	✓	✓
	• 5.1.2. APA Policy - Environment and Heritage	✓									✓	✓	✓	✓
	• 5.1.3 APA Policy - Compliance Management Policy	✓									✓	✓	✓	✓
	• 5.1.4 APA Policy - Procurement	✓									✓	✓	✓	✓
	• 5.1.5 APA Group Executive Delegation Policy (DLA)	✓									✓	✓	✓	✓
	• 5.1.6 APA Policy - Accounting	✓									✓	✓	✓	✓
6.0	Manuals-Procedures-Records													
	• 6.1.1 33120101S3 EDRF Farm Rules	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 6.1.2 APA 500-PR-0004 Project Delivery Procedure	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 6.1.3 EDRF Document Register 2024	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 6.1.4 24077-FD-A-0002 MoC Process Design	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 6.1.5 24077-FD-A-0003 - Risk Management in MOC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 6.1.6 APA Group Standard - Procurement	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 6.1.7 Fixed Asset Disposal Form	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 6.1.8 QRG_MOC Basics	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 6.1.9 QRG_Process - Emergency MOC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 6.2.1 Vestas Contractor Licence 2024	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Number	**Emu Downs Joint Venture** Electricity Generation Licence – EGL1	ASSET PLANNING	ASSET CREATION & AQUISITION	ASSET DISPOSAL	ENVIRONENTAL ANALYSIS	ASSET OPERATIONS	ASSET MAINTENANCE	A M INFORMATION SYSTEM	RISK MANAGEMENT	CONTINGENCY PLLANNING	FINANCIAL PLANNING	CAPITAL EXPENDITURE PLANNING	REVIEW OF AMS	PERFORMANCE AUDIT
	• 6.2.2 Vestas Training Records Export 26 Aug 2024	✓				✓	✓		✓	✓			✓	✓
7.0	Meeting Minutes - Management Reports													
	• 7.1.1 EDRF OM Report - July 2019 to June 2020	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 7.1.2 EDRF OM Report - July 2020 to June 2021	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 7.1.3 EDRF OM Report - July 2021 to June 2022	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 7.1.4 EDRF OM Report - July 2022 to June 2023	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 7.1.5 EDRF OM Report - June 2024	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 7.1.6 EDRF OM Report - July 2023 to June 2024	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 7.1.7 Asset Performance Reports January-December 2020	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 7.1.8 Asset Performance Reports July-December 2019	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 7.1.9 Asset Performance Reports January-December 2021	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 7.1.10 Asset Performance Reports January-December 2022	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 7.1.11 Asset Performance Reports January-December 2023	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 7.1.12 Asset Performance Reports January-June 2024	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 7.2.1 Vestas Monthly Meeting July-December 2019	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 7.2.2 Vestas Monthly Report January-December 2020	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 7.2.3 Vestas Monthly Report January-December 2021	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 7.2.4 Vestas Monthly Report January-December 2022	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 7.2.5 Vestas Monthly Report January-December 2023	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 7.2.6 Vestas Monthly Report January-June 2024	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 7.2.7 Vestas Monthly Meeting January-December 2020	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 7.2.8 Vestas Monthly Meeting January-December 2021	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 7.2.9 Vestas Monthly Meeting January-December 2022	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 7.2.10 Vestas Monthly Meeting January-December 2023	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 7.2.10 Vestas Monthly Report January-December 2023	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	• 7.2.11 Vestas Monthly Report January-June 2024	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8.0	Compliance													
	• 8.1.1 Annual Compliance Reports 2019-2023													✓
	• 8.1.1.1 Annual Compliance Report 2019													✓
	• 8.1.1.2 EDRF Compliance report - FY2020													✓
	• 8.1.1.3 EDRF Compliance report - FY2021													✓
	• 8.1.1.4 EDRF Compliance Report - FY2022													✓
	• 8.1.1.5 EDRF Compliance Report - FY2023													✓

Number	**Emu Downs Joint Venture** Electricity Generation Licence – EGL1	ASSET PLANNING	ASSET CREATION & AQUISITION	ASSET DISPOSAL	ENVIRONENTAL ANALYSIS	ASSET OPERATIONS	ASSET MAINTENANCE	A M INFORMATION SYSTEM	RISK MANAGEMENT	CONTINGENCY PLLANNING	FINANCIAL PLANNING	CAPITAL EXPENDITURE PLANNING	REVIEW OF AMS	PERFORMANCE AUDIT
	• 8.1.2 CMP Report 2019-2023						✓	✓						
	• 8.1.2.1 33190101R1 - CMP Report 2019						✓	✓						
	• 8.1.2.2 33100103R1 - CMP Report 2020						✓	✓						
	• 8.1.2.3 33110102R1 - CMP Report 2021						✓	✓						
	• 8.1.2.4 33120102R2 - CMP Report 2022						✓	✓						
	• 8.1.2.5 33130101R0 - CMP Report 2023						✓	✓						
	• 8.1.3 ERA Invoice and Payment Information													✓
	• 8.1.4 ERA Standing Charges Data 2019-2023													✓
	• 8.1.4.1 ERA Request for standing charges data 1819													✓
	• 8.1.4.2 ERA Request for standing charges data 1920													✓
	• 8.1.4.3 ERA Request for standing charges data EDRF 2021 v2													✓
	• 8.1.4.4 ERA Request for standing charges data 2022													✓
	• 8.1.4.5 ERA Request for standing charges data EDWF 2023													✓
	• 8.1.5 Lease Agreement													✓
	• 8.1.6 Update Letter to ERA PAIP Final													✓
	• 8.1.7 APA Group Procedure - Compliance Management System Handbook													✓
	• 8.1.8 Emu Downs - Project Remediation Details													✓
	• 8.1.9 Annual Compliance Report Checklist (outside audit scope)													
9.0	Workplace Health & Safety System													
	• 9.1.1 320-PR-ER-0094.pdf								✓	✓				✓
	• 9.1.2 Emu Downs Renewable Facility VESTAS V5								✓	✓				✓
	• 9.2.1 0085-4679 - Emergency Response Plan EDWF EDSF BSF								✓	✓				✓
	• 9.2.2 ERP Exercise 16.6.2023								✓	✓				✓
	• 9.2.3 EDWF Enablon Hazard Report - Client_Use_Report_147708								✓	✓				✓
	• 9.2.4 Case #3372859120 Hazardous Observation - Fire Drill Badgingarra Solar Farm - (Friday, 17 DEC 2021)								✓	✓				✓
10.0	Contractor Management Plan													
	• 10.2.1 0089-8380 Australia Service WHSEMP V02	✓					✓	✓	✓	✓				✓
	• 10.2.2 Emu Downs Solar Farm Specific Extension of WHSEMP	✓					✓	✓	✓	✓				✓
	• 10.2.3 Emu Downs Wind Farm Specific Extension of WHSEMP	✓					✓	✓	✓	✓				✓
	• 10.2.4 20221101_Vestas_Environmental Audit Report_Final	✓					✓	✓	✓	✓				✓
11.1	2024 Audit Documentation													
	• 11.1.1 EDRF Audit and Review Report 2019													✓

Number	**Emu Downs Joint Venture** Electricity Generation Licence – EGL1	ASSET PLANNING	ASSET CREATION & AQUISITION	ASSET DISPOSAL	ENVIRONENTAL ANALYSIS	ASSET OPERATIONS	ASSET MAINTENANCE	A M INFORMATION SYSTEM	RISK MANAGEMENT	CONTINGENCY PLLANNING	FINANCIAL PLANNING	CAPITAL EXPENDITURE PLANNING	REVIEW OF AMS	PERFORMANCE AUDIT
	• 11.1.2 EDRF Post Audit Plan 23-10-19													✓
	• 11.1.3 ERA Electricity Compliance Reporting Manuals 2018-2023													✓
	• 11.1.3.1 2018 Electricity Compliance Reporting Manual (clean)													✓
	• 11.1.3.2 Electricity-Compliance-Reporting-Manual-2020---Clean-version													✓
	• 11.1.3.3 Electricity-Compliance-Reporting-Manual-2022---Clean													✓
	• 11.1.3.4 Electricity-Compliance-Reporting-Manual---January-2023---Clean													✓
	• 11.1.3.5 Electricity-Compliance-Reporting-Manual-February-2023---Clean													✓
	• 11.1.4 ERA Audit and Review Guidelines 2022													✓
	• 11.1.5 EDWF Licence EGL01 - 2018													✓
	• 11.1.6 EDWF Licence Map EGL01													✓
	• 11.1.7 EGL1 Approved Audit Plan													✓
11.2	ERA Communication													
	• 11.2.1 EDRF Compliance Register 2024													✓
	• 11.2.2 EDRF Letter to ERA re AMS													✓
	• 11.2.3 EDRF Letter to ERAWA re licence and AMS													✓
	• 11.2.4 ERA Commencement of 2024 audit and review - EGL001													✓
	• 11.2.5 ERA D276403 Approval of Auditor - 2024 - EGL001													✓
	• 11.2.6 ERA Letter - 2019 Audit and Review - EGL1													✓
	• 11.2.7 Update Letter to ERA PAIP Final													✓
12.0	Western Power Agreements/Communication													
	• 12.1 WP Agreements	✓					✓	✓					✓	✓
	• 12.1.1 EDRF HV Maintenance Schedule 2023-24	✓					✓	✓					✓	✓
	• 12.1.2 Emu Downs Deed of Variation - WP Execution Page	✓					✓	✓					✓	✓
	• 12.1.3 Emu Downs Deed of Variation & Restated Connection Agreement	✓					✓	✓					✓	✓
	• 12.1.4 Network Access Agreement Conformed Copy	✓					✓	✓					✓	✓
	• 12.1.5 WP-TR-Customer-Exemptions-List-2023-12-31	✓					✓	✓					✓	✓
	• 12.2.1 33160101R0 Compliance Monitoring Program	✓					✓	✓					✓	✓
13.0	Licensee IT Systems													
	• 13.1.1 EDRF Sapphire Certificate 2023							✓						✓
	• 13.1.2 EDRF Sapphire Licence Renewal 2023							✓						✓
	• 13.1.3 EDWF System Recovery Document 2019							✓						✓
	• 13.1.4 EDWFS _ Business Impact Analysis 2018							✓						✓

Number	**Emu Downs Joint Venture** Electricity Generation Licence – EGL1	ASSET PLANNING	ASSET CREATION & AQUISITION	ASSET DISPOSAL	ENVIRONENTAL ANALYSIS	ASSET OPERATIONS	ASSET MAINTENANCE	A M INFORMATION SYSTEM	RISK MANAGEMENT	CONTINGENCY PLLANNING	FINANCIAL PLANNING	CAPITAL EXPENDITURE PLANNING	REVIEW OF AMS	PERFORMANCE AUDIT
	• 13.1.5 EDWFS System Recovery Sheet 2019							✓						✓
	• 13.1.6 IM-090_INSTALLATION_INSTRUCTIONS							✓						✓
	• 13.1.7 IT Backup Standard v1.2							✓						✓
	• 13.1.8. Linux Environment and Oracle Database_SRD							✓						✓
	• 13.1.9 MD70 Wind Forecast System							✓						✓
	• 13.1.10 EDWFS - Business Impact Analysis_Nov 2022							✓						✓
	• 13.1.11 Service Continuity Management Standard							✓						✓
	• 13.1.12 Configuration Management - Database Security Baseline							✓						✓
	• 13.1.13 Configuration Management - Server Security Baseline							✓						✓
	• 13.1.14 EmuDowns_Unitrends_BackupReport.pdf							✓						✓
	• 13.1.15 EDWF WFS - IT support model 2020_01							✓						✓
	• 13.1.16 APA Consolidated DR Test 2024 Master							✓						✓
	• 13.1.17 DR Recovery APA v1.0							✓						✓
	• 13.1.18 Copy of AESCSF SP1							✓						✓
	• 13.1.19 cmdb_ci_appl							✓						✓
	• 13.2.1 EDRF SCADA Backup Vestas							✓						✓
	• 13.2.2 EDRF ERA Audit - Vestas response to IT-OT Security questions - 18 September 2024							✓						✓
14.0	• Financial Processes													
	• 14.1.1 Financials Statements	✓				✓	✓				✓	✓	✓	✓
	• 14.1.1.1 2019-08-21-apa-fy19-results	✓				✓	✓				✓	✓	✓	✓
	• 14.1.1.2 2020-08-26-fy2020-annual-financial-results	✓				✓	✓				✓	✓	✓	✓
	• 14.1.1.3 apa-fy21-annual-report	✓				✓	✓				✓	✓	✓	✓
	• 14.1.1.4 annual-report-2022	✓				✓	✓				✓	✓	✓	✓
	• 14.1.1.5 apa-fy23-annual-report_interactive_230823	✓				✓	✓				✓	✓	✓	✓
	• 14.1.1.6 interim-financial-reports-1h-fy20.pdf	✓				✓	✓				✓	✓	✓	✓
	• 14.1.1.7 interim-financial-reports-1h-fy21.pdf	✓				✓	✓				✓	✓	✓	✓
	• 14.1.1.8 interim-financial-reports-1h-fy22.pdf	✓				✓	✓				✓	✓	✓	✓
	• 14.1.1.9 interim-financial-reports-1h-fy23.pdf	✓				✓	✓				✓	✓	✓	✓
	• 14.1.1.10 interim-financial-reports-1h-fy24.pdf	✓				✓	✓				✓	✓	✓	✓
	• 14.1.1.1 2019-08-21-apa-fy19-results.pdf.pdf	✓				✓	✓				✓	✓	✓	✓
	• 14.1.2 Asset Register_EDSF	✓				✓	✓				✓	✓	✓	✓
	• 14.1.3 Asset Register_EDWF	✓				✓	✓				✓	✓	✓	✓

Number	**Emu Downs Joint Venture** Electricity Generation Licence – EGL1	ASSET PLANNING	ASSET CREATION & AQUISITION	ASSET DISPOSAL	ENVIRONENTAL ANALYSIS	ASSET OPERATIONS	ASSET MAINTENANCE	A M INFORMATION SYSTEM	RISK MANAGEMENT	CONTINGENCY PLLANNING	FINANCIAL PLANNING	CAPITAL EXPENDITURE PLANNING	REVIEW OF AMS	PERFORMANCE AUDIT
	• 14.2.1 Capex Review Process	✓				✓	✓				✓	✓	✓	✓
	• 14.2.2 Receipted - Dept Planning Industry Environ Inv #22051749 - 1200_EDWF	✓				✓	✓				✓	✓	✓	✓
	• 14.3 EDRF Budgets	✓				✓	✓				✓	✓	✓	✓
	• 14.4 Base Case EDRF Asset Model	✓				✓	✓				✓	✓	✓	✓
	• 14.5 EDRF restoration provision 30 Jun 2024	✓				✓	✓				✓	✓	✓	✓
	• 14.6 Vestas Financial Communication	✓				✓	✓				✓	✓	✓	✓
	• 14.7 AFE Documentation	✓				✓	✓				✓	✓	✓	✓
15.0	AEMO Communication													
	• 15.1 AEMO Communication Protocol EDWFMAN_WF1	✓				✓	✓						✓	✓
	• 15.2 EDRF 33100103S3 - Dispatch Instruction Procedure	✓				✓	✓						✓	✓