



ABN 20 009 454 111

Audit And Review Report
Emu Downs Wind Farm Electricity Licence
Performance Audit and Asset Management System
Review

August 2012

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Executive Summary

EDWF Holdings 1 Pty Ltd and EDWF Holdings 2 Pty Ltd, trading as Emu Downs Wind Farm Joint Venture (EDWF JV), jointly hold an electricity generation licence (EGL1) issued by the Economic Regulation Authority (the Authority) under Sections 7 and 15(2) of the Electricity Industry Act 2004 (WA) (the Act). The licence enables EDWF to construct and operate the Emu Downs Wind Farm in accordance with the licence conditions.

Sections 13 and 14 of the Act require Emu Downs Wind Farm (EDWF) to provide the Authority with a report by an independent expert on the measures taken by the licensee to meet the performance criteria specified in the licence and on the effectiveness of their asset management system. The system is to set out measures that are to be taken by the licensee for the proper maintenance of assets used in the supply of electricity and in the operation of, and, where relevant, the construction of, any generating works.

In June 2012 EDWF commissioned Qualeng to carry out the Performance Audit and the Asset Management System Review (the audit) for the period 1 July 2009 to 30 June 2012. The audit has been conducted and this report prepared in accordance with the Authority's "Audit Guidelines: Electricity, Gas and Water Licences (August 2010)" (the guidelines).

EDWF has a connection agreement in place with Western Power for the supply of electricity of the required quality.

THE ASSETS

EDWF supplies electricity to the South West Interconnected System (SWIS). EDWF's assets include 48 1.65 MW wind turbines (WTG), property leases, 22kV underground feeder cables, 22 kV switchboards, 132/22kV substation, SCADA, site office and O&M buildings. The WTG are split into two groups, each of 24 units. Each group is capable of 40 MW and is separately connected, through the 22 kV underground feeder cables and

circuit breakers to a 22 kV switchboard at the EMD substation. The substation connects to the SWIS through a 132 kV transmission line.

THE OPERATION OF THE ASSETS

EDWF's owner is the APA Group. PowerPlan has been contracted to EDWF to provide the engineering services and act as the owner's representative.

The plant is operated and maintained by Vestas – Australian Wind Technology Pty. Ltd. (Vestas) under a five year Service And Availability Agreement (SAA). Vestas had originally constructed the plant.

THE AUDIT

The audit was conducted through meetings at the PowerPlan office, at the APA Group's office in Perth, site visits and meetings at the generating facility site near Cervantes, Western Australia.

The audit was carried out through an assessment of the control environment, information system, control procedures, supporting documentation and compliance attitude.

The final report includes:

- (i) a review of the objectives, the scope of the task, details and progress of actions resulting from the previous audit,
- (ii) key findings and recommendations and
- (iii) a post audit implementation plan listing the audit recommendations and actions proposed by EDWF. Although this plan does not form part of the report, it is included to complete the documentation.

LICENSEE'S RESPONSE TO PREVIOUS AUDIT RECOMMENDATIONS

The corrective actions taken by EDWF in order to address the recommendations of the 2009 audit were completed in 2010. The actions show an appropriate approach and commitment by EDWF for the continuous improvement of its systems. In total five actions had been identified in the previous performance audit and seven in the asset management system review. All 12 actions have been completed.

SUMMARY REVIEW OF THE PERFORMANCE AUDIT

On completion of the performance audit the auditor has formed the opinion that, during the period of 1 July 2009 to 30 June 2012 the EDWF operation was in compliance with the licence conditions apart from minor observations:

- annual checks of the EDWF Compliance Manual could assist in the maintenance of compliance with all obligations;
- the "Operating Protocol" in place between EDWF and Western Power should be updated.

PERFORMANCE AUDIT EFFECTIVENESS SUMMARY

The findings of the audit are summarised in Table 1 below, keys to compliance ratings are listed in Table 2, a full report on audit findings is included in section 3, "Key findings and recommendations".

Table 1: Performance audit compliance summary

Operating Area	Operating License Reference (Cl.= Clause, Sch.=Schedule)	Consequence (1= minor, 2= Moderate, 3= major)	Likelihood (A= likely, B= probable, C= unlikely)	Inherent Risk (Low, Medium, High)	Adequacy of existing controls (S= Strong, M= Moderate, W= Weak)	Compliance Rating 1-2 Non compliant 3-5 Compliant (Refer to Table 5 for details)						
						1	2	3	4	5	N/A	N/R
SERVICE DELIVERY						1	2	3	4	5	N/A	N/R
Definitions and interpretation	Cl 1										X	
Grant of licence	Cl.2 (Sch2)	1	C	Low	S					✓		
Term	Cl 3	1	C	Low	S					✓		
Fees	Cl 4	1	C	Low	S					✓		
Compliance	Cl.5	2	C	Med	S				✓			
Transfer of licence	Cl 6											X
Cancellation of licence	Cl 7											X
Surrender of licence	Cl 8											X
Renewal of licence	Cl 9											X
Amendment of licence (licensee)	Cl 10											X
Amendment of licence (Authority)	Cl 11											X
Accounting records	Cl 12	2	C	Med	S					✓		
Individual performance standards	Cl 13											X
Performance audit	Cl 14	2	C	Med	S					✓		
Reporting a change in circumstances	Cl 15	2	B	Med	S					✓		
Provision of information	Cl 16	1	C	Low	S					✓		
Publishing information	Cl 17											X
Notices	Cl 18	1	C	Low	S					✓		
Review of the Authority's decisions	Cl 19											X
Asset management system	Cl 20	3	C	High	S					✓		

Table 2: Performance compliance rating scale

Compliance Status	Rating	Description of Compliance
COMPLIANT	5	Compliant with no further action required to maintain compliance.
COMPLIANT	4	Compliant apart from minor or immaterial recommendations to improve the strength of internal controls to maintain compliance.
COMPLIANT	3	Compliant with major or material recommendations to improve the strength of internal controls to maintain compliance.
NON-COMPLIANT	2	Does not meet minimum requirements.
SIGNIFICANTLY NON-COMPLIANT	1	Significant weaknesses and/or serious action required.
NOT APPLICABLE	N/A	Determined that the compliance obligation does not apply to the licensee's business operations
NOT RATED	N/R	No relevant activity took place during the audit period, therefore it is not possible to assess compliance

SUMMARY REVIEW OF THE ASSET MANAGEMENT SYSTEM REVIEW

EDWF has demonstrated that it has an effective plan to manage the different aspects of the asset management system. EDWF has shown continuous improvement and commitment to regulatory compliance.

The audit has found strong commitment to planning, risk analysis, performance monitoring, operation and maintenance and management reporting. There were minor findings but none that required significant improvement or corrective action as defined by the Authority's guidelines.

In general there was strong commitment by staff to participate in the audit meetings and assist with all requests for information. Staff and contractors were very familiar with the operation of the system.

Overall the audit concluded that EDWF asset management system was well established and showed a focus on continuous improvement.

ASSET MANAGEMENT REVIEW EFFECTIVENESS SUMMARY

The review of the Asset Management System is summarised below in Table 3. Definition of the ratings is given in Table 4 and Table 5.

Table 3: Asset management effectiveness summary

ASSET MANAGEMENT SYSTEM	Asset management process and policy definition adequacy ratings	Asset management performance ratings
1. Asset planning	A	2
2. Asset creation/ acquisition	A	2
3. Asset disposal	A	1
4. Environmental analysis	A	2
5. Asset operations	A	1
6. Asset maintenance	A	2
7. Asset management information system	A	1
8. Risk management	B	2
9. Contingency planning	B	1
10. Financial planning	A	1
11. Capital expenditure planning	A	1
12. Review of asset management system	B	2

Table 4: Asset management process and policy definition adequacy ratings

Rating	Description	Criteria
A	Adequately defined	<ul style="list-style-type: none"> Processes and policies are documented. Processes and policies adequately document the required performance of the assets. Processes and policies are subject to regular reviews, and updated where necessary. The asset management information system(s) are adequate in relation to the assets that are being managed.
B	Requires some improvement	<ul style="list-style-type: none"> Process and policy documentation requires 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) require minor improvements (taking into consideration the assets that are being managed).
C	Requires significant improvements	<ul style="list-style-type: none"> Process and policy documentation is incomplete or requires significant improvement. Processes and policies do not document the required performance of the assets. Processes and policies are significantly out of date. The asset management information system(s) require significant improvements (taking into consideration the assets that are being managed).

Rating	Description	Criteria
D	Inadequate	<ul style="list-style-type: none"> Processes and policies are not documented. The asset management information system(s) is not fit for purpose (taking into consideration the assets that are being managed).

Table 5: Asset management review performance rating scale

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

POST AUDIT IMPLEMENTATION PLAN

The audit has resulted, where applicable, in observations and recommendations that require corrective actions by the Licensee.

The recommendations have been listed in the Post Audit Implementation Plan 2012. Responses including actions, responsibilities and dates for completion have been completed by the Licensee. A copy of the plan is attached in Appendix A.

This report is an accurate representation of the findings and opinions of the auditors following the audit of the client's conformance to nominated Licence conditions. The audit is reliant on evidence provided by other parties and is subject to limitations due to the nature of the evidence available to the auditor, the sampling process inherent in the audit process, the limitations of internal controls and the need to use judgement in the assessment of evidence. On this basis Qualeng shall not be liable for loss or damage to other parties due to their reliance on the information contained in this report or in its supporting documentation.

The Post Audit Implementation Plan is a document prepared by the licensee in response to the recommendations provided by the audit. As it represent the licensee's views and actions it does not form part of the audit, however it has been included in Appendix A in order to complete the documentation of the audit and in accordance with the Authority's Guidelines.

Approvals

Representation	Name	Signature	Position	Date
Auditor:	M Zammit		Lead Auditor / Projects Director, Qualeng	12 October 2012

Ref:	62/1	
Issue Status		
Issue No	Date	Description
A	19 September 2012	Draft Issue
B	26 September 2012	Second Issue
1	12 October 2012	Final Issue

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1 OBJECTIVES AND SCOPE OF AUDIT

1.1 BACKGROUND

EDWF Holdings 1 Pty Ltd and EDWF Holdings 2 Pty Ltd trading as Emu Downs Wind Farm Joint Venture (EDWF JV) jointly hold an electricity generation licence (EGL1) issued by the Economic Regulation Authority (the Authority) under Sections 7 and 15(2) of the Electricity Industry Act 2004 (WA) (the Act). The licence enables EDWF to construct and operate the Emu Downs Wind Farm in accordance with the licence conditions.

EDWF was purchased by the APA Group on 30 June 2011. EDWF Manager Pty Ltd is an entity which represents the owner of the asset and is the Market Participant. PowerPlan is the service provider contracted to EDWF Manager Pty Ltd to provide the engineering services and act as the owner's representative. The plant is operated and maintained by the company that constructed it, Vestas – Australian Wind Technology Pty. Ltd. (Vestas) under a five year Service And Availability Agreement (SAA).

EDWF supplies electricity to the South West Interconnected System (SWIS). EDWF's assets include 48 1.65 MW wind turbines (WTG), property leases, 22kV underground feeder cables, 22 kV switchboards, 132/22kV substation, SCADA, site office and O&M buildings. The WTGs are split onto two groups, each of 24 units. Each group is capable of 40 MW and is separately connected, through the 22 kV underground feeder cables and circuit breakers to a 22 kV switchboard at the EMD substation. The substation is connected to the grid through a 132 kV transmission line.

EDWF has a connection agreement in place with Western Power for the supply of electricity of the required quality.

Sections 13 and 14 of the Act require EDWF to provide a performance audit and asset management system review of the licence. In June 2012 EDWF commissioned Qualeng to carry out the performance audit and the asset management system review (the audit) for the period 1 July 2009 to 30 June 2012. The audit has been conducted and this report prepared in accordance with the Authority's "Audit Guidelines: Electricity, Gas and Water Licences (August 2010)" (the guidelines).

1.2 AUDIT OBJECTIVES

The purpose of the performance audit is to:

- *Assess the effectiveness of measures taken by the licensee to meet the obligations of the performance and quality standards referred to in the licence.*

The purpose of the asset management system review is:

-
- *Assess the measures taken by the licensee for the proper management of assets used in the provision and operation of services and, where appropriate, for the construction or alteration of relevant assets.*

1.3 AUDIT SCOPE

1.3.1 Scope of Performance Audit

The scope of the performance audit is to audit the systems and the processes to assess their effectiveness in ensuring compliance with the standards, outputs and outcomes required by the licence, in detail:

- Assess the effectiveness of systems and procedures and the adequacy of internal controls;
- Consider performance against standards prescribed in the licence;
- Provide assurance of compliance to systems and procedures, existence of control and system outputs / records;
- Completeness and accuracy of performance reporting to the Authority;
- Compliance with any individual licence conditions.

1.3.2 Scope of Asset Management System Review

The scope of the asset management system review includes the assessment of the adequacy and effectiveness of the licensee's asset management system by evaluating the key processes of:

- Asset planning
- Asset creation/acquisition
- Asset disposal
- Environmental analysis
- Asset operations
- Asset maintenance
- Asset management information system
- Risk management
- Contingency planning
- Financial planning
- Capital expenditure planning
- Review of the asset management system.

Each of the system processes was evaluated against effectiveness criteria defined in the guidelines.

1.4 AUDIT PERIOD

The audit covers the period 1 July 2009 to 30 June 2012 and follows the previous audit (September 2009) that covered the period 1 July 2007 to 30 June 2009.

1.5 AUDIT METHODOLOGY

The audit followed the methodology defined in the Authority's guidelines including:

- Review of documentation;
- Review of previous audit responses and actions;
- Preparation of an audit plan, risk assessment and system analysis;
- Fieldwork including the document review, site visit and meetings with the licensee's key personnel;
- Reporting.

These activities were supported by additional investigations to further clarify aspects of the procedures.

An audit plan was prepared which outlined the objectives, scope, risk assessment, system analysis, fieldwork plan, the report structure, key contacts and auditing staff.

The audit adopted a risk based approach where a preliminary risk and materiality assessment was carried out for each licence condition to evaluate the risks resulting from non-compliance and/or lack of controls.

The existing controls were rated and an audit priority assigned based on the risk resulting from lack of controls. Tests were also defined for each licence condition to assess the compliance and effectiveness of the current process.

In regard to the Asset Management Review the review followed the methodology outlined above and defined in the guidelines. The risk assessment was carried out on each asset management system (AMS) element.

1.6 LICENSEE'S REPRESENTATION

Key contacts for the audit were:

- Paul McLagan, EDWF JV Manager
- Ian Manns, Vestas Site Manager
- Rory Nation, Vestas Area Service Manager
- Le Trung, Vestas Quality Manager
- Karina Dandle, Vestas Site Administration

-
- Shane Cremin, APA Group Project Development Manager
 - Genevieve Ellerker, APA Group Perth Manager
 - Domenica Cutri, APA Group Perth Senior Management Accountant.

1.7 AUDIT TEAM

The audit representatives were:

- Mike Zammit, Project Director and Lead Auditor,
- Shaun Campbell, Senior Engineer, Document Reviewer and Verifier.

1.8 KEY DOCUMENTS AND INFORMATION

Main documents accessed by the auditors are listed in Appendix B.

1.9 LIMITATIONS AND QUALIFICATIONS

An audit provides a reasonable level of assurance on the effectiveness of control procedures, however there are limitations due to the nature of the evidence available to the auditor, the sampling process inherent in checking the evidence, the limitations of internal controls and the need to use judgement in the assessment of evidence.

In regard to the review process, the reviewer relies on evidence coming to the reviewer's attention showing that the control procedures are not effective, when the initial process and procedures do not provide sufficient evidence to the level that would be required by a review.

The Post Audit Implementation Plan (PAIP) is a document prepared by the licensee in response to the recommendations provided by the audit. As it represents the licensee's views and actions it does not form part of the audit, however it has been included in Appendix A in order to complete the documentation of the audit and in accordance with the guidelines.

1.10 OTHER INFORMATION

A summary of the resources utilised in the performance of the audit are listed below.

<i>Item</i>	<i>Resource</i>	<i>Description</i>	<i>Hours</i>
1	M Zammit	Project Director and Lead Auditor	97
2	S Campbell	Senior Engineer, Document Reviewer and Verifier	12

1.11 ABBREVIATIONS

AMP	Asset Management Plan
AMS	Asset Management System
AS	Australian Standard
CAPEX	Capital Expenditure
EDWF	Emu Downs Wind Farm
HV	High voltage
JV	Joint Venture
MSDS	Material Safety Data Sheet
NAA	Network Access Agreement
NGER	National Greenhouse and Energy Reporting
O&M	Operation and Maintenance
OFI	Opportunity for Improvement
OPEX	Operating Expenditure
SAA	Service and Availability Agreement
SMP	Service Management Plan
SVC	Static Var Compensator
WOL	Whole Of Life
YTD	Year To Date

2 LICENSEE'S ACTIONS IN RESPONSE TO PREVIOUS AUDIT RECOMMENDATIONS

The actions taken by the Licensee in response to recommendations in the previous audit have been reviewed. Where applicable closure of the actions has been confirmed. Where work is still in progress or further actions are required appropriate recommendations are included in the Status/Recommendation column.

POST AUDIT IMPLEMENTATION PLAN (2009)

Table 6 Post Audit Implementation Plan 2009

PERFORMANCE AUDIT					
Ref No	Requirement	Actions	Status Reported by ED	Findings of this audit	Status Recommendation
1	Recommendations	Progress Reported by ED			
Was item number 349; now is 379	<p>Generation Licence condition 5.1 A network operator and affected Code participants must liaise together to determine the most appropriate way to resolve a discrepancy between energy data held in a metering installation and data held in the metering database.</p> <p>▶ Consideration could be given to requesting calibration of the meters if the Plan [A Meter Asset Management Plan for the maintenance of the HV meters] is not developed and implemented before the Feb 2010 timeframe. Liaison with Western Power/ERA is recommended</p>	<p>1. Clarify calibration requirements for the EDWF meters and monitor testing schedule as per outcome.</p> <p>▶ Western Power is responsible for the tariff meters at EDWF. Western Power advised that a Metering Management Plan has been compiled and was approved by the ERA. Western Power further advised that tariff meters will be tested and calibrated in accordance with the requirements of this plan. (Updated 7 July 2010)</p>	▶ Complete	Western Power have two meters in the installation, one is a main meter and the second one is a check meter. Emu Down Wind Farm (EDWF) has an additional meter on the EDWF side of the connection. The arrangement provides a continuous facility for monitoring malfunctions and drift in any of the meters.	Completed

PERFORMANCE AUDIT					
Ref No	Requirement	Actions	Status Reported by ED	Findings of this audit	Status Recommendation
1	Recommendations	Progress Reported by ED			
Requirement was no 416; now is 446	<p>Generation Licence condition 5.1 A user must, in relation to a network on which it has an access contract, comply with the rules, procedures, agreements and criteria prescribed.</p> <p>▶ Ensure that the Compliance Manual is reviewed as scheduled in the EDWF Year Plan 2009- 2010 (i.e. August 2009) and that the NAA is reviewed to ensure requirements are updated where necessary. Note: this has not been included in audit as outside the scope of the audit timeframe.</p>	<p>1. Undertake the review of the Compliance Manual</p> <p>▶ The Compliance Manual was reviewed and updated</p>	<p>▶ Completed 31 December 2009</p>	<p>Compliance Manual was reviewed and updated last in 2009.</p> <p>▶ Maintenance of compliance with all obligations would be improved if Compliance Manual were reviewed annually rather than over long intervals.</p>	<p>Completed</p> <p>New recommendation: ▶ Review of compliance with all obligations should be carried out yearly to ensure that all requirements are up to date and that they are not overlooked. This could take place through an annual check of the Compliance Manual.</p>
Was 418; now 448	<p>Generation Licence condition 5.1 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.</p>	<p>1. Contact Metering Services and issue current contact details. Request written confirmation or MBS when complete.</p> <p>▶ Current EDWF contact details were sent to Metering Services who confirmed receipt thereof. Wester Power Metering Services indicated that contact person for MBS is rhonda.timms@.westernpower.com.au</p>	<p>▶ Complete</p>	<p>A documented protocol is in place listing contact details.</p> <p>▶ Some of the telephone contact numbers are not in use and should be updated. (OFI)</p> <p>▶ The protocol may be updated to include a scope describing the function of the protocol. (OFI)</p>	<p>Completed</p> <p>▶ Some of the telephone contact numbers are not in use and should be updated. (OFI)</p> <p>▶ The protocol could be updated to include a</p>

PERFORMANCE AUDIT					
Ref No	Requirement	Actions	Status Reported by ED	Findings of this audit	Status Recommendation
1	Recommendations	Progress Reported by ED			
	<ul style="list-style-type: none"> ▶ Contact Metering Services and issue current contact details. Request written confirmation or MBS print out when complete. 				scope describing the function of the protocol. (OFI)
Was 420, now 450	<p>Generation Licence condition 5.1 A Code participant must notify its contact details to a network operator with whom it has entered into an access contract within 3 business days after the network operator's</p> <ul style="list-style-type: none"> ▶ As above 448 	2. As for 448	▶ As for 448	As for 448	Completed
Was item 81, now item 101	<p>Generation Licence condition 14.1 A licensee must, not less than once every 24 months, provide the Authority with a performance audit conducted by an independent expert acceptable to the Authority.</p> <ul style="list-style-type: none"> ▶ Include specific performance requirement into the Service Agreement for the JV Manager and ensure scheduling connected in the 2010-2011 Year Plan. 	<p>3. Include a specific reference in the Compliance Manual that an audit is required every 24 months.</p> <ul style="list-style-type: none"> ▶ The Compliance Manual was reviewed and updated. However, the next audit will be 36 months. 	▶ Complete	▶ Recorded as item 5 in "Generation Licence Obligations (including applicable legislation)" section of "Emu Downs Wind Farm Compliance Manual".	Completed

Table 7 Post Review Implementation Plan 2009

ASSET MANAGEMENT REVIEW					
Ref No	Requirement Recommendations	Actions Progress Reported by ED	Status Reported by ED	Findings of this audit	Status Recommendation
1. Asset Planning					
1.4	<p>Lifecycle costs of owning and operating assets are assessed.</p> <p>Issue: Life cycle costing (Whole of life) not being maintained.</p> <p>▶ Update Whole of Life (WOL) with actual availability, generation and capacity factor and use historical data to revise forecasts.</p>	<p>1. Update WOL with actual availability, generation and capacity factors and use historical data to revise forecasts.</p> <p>▶ The Whole Of Life Plan was reviewed and updated.</p>	▶ Complete	<p>The Whole of Lifecycle Model was updated on 2 June 2010 and brought up to date up to the FY 2008-09.</p> <p>Action for 2008-09 completed, however subsequent years have not been updated.</p> <p>▶ The Whole of Lifecycle Model needs to be updated to include actual figures for FYs 2009-10 and 2010-11.</p>	<p>Action for 2008-09 completed, however subsequent years have not been updated.</p> <p>▶ Update Whole of Lifecycle Model to include actual figures for FYs 2009-10 and 2010-11. Regular updates of Whole of Lifecycle model should be prompted by the review of the Compliance Manual. (Refer to recommendation for item 446 above, in Performance Audit section)</p>

ASSET MANAGEMENT REVIEW					
Ref No	Requirement Recommendations	Actions Progress Reported by ED	Status Reported by ED	Findings of this audit	Status Recommendation
2. Asset Creation/Acquisition					
2.5	<p>Ongoing legal/environmental/safety obligations of the asset owner are assigned and understood.</p> <p>Issue: Compliance update requirements being missed or nearly missed. The onus is on the licensee and reminders are not always issued.</p> <p>▶ Fully review compliance requirements and establish a notification system.</p>	<p>2. Review compliance requirements and establish a notification system.</p> <p>▶ The Compliance Manual was reviewed and updated. In addition, a notification system has been established as per Section 4.5 of the Year Plan.</p>	▶ Complete	<p>The Compliance Manual has been updated. In addition, Section 4.5 of the Year Plan includes a calendar of stakeholders' requirements and dates for compliance with obligations.</p>	Completed
3. Asset Disposal					
3.1	<p>Under-utilised and under-performing assets are identified as part of a regular systematic review process.</p> <p>Issue: Life cycle costing (Whole of life) not being maintained.</p> <p>▶ Update WOL with actual availability, generation and capacity factor and use historical data to revise forecasts.</p>	<p>3. Update WOL with actual availability, generation and capacity factors and use historical data to revise forecasts.</p> <p>▶ The Whole Of Life Plan was reviewed and updated.</p>	▶ Complete	<p>Action and findings same as for item 1.4.</p> <p>The Whole of Lifecycle Model was updated on 2 June 2010 and brought up to date up to the FY 2008-09.</p> <p>▶ The Whole of Lifecycle Model needs to be updated to include actual figures for FYs 2009-10 and 2010-11.</p>	Refer to action at 1.4.

ASSET MANAGEMENT REVIEW					
Ref No	Requirement	Actions	Status Reported by ED	Findings of this audit	Status Recommendation
	Recommendations	Progress Reported by ED			
4. Environmental Analysis					
4.3	<p>Compliance with statutory and regulatory requirements.</p> <p>Issue: Wind forecasting using Bureau of Meteorology data is inaccurate</p> <p>▶ Continue developing the forecast model.</p>	<p>4. Continue developing the forecast model.</p> <p>▶ The wind forecast model has been further upgraded to automatically calculate expected wind speeds at wind turbine heights based on data received from the Bureau of Meteorology.</p>	▶ Complete	Forecast model now drawing data from more than one source. System Management (Western Power) is also carrying out forecasting. Whilst accuracy of forecasting is not ideal more analysis is being carried out to improve it.	Completed
7. Asset Management Information System					
7.7	<p>Management reports appear adequate for the licensee to monitor licence obligations.</p> <p>Issue: Compliance update requirements being missed or nearly missed. The onus is on the licensee and reminders aren't always issued.</p> <p>▶ Fully review compliance requirements and establish a notification system</p>	<p>5. Fully review compliance requirements and establish a notification system</p> <p>▶ The Compliance Manual was reviewed and updated. In addition, a notification system has been established as per Section 4.5 of the Year Plan.</p>	▶ Complete	<p>Action and findings same as for item 446 in Post Audit Implementation Plan 2009.</p> <p>Compliance Manual was reviewed and updated last in 2009.</p> <p>There is a significant time interval between reviews of the obligations within the Compliance Manual.</p> <p>▶ Review of maintenance of compliance to all obligations should be carried out yearly to ensure that all requirements are still up to date and that they are not overlooked.</p>	<p>Completed</p> <p>New recommendation (as for item 446):</p> <p>▶ Review of maintenance of compliance to all obligations should be carried out yearly to ensure that all requirements are still up</p>

ASSET MANAGEMENT REVIEW					
Ref No	Requirement	Actions	Status Reported by ED	Findings of this audit	Status Recommendation
	Recommendations	Progress Reported by ED			
					to date and that they are not overlooked.
8. Risk Management					
8.3	<p>The probability and consequences of asset failure are regularly assessed.</p> <p>Issue: Overall risk policy and contingency planning is poorly documented. Some risks are said to be accepted but we did not see this written down.</p> <p>▶ Document risk policy and prepare contingency plans for identified risks</p>	<p>6. Document risk policy and prepare contingency plans for identified risks.</p> <p>▶ A Risk Management Strategy document was compiled based on AS 31000. In addition, risks are reviewed annually as per the Year Plan.</p>	▶ Complete	Risks are identified and assessed yearly as per "EDWF Year Plan 2011-12". The Operation Service Provider Vestas has also identified risks and responses in its Service Management Plan which also include the "Emergency Response Plan" for the Emu Down facility.	Completed
9. Contingency planning					
9.1	<p>Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks.</p> <p>Issue: Overall risk policy and contingency planning is poorly documented. Some risks are said to be accepted but we did not see this</p>	<p>7. As for 8.3</p> <p>▶</p>	▶ Complete	As for 8.3	Completed

ASSET MANAGEMENT REVIEW					
Ref No	Requirement	Actions	Status Reported by ED	Findings of this audit	Status Recommendation
	Recommendations	Progress Reported by ED			
	written down ▶ As for 8.3				

3 KEY FINDINGS AND RECOMMENDATIONS

3.1 PERFORMANCE SUMMARY

The findings of the performance audit and asset management system review are summarised in Table 8 and Table 9.

The summaries in Table 1 and Table 3 separately rate EDWF's operational performance and the adequacy and performance of the asset management process and policy definition, in accordance with the Authority's performance summary requirements. These rating definitions are reproduced in Table 2 for the performance audit and Table 4 and Table 5 for the AMS review.

Where the performance audit has rated compliance obligations as 1, 2, or 3 recommendations are made to address the issue(s) that have resulted in that rating. Where adequacy of the AMS process and policy definition is rated C or D, or the asset management system performance is rated 3 or 4, recommendations are included to address the issue(s) that have resulted in those ratings. The licensee's corrective actions are included in the Post Audit Implementation Plan, prepared by the auditor for the licensee's review and approval, a copy of the plan is attached in Appendix A.

3.2 PERFORMANCE AUDIT OBSERVATIONS AND RECOMMENDATIONS

Key findings and recommendations arising from the Performance Audit are listed in the following table.

Item numbers refer to the obligation number in the Authority’s “Electricity Compliance Reporting Manual”. Items “L1, L2” etc are reference numbers for licence clauses.

References in [] are to meetings.

[OFI] are Opportunities for Improvement.

Table 8 - Performance Audit Observations and Recommendations

<i>Item</i>	<i>Lic ref</i>	<i>Licence Conditions</i>	<i>Findings</i>	<i>Compliance*</i> 5,4,3=Y 1,2=N	<i>Recommended Corrective Actions</i>
L1	CI 2	Grant of Licence Licensee is granted a licence for the licence area to construct and operate generating works or operate existing generating works in accordance with the terms and conditions of this licence	Licensee has identified licence boundaries which correspond to licence information. Licensee is operating plant in accordance with the conditions of the licence.	5	
L2	CI.2 (Sch1)	Licence Area The licence area is the area as set out in plan ERA-EL-006	Licensee has identified licence boundaries which correspond to licence information.	5	
L3	CI 3	Term Licence commences on the commencement date [23 June 2005] and continues until the earlier of: (a) the cancellation of the licence (clause 7) (b) surrender of licence (c) expiry (2035)	There has been no change.	5	

Item	Lic ref	Licence Conditions	Findings	Compliance* 5,4,3=Y 1,2=N	Recommended Corrective Actions
L4	CI 4	Fees The licensee must pay the applicable fees in accordance with the Regulations	Licence fees were paid in accordance with requirements. Payment evidence viewed.	5	
105	CI 4.1	Electricity Industry Act section 17(1) A licensee must pay to the Authority the prescribed licence fee within one month after the day of grant or renewal of the licence and within one month after each anniversary of that day during the term of the licence.	Evidence of payment has been viewed: e.g. Payment by APA Group on PO258326 of 15 June 2012.	5	
L5	CI.5	Compliance: The licensee has to comply with all applicable legislation.	There was evidence to show that the licensee has documentation, plans and reports to ensure compliance with all applicable legislation: <ul style="list-style-type: none"> • Licensee has prepared the “Emu Downs Wind Farm Compliance Manual”, last revised in June 2009, which provides a detailed summary of obligations related to the statutory and regulatory regimes that apply the Emu Downs Wind Farm. The manual includes: <ul style="list-style-type: none"> ◦ requirements under the generation licence; ◦ obligations imposed by the Authority; ◦ requirements under the Connection, Network Access Agreement and Technical Code with Western Power; ◦ requirements under the Power Purchase Agreements with Western Power; ◦ includes daily, weekly, monthly and annual obligations; ◦ includes requirements under all applicable legislation. • EDWF Yearly Plans summarise forthcoming annual 	4	

<i>Item</i>	<i>Lic ref</i>	<i>Licence Conditions</i>	<i>Findings</i>	<i>Compliance*</i> 5,4,3=Y 1,2=N	<i>Recommended Corrective Actions</i>
			<p>obligations.</p> <p>Whilst there was no evidence of non-compliance, the process would be improved if the Compliance Manual were reviewed annually rather than over long intervals. A recommendation has been made at item 446 under the Post Review Implementation 2009.</p> <p>Assessment of the compliance of the licensee with applicable legislation has been made through this audit report which has found that the licensee is compliant apart from some minor recommendations (refer to the Executive Summary).</p>		
106	CI 5.1	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.	There was evidence that the licensee has taken reasonable steps to minimise the extent or duration of any interruption, suspension or restriction of the supply of electricity. A Service and Availability Agreement (SAA) commits the O&M Contractor to maintaining high availability through control of maintenance and minimisation of forced outages. Vestas has in place a "Service Management Plan" (SMP), planned maintenance services, failure and investigation database and global resources on plant operation to assist them in achieving operational objectives.	5	
107	CI 5.1	Electricity Industry Act section 41(6) A licensee must pay the costs of taking an interest in land or an easement over land	A 22 year lease exists over the property, between EDWF Holdings 1 PL and EDWF Holdings 2 PL and WR Carpenter Agriculture PL, until 22 July 2027. Liability of the EDWF Manager is noted in item 47 of the EDWF Compliance Manual.	5	
L6	CI 6	Transfer of Licence	There have not been any transfers of the licence in the	5	

<i>Item</i>	<i>Lic ref</i>	<i>Licence Conditions</i>	<i>Findings</i>	<i>Compliance*</i> 5,4,3=Y 1,2=N	<i>Recommended Corrective Actions</i>
		This licence may be transferred only in accordance with the Act.	audit period.		
L7	CI 7	Cancellation of Licence This licence may be cancelled only in accordance with the Act.	Not applicable (NA) in the audit period.	NR	
L8	CI 8	Surrender of Licence This licence may be surrendered only in accordance with the Act [and as defined in the clause]	NA in the audit period.	NR	
L9	CI 9	Renewal of Licence This licence may be renewed only in accordance with the Act.	NA in the audit period.	NR	
L10	CI 10	Amendment of Licence on Application of the Licensee The licensee may apply to the Authority to amend the licence in accordance with the Act.	NA in the audit period.	NR	
L11	CI 11	Amendment of Licence by the Authority the Authority may amend the licence at any time in accordance with this clause.	NA in the audit period.	NR	
L12 see item 119	CI 12	Accounting Records See item 119 below	See item 119	See item 119	
119	CI 12.1	Accounting records: Electricity Industry Act section 11 The licensee must maintain accounting records that comply with the Australian Accounting Standards Board Standards or equivalent International	The licensee produces a financial report which has been prepared in accordance with the Corporations Act 2001, Accounting Standards and Interpretations, and complies with other requirements of the law. Deloitte's Audit conducted the annual audit of the financial	5	

<i>Item</i>	<i>Lic ref</i>	<i>Licence Conditions</i>	<i>Findings</i>	<i>Compliance*</i> 5,4,3=Y 1,2=N	<i>Recommended Corrective Actions</i>
		Accounting Standards.	report and have confirmed that the report complies with the Corporations Act 2001, Australian Accounting Standards, the Corporations Regulations 2001 and International Financial Reporting Standards (IFRS).		
L13	CI 13	Individual Performance Standards	NA in the audit period.	NR	
120	CI 13.4	Electricity Industry Act section 11 A licensee must comply with any individual performance standards prescribed by the Authority.	NA in the audit period.	NR	
L14	CI 14	Performance Audit see items 101, 121 below.		See 101, 121	
101	CI14.1	Electricity Industry Act section 13(1) A licensee must, not less than once every 24 months, provide the Authority with a performance audit conducted by an independent expert acceptable to the Authority.	Licensee was allowed a period of 36 months between audits. A performance audit has been initiated in accordance with requirements.	5	
121	CI 14.2	Electricity Industry Act section 11 A licensee must comply, and require its auditor to comply, with the Authority's standard audit guidelines dealing with the performance audit.	Authority's guidelines were part of specified auditor's requirements.	5	
L15	14.4	The independent auditor must be approved by the Authority prior to the audit.	Auditor was approved by the Authority.	5	
123	CI 15.1	Reporting a Change in Circumstances Electricity Industry Act section 11 A licensee must report to the Authority, in the manner prescribed, if a licensee is under external administration or there is a significant change in the circumstances upon which the licence was granted	Advice provided to the Authority on 30 June 2011 of change in ownership of EDWFH1 and EDWFH2 Joint Venture (JV).	5	

<i>Item</i>	<i>Lic ref</i>	<i>Licence Conditions</i>	<i>Findings</i>	<i>Compliance*</i> 5,4,3=Y 1,2=N	<i>Recommended Corrective Actions</i>
		which may affect a licensee's ability to meet its obligations.			
124	CI 16.1	Provision of information Electricity Industry Act section 11 A licensee must provide the Authority, in the manner prescribed, any information the Authority requires in connection with its functions under the Electricity Industry Act.	The licensee has provided reports required by the Act. There has been no requirement to provide the Authority other information in connection with its functions under the Electricity Industry Act during the audit period.	5	
125	CI 17.1	Publishing information Electricity Industry Act section 11 A licensee must publish any information it is directed by the Authority to publish, within the timeframes specified.	There has been no direction from the Authority to publish information in connection with its functions under the Electricity Industry Act during the audit period.	NR	
L16	CI. 18	Reporting: The licensee must report to the Authority: (a) if the licensee is under external administration (b) if the licensee experiences a change in the licensee's corporate, financial or technical circumstances upon which this licence was granted which may affect the licensee's ability to meet its obligations under this licence within 10 business days of the change occurring or (c) if the: licensee's name; licensee's ABN; licensee's address; (iv) description of the generating works; or	There has been advice to the Authority of the change in the licensee's owner on the day that the change took place, 30 June 2011. No other changes occurred in the audit period.	5	
			There have been no changes during the audit period.	5	

<i>Item</i>	<i>Lic ref</i>	<i>Licence Conditions</i>	<i>Findings</i>	<i>Compliance*</i> 5,4,3=Y 1,2=N	<i>Recommended Corrective Actions</i>
		(v) nameplate capacity of the generating works, change, within 10 business days of the change occurring.			
126	CI 18.1	Notices Electricity Industry Act section 11 Unless otherwise specified, all notices must be in writing.	Notices viewed were in writing.	5	
L17	CI 19	Review of the Authority's decisions The licensee may seek a review of a reviewable decision by the Authority pursuant to this licence	NA in the audit period.	NR	
102	CI 20.1	Asset Management System Electricity Industry Act section 14(1)(a) A licensee must provide for an asset management system.	The licensee has in place an asset management system in respect of the licensee's assets. The licensee's Asset Management Plan (AMP) describes the main aspects of operation of the system. Evidence available of compliance, refer to section 3.3 of this report.	5	
103	CI 20.2 (see below) CI 20.3 CI 20.2	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 Authority. CI 20.3 ... within 10 business days CI 20.2 The licensee must notify the Authority of the details of the asset management system within 5 business days from the later of: (a) the commencement date; and (b) the completion of construction of the generating works.	Details of asset management system (AMS) were notified to the Authority by communicating the changes on the 11 May 2010 and acknowledged by the Authority on 19 May 2010. The Authority's acknowledgement confirmed the compliance with the requirements of the Licence. There has been advice to the Authority of the change in the licensee's owner on the day that the change took place, however that advice also confirmed that there was no change in the AMS. There were no other changes applicable.	5	

<i>Item</i>	<i>Lic ref</i>	<i>Licence Conditions</i>	<i>Findings</i>	<i>Compliance*</i> 5,4,3=Y 1,2=N	<i>Recommended Corrective Actions</i>
104	CI 20.4	Electricity Industry Act section 14(1)(c) A licensee must provide the Authority with a report by an independent expert as to the effectiveness of its asset management system every 24 months, or such longer period as determined by the Authority.	Report has been provided in 2009. Licensee was allowed a period of 36 months between AMS reviews. A review leading to a report has been initiated in accordance with requirements.	5	
122	CI 20.5	Electricity Industry Act section 11 A licensee must comply, and must require the licensee's expert to comply, with the relevant aspects of the Authority's standard guidelines dealing with the asset management system.	Authority's guidelines were part of specified auditor's requirements.	5	
L18	20.6	The licensee may seek a review of any of the requirements of the Authority's standard audit guidelines dealing with the asset management system in accordance with clause 19.1.	NA in the audit period.	NR	
L19	20.7	The review of the asset management system must be conducted by an independent expert approved by the Authority.	Independent expert was approved by the Authority.	5	
349	CI 5.1	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	Operation of metering installation is cross checked by EDFW Manager on a monthly basis. Western Power have two meters in the installation, one is a main meter and the second one is a check meter. Emu Down Wind Farm (EDWF) has installed a meter on the EDWF side of the connection. The arrangement provides a continuous facility for monitoring malfunction, calibration of meters and drift in any of the meters.	4	
361	CI 5.1	Electricity Industry Metering Code clause 3.16(5) A network operator or a user may require the other to negotiate and enter into a written service level	A written Network Access Agreement (NAA) between Western Power and EDWF Holdings 1 Pty Ltd and EDWF Holdings 2 Pty Ltd is in place to identify the metering	5	

<i>Item</i>	<i>Lic ref</i>	<i>Licence Conditions</i>	<i>Findings</i>	<i>Compliance*</i> 5,4,3=Y 1,2=N	<i>Recommended Corrective Actions</i>
		agreement in respect of the matters in the metrology procedure dealt with under clause 3.16(4) of the Code.	services and equipment that is supplied by the network operator.		
372	CI 5.1	Electricity Industry Metering Code clause 3.27 A person must not install a metering installation on a network unless the person is the network operator or a registered metering installation provider for the network operator doing the type of work authorised by its registration.	The metering installation has been performed by the network operator.	5	
379	CI 5.1	Electricity Industry Metering Code clause 4.4(1) A network operator and affected Code participants must liaise together to determine the most appropriate way to resolve a discrepancy between energy data held in a metering installation and data held in the metering database.	There have been no instances of disagreement during the audit period.	5	
380	CI 5.1	Electricity Industry Metering Code clause 4.5(1) A Code participant must not knowingly permit the registry to be materially inaccurate.	Meter readings are checked monthly by EDWF Manager.	5	
381	CI 5.1	Electricity Industry Metering Code clause 4.5(2) If a Code participant (other than a network operator) becomes aware of a change to or an 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.	NA in the audit period.	5	
393	CI 5.1	Electricity Industry Metering Code clause 5.4(2) A user must, when reasonably requested by a network operator, use reasonable endeavours to assist the network operator to comply with the	NA in the audit period.	5	

<i>Item</i>	<i>Lic ref</i>	<i>Licence Conditions</i>	<i>Findings</i>	<i>Compliance*</i> 5,4,3=Y 1,2=N	<i>Recommended Corrective Actions</i>
		network operator's obligation.			
395	CI 5.1	Electricity Industry Metering Code clause 5.5(3) A user must not impose any charge for the provision of the data under this Code unless it is permitted to do so under another enactment.	NA in the audit period.	5	
406	CI 5.1	Electricity Industry Metering Code clause 5.16 A user that collects or receives energy data from a metering installation must provide the network operator with the energy data (in accordance with the communication rules) within the timeframes prescribed.	NA, the network operator collects the information.	5	
407	CI 5.1	Electricity Industry Metering Code clause 5.17(1) A user must provide standing data and validated (and where necessary substituted or estimated) energy data to the user's customer, to which that information relates, where the user is required by an enactment or an agreement to do so for billing purposes or for the purpose of providing metering services to the customer.	NA. The user's customer is Synergy. Synergy has independent access to metering data.	5	
408	CI 5.1	Electricity Industry Metering Code clause 5.18 A user that collects or receives information regarding a change in the energisation status of a metering point must provide the network operator with the prescribed information, including the stated attributes, within the timeframes prescribed.	NA. The network operator has access to tariff meters.	5	
409	CI 5.1	Electricity Industry Metering Code clause 5.19(1) A user must, when requested by the network operator acting in accordance with good electricity industry practice, use reasonable endeavours to	NA. There have been no requests by the network operator during the audit period.	5	

<i>Item</i>	<i>Lic ref</i>	<i>Licence Conditions</i>	<i>Findings</i>	<i>Compliance*</i> 5,4,3=Y 1,2=N	<i>Recommended Corrective Actions</i>
		collect information from customers, if any, that assists the network operator in meeting its obligations described in the Code and elsewhere.			
410	CI 5.1	Electricity Industry Metering Code clause 5.19(2) A user must, to the extent that it is able, collect and maintain a record of the address, site and customer attributes, prescribed in relation to the site of each connection point, with which the user is associated.	NA. The connection point is with the network operator.	5	
411	CI 5.1	Electricity Industry Metering Code clause 5.19(3) A user must, after becoming aware of any change in a site's prescribed attributes, notify the network operator of the change within the timeframes prescribed.	NA. No changes to the site's prescribed attributes.	5	
412	CI 5.1	Electricity Industry Metering Code clause 5.19(4) A user that becomes aware that there is a sensitive load at a customer's site must immediately notify the network operator's Network Operations Control Centre of the fact.	NA during the audit period.	NA	
413	CI 5.1	Electricity Industry Metering Code clause 5.19(5) A network operator must give notice to a user, or (if there is a different current user) the current user, acknowledging receipt of any customer, site or address attributes from the user within the timeframes prescribed.	NA	NA	
414	CI 5.1	Electricity Industry Metering Code clause 5.19(6) A user must use reasonable endeavours to ensure that it does not notify the network operator of a change in an attribute that results from the provision of standing data by the network operator to the user.	NA in the audit period.	5	

<i>Item</i>	<i>Lic ref</i>	<i>Licence Conditions</i>	<i>Findings</i>	<i>Compliance*</i> 5,4,3=Y 1,2=N	<i>Recommended Corrective Actions</i>
420	CI 5.1	Electricity Industry Metering Code clause 5.21(5) A Code participant must not request a test or audit 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.	No tests have been requested in the audit period.	5	
421	CI 5.1	Electricity Industry Metering Code clause 5.21(6) A Code participant must not make a test or audit request that is inconsistent with any access arrangement or agreement.	No tests have been requested in the audit period.	5	
439	CI 5.1	Electricity Industry Metering Code clause 5.27 Upon request, a current user must provide the network operator with customer attribute information that it reasonably believes are missing or incorrect within the timeframes prescribed.	NA to the audit period.	5	
446	CI 5.1	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.	There have been no breaches of the rules, procedures, agreements and criteria in the audit period.	5	A recommendation has been made at item 446 in the Post Audit Implementation Plan 2009.
448	CI 5.1	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.	ED site has main telephone line and mobile telephone coverage, wireless internet access, and facsimile. Site outages are entered into Western Power Web portal. A written Protocol provides communication details.	4	Recommendations as at item 448 in Post Audit Implementation Plan 2009 and at item 449 below.
449	CI 5.1	Electricity Industry Metering Code clause 7.2(2) A network operator must notify each Code participant of its initial contact details and of any change to its contact details at least 3 business days	Western Power has provided contact details in its "Emu Downs Wind Farm - Operating Protocol", last issued on 2 Aug 2006. ▶ Current documented contact details are not in use as	4	1. [OFI] Western Power and EDWF communication details should be updated to reflect current contact arrangements.

<i>Item</i>	<i>Lic ref</i>	<i>Licence Conditions</i>	<i>Findings</i>	<i>Compliance*</i> 5,4,3=Y 1,2=N	<i>Recommended Corrective Actions</i>
		before the change takes effect.	they have been superseded.		
450	CI 5.1	Electricity Industry Metering Code clause 7.2(4) A Code participant must notify its contact details to a network operator with whom it has entered into an access contract within 3 business days after the network operator's request.	Western Power's "Operating Protocol" has EDWF contact details which had been provided to Western Power.	5	
451	CI 5.1	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 at least 3 business days before the change takes effect	Contact details in Operating Protocol" should be reviewed and updated	4	Recommendation as above at item 449.
452	CI 5.1	Electricity Industry Metering Code clause 7.5 A Code participant must 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.	The NAA identifies confidential information. Confidentiality Agreements are in place for personnel that will be privy to confidential information. Metering information is treated as confidential information. There have been no breaches of confidentiality during the audit period.	5	
453	CI 5.1	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.	Confidential information is disclosed on as required basis.	5	
454	CI 5.1	Electricity Industry Metering Code clause 8.1(1) 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 under or in connection with the Electricity Industry Metering Code by	NA in the audit period.	5	

<i>Item</i>	<i>Lic ref</i>	<i>Licence Conditions</i>	<i>Findings</i>	<i>Compliance*</i> 5,4,3=Y 1,2=N	<i>Recommended Corrective Actions</i>
		negotiations in good faith.			
455	CI 5.1	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.	NA in the audit period.	5	
456	CI 5.1	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.	NA in the audit period.	5	
457	CI 5.1	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.	NA in the audit period.	5	
458	CI 5.1	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 of dispute resolution with as little formality and technicality and with as much expedition as the requirements of Part 8 of the Code and a proper hearing and determination of the dispute permit.	NA in the audit period.	5	

3.3 ASSET MANAGEMENT REVIEW OBSERVATIONS AND RECOMMENDATIONS

Key findings and recommendations arising from the Asset Management Review are listed in the following table.

References in [] are to meetings.

[OFI] are Opportunities for Improvement.

Table 9 Asset Management System Review

No.	Asset Management System Element / Criteria	Rating	Findings (► Observations)	Recommendations
1	Asset Planning	Adeq & Perf	Integration of asset strategies into operational or business plans will establish a framework for existing and new assets to be effectively utilised and their service potential optimised.	
1.1	Planning process and objectives reflect the needs of all stakeholders and is integrated with business planning.	A1	<p>An annual plan, the “EDWF Year Plan”, (YP) provides the programs and activities proposed for the Emu Downs Wind Farm (EDWF) to meet the operational objectives and expectations of stakeholders. The YP reviews objectives in terms of:</p> <ul style="list-style-type: none"> • Safety considerations • Environmental • Production • Financial. <p>The YP has been issued annually between 2009 and 2011, the last YP covered the FY period 2011-2012.</p> <p>In general EDWF stakeholders include the owners, customers including Synergy, the network operator (Western Power), the land owners (farm owner) and the local community.</p> <p>The YP is based on a number of assumptions which include</p> <ul style="list-style-type: none"> • the engagement of an O&M Contractor (Vestas) under a Service and Availability Agreement (SAA), responsible for the operation and maintenance of 	

No.	Asset Management System Element / Criteria	Rating	Findings (► Observations)	Recommendations
			<p>the plant until October 2013;</p> <ul style="list-style-type: none"> • guarantee of plant performance by Vestas under the SAA; • planned maintenance and no unplanned major plant outages. <p>The planning documents include:</p> <ul style="list-style-type: none"> • an analysis of strength and weaknesses; • key performance requirements for the objectives noted above; • risk analysis; • forward production plans including monthly production forecasts and maintenance commitments; • forecasts of wind energy and energy delivery; • 5 year maintenance plans. <p>The EDWF Asset Management Plan (AMP) was last reviewed in June 2010 and provides the strategies for the management of the plant. The AMP is a 5 year document and it covers the period 2008-2012 inclusive. It includes:</p> <ul style="list-style-type: none"> • Review of external factors impacting the life and operation of the plant; • Mission statement and main performance indicators including an availability factor; • A lifecycle plan; • Risk summary; • Cost history and forecasts; • Plant history; • Currently known issues and strategies; • Plant maintenance compliance summary. 	
1.2	Service levels are defined.	A1	<p>Service levels include, among others:</p> <ul style="list-style-type: none"> • obligations within market for energy delivery, the commercial requirement is the minimum quantity to be supplied; • control of power factor, adjusted to suit Western Power network demand and controlled by Western Power; • achievement of minimum RECs; if insufficient these need to be outsourced; 	

No.	Asset Management System Element / Criteria	Rating	Findings (► Observations)	Recommendations
			<ul style="list-style-type: none"> • compliance with Western Power Technical Rules for dispatch and operation, proven by commissioning tests; • Maintenance of power quality, the plant can be tripped if power parameters are outside set limits. <p>The AMP and the Year Plan identify the key performance indicators:</p> <ul style="list-style-type: none"> • Availability (>97%); • Reliability (forced outages < 1.5%); • Substation, Grid and Non Grid Trips; • Wind; • Maintenance of routine inspections; • Utilisation Factor. 	
1.3	Non-asset options (e.g. demand management) are considered.	A1	The connection agreement that regulates the operation of EDWF is based on the supply of energy to agreed levels. Demand management is not applicable to this service regime.	
1.4	Lifecycle costs of owning and operating assets are assessed.	A2	The AMP includes a Life Plan and overall Life Cycle Costs for the plant. In addition a separate document, the "Whole of Lifecycle Model", last updated on 2 June 2010 and brought up to date up to the FY 2008-09, summarises the lifecycle costs.	<p>1. [OFI] Update Whole of Life Cycle Model to include actual figures for FYs 2009-10 and 2010-11. Regular updates of Whole of Lifecycle model should be prompted by the review of the Compliance Manual. (Refer to recommendation for item 446 and item 1.4 in Post Audit/Review Implementation Plan).</p>
1.5	Funding options are evaluated.	A1	APA Group sets budgets including revenue forecasts. Revenue is contracted through long term off-take agreements. Revenue is wind dependent and outside of licensee's control. An "Acquisition Budget" includes five year forecast of revenue and expenditure including OPEX and CAPEX until 2018.	

No.	Asset Management System Element / Criteria	Rating	Findings (▶ Observations)	Recommendations
1.6	Costs are justified and cost drivers identified.	A1	Full costs evaluations are performed. Cost drivers are identified in financial plans, O&M costs are main drivers at present with additional costs due to unexpected unplanned outages due to parts failures (e.g. SVC Panel failure).	
1.7	Likelihood and consequences of asset failure are predicted.	A2	Risk analysis is applied systematically. Both EDWF Manager and the O&M Contractor carry out risk analysis. There have been asset failures with higher frequency or impact than expected: <ul style="list-style-type: none"> • Blade lightning strikes; • Issues with SVC panels; • Fire at the SVC Panel. 	
1.8	Plans are regularly reviewed and updated.	A2	AMP is reviewed every five years. The Yearly Plans provide an annual update of the asset management plan. There is a constant review of the plant operation through canvassing of the global operational experience resources provided by the O&M Contractor.	
2	Asset Creation and acquisition		A more economic, efficient and cost-effective asset acquisition framework which will reduce demand for new assets, lower service costs and improve service delivery.	
2.1	Full project evaluations are undertaken for new assets, including comparative assessment of non-asset solutions.	B2	Justification of new projects is submitted to the APA Group if due to be delivered within the year, otherwise it is included in allowance for following year's budget. Small acquisitions are performed by the O&M Contractor and are funded by the owner. Whilst no major creation or acquisition are contemplated there have been instances of small purchases: <ul style="list-style-type: none"> • A small shed was purchased to store hydraulic fluids in FY 2011-12. ▶ Due to the small expenditure the purchase was made from an approved supplier, however there should be a more rigorous process for project justification for larger levels of expenditure. Documents such as purchasing specifications should be in use.	<ol style="list-style-type: none"> 2. There should be a more rigorous process for project justification for larger levels of expenditure. 3. Purchasing of assets should require the preparation of appropriate purchasing documentation such as specifications.

No.	Asset Management System Element / Criteria	Rating	Findings (► Observations)	Recommendations
2.2	Evaluations include all life-cycle costs.	A2	Lifecycle costs are assessed in the "Whole of Lifecycle Model". There were no other examples of life-cycle costs applications.	
2.3	Projects reflect sound engineering and business decisions.	A2	New capital expenditure projects are assessed by the owner's representative. A "Lift Assist" project has been subject to cost benefit analysis, safety and productivity analysis. Projects have to be approved by owner.	
2.4	Commissioning tests are documented and completed.	B2	There is a procedure in the original EPC Contract, however no procedure is in place for future works. ► No formal procedure is in place to address commissioning tests.	4. Prepare a procedure to address commissioning and plant acceptance to define performance criteria for new or refurbished assets and record commissioning/ acceptance data.
2.5	Ongoing legal/environmental/safety obligations of the asset owner are assigned and understood.	A1	Legal, environmental and safety obligations of the asset owner are addressed in the AMP, in performance indicators for stakeholders' expectations. The "Emu Downs Wind Farm Compliance Manual", last revised in June 2009, provides a detailed summary of obligations related to the regulatory regimes that apply the Emu Downs Wind Farm. There was evidence of compliance report being submitted to the Authority on time and approved by the Authority. There was evidence of advice to the Authority of changes in the AMP (as per Clause 16.2), noted by the Authority on 19 May 2010.	
3	Asset Disposal		Effective management of the disposal process will minimise holdings of surplus and under-performing assets and will lower service costs.	
3.1	Under-utilised and under-performing assets are identified as part of a regular systematic review process.	A1	Monthly reports summarise the plant performance and report on findings of any investigation. The O&M Contractor produces weekly and monthly reports. The monthly Class 2 Report summarises: <ul style="list-style-type: none"> • Performance criteria • Matter for approval • Opportunities for success 	

No.	Asset Management System Element / Criteria	Rating	Findings (► Observations)	Recommendations
			<ul style="list-style-type: none"> • Data on corrective actions • Financial reports (planned vs actual costs) • Risk report. <p>Monthly O&M Meetings review the information provided in the reports. Plant performances are also reviewed in regular assessments of ED assets against global trends through a world wide web report.</p>	
3.2	The reasons for under-utilisation or poor performance are critically examined and corrective action or disposal undertaken.	A1	<p>A range of reports provide management reporting of plant operation and performance. These include:</p> <ul style="list-style-type: none"> • Vestas, the O&M Contractor prepares monthly operating status reports, the "Maintenance and Service Monthly Report Class I"; • A monthly "Operations And Maintenance Monthly Report" which includes Vestas report and the EDWF Manager report; • An "Annual Operations Report", the last being July 2010 to June 2011. <p>The reports document any incident that have impacted the plant operation and provide reasons for the event. The Vestas report includes:</p> <ul style="list-style-type: none"> • Safety and environmental performance data • A list of incidents with commentary and status • A list of the 10 worst performing turbine generators • Status of main bearings • Outstanding defects register • Availability and output of each of the 48 wind turbines. <p>Investigations are carried out on plant that is performing poorly. Investigations are identified in the SAP system.</p>	
3.3	Disposal alternatives are evaluated.	A1	The only significant disposal activity has been the disposal of a Meteorological Mast which was surplus to requirements. The mast was originally required for initial wind data, however it was no longer required and was going to represent a safety risk if left standing. There was evaluation of contractors' proposals and best and most cost effective proposal was accepted.	

No.	Asset Management System Element / Criteria	Rating	Findings (► Observations)	Recommendations
3.4	There is a replacement strategy for assets.	A1	There is a long term strategy for the assets. EDWF is targeting a wind turbine life of 25 years. At this point there are no plans for the wind turbine replacement.	
4	Environmental Analysis		The asset management system regularly assesses external opportunities and threats and takes corrective action to maintain requirements.	
4.1	Opportunities and threats in the system environment are assessed.	A1	<p>Opportunities and threats are assessed in the AMP and in monthly and annual reports in regard to their effect on EDWF's operation including:</p> <ul style="list-style-type: none"> • Safety and environmental consideration; • Community expectations and feedback, especially in regard to noise, combined bushfire management; • Land owner expectations; • Weather events and wind availability. <p>At this point there are no contractual threats to the plant commercial performance.</p>	
4.2	Performance standards (availability of service, capacity, continuity, emergency response, etc) are measured and achieved.	A2	<p>EDWF and the O&M Contractor continually monitor and report on performance standards. Most significant performance indicators are:</p> <ul style="list-style-type: none"> • Energy sent out • Plant availability (> 97%) • Forced outage (< 1.5%) • Maintenance outage (< 1.5%) • Capacity factor • Wind speed. 	
4.3	Compliance with statutory and regulatory requirements.	A2	<p>Legal, environmental and safety obligations of the asset owner are addressed in the AMP, in performance indicators for stakeholders' expectations. In addition the "Emu Downs Wind Farm Compliance Manual", last revised in June 2009, provides a detailed summary of obligations related to the regulatory regimes that apply the Emu Downs Wind Farm. Some of the regimes are:</p> <ul style="list-style-type: none"> • Generation licence related and obligations; • Market Rules; 	

No.	Asset Management System Element / Criteria	Rating	Findings (▶ Observations)	Recommendations
			<ul style="list-style-type: none"> • creation and transfer of Renewable Energy Certificates (REC); • Power Purchase Agreements with Western Power; • Connection, Network Access Agreement and Technical Code requirements with Western Power; • Green Power; • registration and reporting of energy production and greenhouse gas emissions under the NGER Act. <p>There was evidence of compliance reports being submitted to the Authority on time and approved by the Authority.</p> <p>There was evidence of advice to the Authority of changes in the AMP as per Clause 16.2, noted by the Authority on 19 May 2010.</p> <p>Actions arising from the Asset Management System Review of 2011 were also tracked. Correspondence to and from the Authority was available for review.</p>	
4.4	Achievement of customer service levels.	A2	<p>Customer service levels are included in the suite of performance indicators noted above. Service levels include, among others:</p> <ul style="list-style-type: none"> • obligations within market for energy delivery, the commercial requirement is the minimum quantity to be supplied; • control of power factor, adjusted to suit Western Power network demand and controlled by Western Power; • achievement of minimum RECs; if insufficient these need to be outsourced; • compliance with Western Power Technical Rules for dispatch and operation, proven by commissioning tests; • Maintenance of power quality, the plant can be tripped if power parameters are outside set limits. <p>Monthly reports monitor performance against service levels.</p>	
5	Asset Operations		Operations plans adequately document the processes and knowledge of staff in the operation of assets so that service levels can be consistently achieved.	
5.1	Operational policies and procedures are documented and linked to service levels required.	A1	Operational policies are clearly documented and implemented. There is a strong link between the service levels and the operational policies and procedures.	

No.	Asset Management System Element / Criteria	Rating	Findings (► Observations)	Recommendations
			<p>The O&M Contractor has a "Service Management Plan" (SMP), last revised in October 2010, which documents Vestas' policies and procedures. The plant is managed under the SAA, which represents a warranty, operation and maintenance agreement. The following O&M regimes have been implemented or planned:</p> <ul style="list-style-type: none"> • A first period of two years following construction where the operations and maintenance function was carried out by the OEM (Vestas) under the EPC contract; • A second period of five years between 2008 to 2013 where the SAA is in effect, where the operation and maintenance of the wind turbine and generators (WTG), WTG transformers and HV isolators is carried out by the O&M Contractor (Vestas) to a warranted availability of 97%. The substation and the distribution network O&M maintenance is Vestas' responsibility, however the availability of this plant is the owner's responsibility; • A third period of increasing O&M costs between 2013 and 2023, where increasingly the plant will require significant condition assessment and planned overhauls. 	
5.2	Risk management is applied to prioritise operations tasks.	A2	<p>There is a process of application of risk analysis and management throughout the performance of the operation tasks. Risk analysis is applied in AMP annually and as required for individual response to events, e.g. a recent fire in the SVC Panel has necessitated risk review of stock holding. Vestas has in place four levels of priority, from immediate correction, to 4 days, 2 weeks and longer.</p>	
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 and accounting data.	A1	<p>The asset register is held in Vestas' SAP which also manages work activities such as asset maintenance and inspection.</p>	
5.4	Operational costs are measured and monitored.	A1	<p>Operational costs are captured on Vestas' SAP system, through Service Orders which track hours and material expended. Costs to the owner are on the basis of the SAA and include penalties and incentives such as Contractor Availability (CA),</p>	

No.	Asset Management System Element / Criteria	Rating	Findings (▶ Observations)	Recommendations
			Availability Liquidated Damages (ALDs) and Incentive Payments (IPs).	
5.5	Staff receive training commensurate with their responsibilities.	A2	<p>There was evidence of the application of training throughout the operation. A local training register is maintained and synchronised with the corporate system and inductions are performed on site for site entry.</p> <p>Training in SAP allows access to specific areas of the system and different levels of interaction, with read only or modification rights, depending on the authorisation level.</p>	
6	Asset Maintenance		Maintenance plans cover the scheduling and resourcing of the maintenance tasks so that work can be done on time and on cost.	
6.1	Maintenance policies and procedures are documented and linked to service levels required.	A1	<p>Maintenance policies aim at maintaining the required service levels by the application of Vestas' maintenance regime. This includes the application of planned and documented A, B and C services to the WTG. WTG services are bundled together to reduce the number of outages and maintain high availability.</p> <p>The main service levels driving maintenance are the Maintenance Outage Factor (< 1.5%), the Forced Outage Factor (< 1.5%) and the Availability (> 97%).</p>	
6.2	Regular inspections are undertaken of asset performance and condition.	A1	Inspections are undertaken throughout the year in accordance with a maintenance planning calendar included in monthly reports, with plans entered in the SAP maintenance management system and with Vestas global inspection and test plans.	
6.3	Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule.	A1	<p>The "EDWF - Scheduled Service - 2012 to 2016" planning calendar included in monthly reports shows the program of maintenance services to be performed. Timing of services may vary slightly from plan due to external requirements or wind conditions. Most of the intensive maintenance is planned for periods of low demand. Maintenance jobs are created in SAP maintenance management system and Service Orders generated to initiate work.</p> <p>Service reports were available to record the outcome of routine A, B and C services. Reports were available to show emergency and corrective maintenance required for fire in SVC Panel.</p> <p>Process Performance Indicators (PPIs) report on notifications of work and overdue service orders.</p>	

No.	Asset Management System Element / Criteria	Rating	Findings (► Observations)	Recommendations
6.4	Failures are analysed and operational/maintenance plans adjusted where necessary.	A2	<p>Incident investigation is managed through Vestas database for hazard identification which manages audits, incidents, MSDS (Material Safety Data Sheet). Issues with a generator make due to a manufacturing problems resulting in insufficient insulation on windings have been estimated to result in 20% replacement of generators over the life of the project. A change in the operational regime of the generators has been effected to reduce the temperature of the windings, thus extending the life of insulation.</p> <p>Other failures that have been analysed are:</p> <ul style="list-style-type: none"> • Main bearings failures on WTG28 and 01; • SVC failures; • 54 Blades damaged including 34 damaged due to lightning. <p>Outstanding and open defects are reported in Vestas "Maintenance and Service Monthly Report", May 2012.</p>	
6.5	Risk management is applied to prioritise maintenance tasks.	A1	Prioritisation of maintenance task is through the P1 to P4 classification as reported on item 5.2, from immediate correction, to 4 days, 2 weeks and longer.	
6.6	Maintenance costs are measured and monitored.	A1	Maintenance costs are recorded in Vestas Service Orders within the SAP maintenance management system. Maintenance costs are reported in monthly DIVA reports by APA Group.	
7	Asset Management Information system (AMIS)		The asset management information system provides authorised, complete and accurate information for the day-to-date 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.	
7.1	Adequate system documentation for users and IT operators.	A1	Vestas staff receive training for access to the SAP system.	
7.2	Input controls include appropriate verification and validation of data entered into the system.	A2	<p>Processes are in place to provide appropriate verification and validation of data entered into the system:</p> <ul style="list-style-type: none"> • Staff updating the data on the systems need to have appropriate training and 	

No.	Asset Management System Element / Criteria	Rating	Findings (► Observations)	Recommendations
			authorisation. <ul style="list-style-type: none"> • Data of significance is entered into the system from SCADA from the WTG. • There are 48 WTG providing validation of data. • There is continuous checking of data through monthly and annual reports and global review of performance. • There is independent checking by the EDWF Manager of meter data recorded by Western Power meters. 	
7.3	Logical security access controls appear adequate, such as passwords.	A1	Access to the asset management systems is controlled through access authorisation and passwords. There are level of access such as read only and modification rights. Controls appear adequate for the operation.	
7.4	Physical security access controls appear adequate.	A1	Access to the Emu Downs office site is controlled through locks at points of entry. Similar controls are in place at APA Group. Physical security access controls to the AMIS appear adequate.	
7.5	Data backup procedures appear adequate.	A2	Systems are backed up daily: <ul style="list-style-type: none"> • SCADA information stored on its server is backed up in real time to tape at the substation; tapes are rotated monthly, one tape is in use at the substation and three tapes are kept separately at the site office; • WTG store seven full days of data and a lower level of data for 21 days; • SCADA can reload data from the WTGs; • All WTG information is recorded in servers in Denmark and can be retrieved. 	
7.6	Key computations related to licensee performance reporting are materially accurate.	A1	SCADA data is provided by automatic systems. Data included in performance reports is verified independently by the O&M Contractor and the EDWF Manager. There is adequate evidence to show that the	
7.7	Management reports appear adequate for the licensee to monitor licence obligations.	A1	Management reports appear adequate for the licensee to monitor licence obligations. A suite of monthly and corporate reports allow management to monitor the performance of the assets. Licence obligations are captured in the "Emu Downs Wind	A recommendation has been made in the review of the Post Review Implementation Plan 2009, at Effectiveness Criterion 7.7 in regard to

No.	Asset Management System Element / Criteria	Rating	Findings (► Observations)	Recommendations
			Farm Compliance Manual", last issued on 30 September 2009 and in the annual "EDWF Year Plan" which identifies licence obligations in a calendar. There is a significant time interval between reviews of the "Emu Downs Wind Farm Compliance Manual". "Management Committee Notes" are prepared monthly to manage the monthly Management Committee Meetings between the EDWF Manager and the owner and to report on obligation actions.	reviewing licence obligations in the compliance manual on an annual basis.
8	Risk Management		An effective risk management framework is applied to manage risks related to the maintenance of service standards.	
8.1	Risk management policies and procedures exist and are being applied to minimise internal and external risks associated with the asset management system.	A1	Risk plan is included in the "EDWF Year Plan". Additional risk plans have been created by Vestas in their SMP. The "Emu Downs Wind Farm Risk Management Strategy" provides high level direction for risk policy and approach.	
8.2	Risks are documented in a risk register and treatment plans are actioned and monitored.	A1	Risks are recorded in the <ul style="list-style-type: none"> • Register "Key Plant Related Risks - Plant Risk Management Summary" in the AMP; • "EDWF Risk Summary" in the "EDWF Year Plan". New conditions and events are also assessed for risks and appropriate actions reported and monitored in system.	
8.3	The probability and consequences of asset failure are regularly assessed.	A1	Risks are identified and assessed yearly as per "EDWF Year Plan 2011-12". The Operation Service Provider Vestas has also identified risks and responses in its SMP which also include the "Emergency Response Plan" for the Emu Down facility. Risks plans are updated with annual update of Year Plan. Asset failure is regularly reviewed through monthly performance reports.	
9	Contingency Planning		Contingency plans have been developed and tested to minimise any significant disruptions to service standards.	

No.	Asset Management System Element / Criteria	Rating	Findings (▶ Observations)	Recommendations
9.1	Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks.	B1	<p>A “Crisis Management Plan (including Emergency Response)” (CMP) is available. The CMP is well documented and comprehensive, however its last issue was for construction, in June 2006 and it has not been updated since.</p> <p>The O&M Contractor has an “Emergency Response Plan” (ERP) in its SMP. The ERP contains various scenarios including threats to assets, to personnel, failure of operational machinery, natural disasters, environmental incidents and man made threats. These scenarios are tested monthly on a random playrole approach. Issues arising from the tests are entered in Hazard Database and followed up until closed.</p> <p>From the discussions with operational personnel and review of documentation there was evidence of the application of emergency responses.</p> <p>▶ However from a system continuity point of view the CMP, which was applicable during construction, should be reviewed and, if required, updated to suit current operation. The CMP should then be implemented.</p>	<p>5. The Crisis Management Plan was prepared for the construction project and should be reviewed and, if required, updated to suit current operation. The CMP should be implemented through dissemination and testing.</p>
10	Financial Planning		A financial plan that is reliable and provides for the long-term financial viability of the services.	
10.1	The financial plan states the financial objectives and strategies and actions to achieve the objectives.	A1	Financial objectives and strategies are identified in the AMP. Budgets identify specific CAPEX and OPEX expenditure. Maximising sent out energy and availability are the main financial objectives.	
10.2	The financial plan identifies the source of funds for capital expenditure and recurrent costs.	A1	<p>Costs are funded by revenue. APA Group sets budgets including revenue forecasts. Revenue is contracted through long term off-take agreements. Revenue is wind dependent and outside of licensee’s control.</p> <p>An “Acquisition Budget” by APA Group includes five year forecast of revenue and expenditure including OPEX and CAPEX until 2018.</p>	
10.3	The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets).	A1	An “Acquisition Budget” by APA Group includes five year forecast of revenue and expenditure including OPEX and CAPEX until 2018.	

No.	Asset Management System Element / Criteria	Rating	Findings (▶ Observations)	Recommendations
10.4	The financial plan provides firm predictions on income for the next five years and reasonable indicative predictions beyond this period.	A1	An "Acquisition Budget" by APA Group includes five year forecast of revenue until 2018.	
10.5	The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services.	A1	An "Acquisition Budget" by APA Group includes five year forecast of expenditure including OPEX and CAPEX until 2018.	
10.6	Significant variances in actual/budget income and expenses are identified and corrective action taken where necessary.	A1	Variations are reviewed on a monthly basis. APA Group with the DIVA Report reviews monthly the YTD planned and actual costs and revenue; the report analyses variations of actuals over and under budgets.	
11	Capital Expenditure Planning		A capital expenditure plan that provides reliable forward estimates of capital expenditure and asset disposal income, supported by documentation of the reasons for the decisions and evaluation of alternatives and options.	
11.1	There is a capital expenditure plan that covers issues to be addressed, actions proposed, responsibilities and dates.	A1	A capital expenditure plan is in place and is incorporated in the financial documentation of the assets. The CAPEX is prepared 12 weeks prior to the end of the financial year. CAPEX is presented in a CAPEX plans and in reports including: <ul style="list-style-type: none"> • EDWF Manager Budget Plan; • The "Capital Expenditure Budget For The Period 1 July 2011 Ended 30 June 2012" (CAPEX Plan) which identifies individual CAPEX projects, prepared by the EDWF Manager; • DIVA Report by APA Group. 	
11.2	The plan provides reasons for capital expenditure and timing of expenditure.	A1	Reasons and timing for CAPEX are included in the CAPEX Plan.	
11.3	The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan.	A1	The expenditure plan is consistent with the programs identified in the AMP and the Yearly Plan.	

No.	Asset Management System Element / Criteria	Rating	Findings (► Observations)	Recommendations
11.4	There is an adequate process to ensure that the capital expenditure plan is regularly updated and actioned.	A1	CAPEX Plan performance is reviewed through the DIVA monthly reports.	
12	Review of AMS		Review of the Asset Management System to ensure the effectiveness of the integration of its components and their currency.	
12.1	A review process is in place to ensure that the asset management plan and the asset management system described therein are kept current.	B2	The AMP is reviewed at five year intervals. Yearly Plans summarise the year operation and examine the performance against the objectives.	6. (OFI) A methodology should be adopted for an annual check of the Asset management Plan to ensure that strategies and plans are still current. Results could be included in the Yearly Plans.
12.2	Independent reviews (e.g. internal audit) are performed of the asset management system.	B2	There are investigations on assets and on problems with the assets, most of these investigations are reactive. Vestas as O&M Contractor conducts annual audits of its operations. The EDWF Manager conducts continuous review of the operation of the O&M Contractor. External reviews are carried out as part of the biannual or triennial electricity Licence asset management system review.	

4 CHANGES TO THE LICENCE

No changes to the licence conditions are recommended.

5 CONCLUSION

The Performance audit has found a high level of compliance with the requirements of the licence.

The Asset Management System Review 2012 has assessed all 12 elements of the asset management system (AMS) outlined in the guidelines and the actions taken in response to recommendations from the previous AMS review (2009). The review has found that EDWF's asset management system is performing satisfactorily.

Actions from the previous audit have been completed. Where new opportunities for improvement related to the previous actions have been identified, they have been included in the new set of recommendations.

6 POST AUDIT IMPLEMENTATION PLAN

The Post Audit Implementation Plan (PAIP) is a document prepared by the licensee in response to the recommendations made in the audit. As it represents the licensee's views and actions it does not form part of the audit report, however it has been included in Appendix A in order to complete the documentation of the report.

Each key review finding and recommendation has been listed in the PAIP. For each recommendation the Licensee has recorded responses and corrective actions, responsibility for the actions and a proposed date for completion.

Appendix A - Post Audit Implementation Plan



1 POST AUDIT/REVIEW IMPLEMENTATION PLAN 2012

The Post Audit/Review Implementation Plan 2012 has been prepared following the 2012 audit of Emu Downs Wind Farm and the review of its asset management system. For simplification reference to the audit/ review will be addressed with the term “audit”.

The auditor has prepared the template of the plan and has recorded the audit recommendations.

In accordance with the Economic Regulation Authority’s “Audit Guidelines: Electricity, Gas and Water Licences”, August 2010 (the guidelines) the licensee is responsible to develop the plan further. In the plan the licensee records the actions that will be taken by the licensee to address the recommendations and opportunities for improvement highlighted by the auditor in the audit report, together with responsibilities and timing.

The post-audit implementation plan identifies, for each of the recommendations made by the auditor:

- the action(s) to be taken to address the auditor’s recommendations;
- the position(s) or business function(s) in the licensee’s organisation that will be responsible for undertaking the nominated action(s); and
- the date by which the nominated action(s) will be completed.

Notes:

- [OFI] are Opportunities for Improvement.

Table 1: Post Audit Implementation Plan

PERFORMANCE AUDIT						
No	CI	Licence Requirement	Recommendations	Actions	By Whom	Date
446	5.1	<p>Electricity Industry Metering Code clause 6.1(2)</p> <p>A user must, in relation to a network on which</p>	<p>1. Review of compliance with all obligations should be carried out yearly to ensure that all requirements are up to date and that they are not overlooked. This could take</p>	▶		

PERFORMANCE AUDIT						
No	CI	Licence Requirement	Recommendations	Actions	By Whom	Date
		it has an access contract, comply with the rules, procedures, agreements and criteria prescribed.	place through an annual check of the Compliance Manual.			
448	CI 5.1	Generation Licence condition 5.1 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.	Western Power has provided contact details in its "Emu Downs Wind Farm - Operating Protocol", last issued on 2 Aug 2006. 2. Western Power and EDWF communication details should be updated to reflect current contact arrangements. Some of the telephone contact numbers are not in use and should be updated. (OFI) 3. The protocol could be updated to include a scope describing the function of the protocol. (OFI)	▶		
449	CI 5.1	Electricity Industry Metering Code clause 7.2(2) A network operator must notify each Code participant of its initial contact details and of any change to its contact details at least 3 business days before the change takes effect.	▶ Recommendation as at item 448.	▶		
451	CI 5.1	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 at least 3 business days before the change takes effect.	▶ Recommendation as at item 448.	▶		
Actions from Previous Post Audit Implementation Plan						



PERFORMANCE AUDIT						
No	CI	Licence Requirement	Recommendations	Actions	By Whom	Date
		All previous actions have been combined with current actions.				

Table 1: Post Review Implementation Plan

ASSET MANAGEMENT REVIEW					
No	AMS Element / Effectiveness Criteria Finding	Recommendations	Actions	By Whom	Date
2	Asset Planning				
EC 1.4	Lifecycle costs of owning and operating assets are assessed.				
1.1	The Whole of Lifecycle Model was updated on 2 June 2010 and brought up to date up to the FY 2008-09. The Whole of Lifecycle Model needs to be updated to include actual figures for FYs 2009-10 and 2010-11.	<ol style="list-style-type: none"> 1. Update Whole of Lifecycle Model to include actual figures for FYs 2009-10 and 2010-11. Regular updates of Whole of Lifecycle model should be prompted by the review of the Compliance Manual. (Refer to recommendation for item 446 above in Performance Audit section) 	▶		
2	Asset Creation and acquisition				
2.1	Due to the small expenditure the purchase of a storage shed was made from an approved supplier, however there should be a more rigorous process for project justification for larger levels of expenditure. Documents such as purchasing specifications should be in use.	<ol style="list-style-type: none"> 2. There should be a more rigorous process for project justification for larger levels of expenditure. 3. Purchasing of assets should require the preparation of appropriate purchasing documentation such as specifications. 	▶		
EC 2.4	Commissioning tests are documented and completed.				
2.2	There is a procedure in the original EPC Contract, however no procedure is in place for future works.	<ol style="list-style-type: none"> 4. Prepare a procedure to address commissioning and plant acceptance to define performance criteria for new or refurbished 	▶		

ASSET MANAGEMENT REVIEW					
No	AMS Element / Effectiveness Criteria Finding	Recommendations	Actions	By Whom	Date
	No formal procedure is in place to address commissioning tests.	assets and record commissioning/acceptance data.			
7	Asset Management Information System				
EC 7.7	Management reports appear adequate for the licensee to monitor licence obligations.				
	Compliance Manual was reviewed and updated last in 2009.	5. A recommendation has been made in the Performance Audit, item 446.	▶		
9	Contingency Planning				
EC 9.1	Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks.				
9.1	A "Crisis Management Plan (including Emergency Response)" (CMP) is available. The CMP last issue was June 2006 and has not been updated since. The CMP was prepared for the construction project and should be reviewed and, if required, updated to suit current operation.	6. The Crisis Management Plan was prepared for the construction project and should be reviewed and, if required, updated to suit current operation. The CMP should be implemented through dissemination and testing.	▶		
12	Review of AMS				
EC 12.1	A review process is in place to ensure that the asset management plan and the asset management system described therein are kept current.				
12.1	The AMP is reviewed at five year intervals.	7. (OFI) A methodology should be adopted for an annual check of the Asset management Plan to ensure that strategies and plans are still current. Results could be included in the Yearly Plans.	▶		
Actions from Previous Post Asset					



ASSET MANAGEMENT REVIEW					
No	AMS Element / Effectiveness Criteria Finding	Recommendations	Actions	By Whom	Date
	Management Review Implementation Plan				
	All previous actions have been combined with current actions.				

Appendix B - Documentation reviewed

Documentation Reviewed:

Plans and agreements

1. EDWF Asset Management Plan - Whole of Life Model Rev 2
2. EDWF Asset Management Plan Rev 2
3. EDWF Crisis Management Plan - Revision B
4. EDWF Compliance Manual - Revision 1
5. EDWF Griffin Business Service Agreement Apr 2008
6. EDWF Griffin Marketing & Trading Services Feb 2007
7. EDWF Health and Safety Management Plan - Final - Revision A CS
8. EDWF JV Management Agreement Jul 2005
9. EDWF Risk Management Strategy - Rev 0
10. Emu Downs - Farm Rules
11. Lease Agreement
12. Powerplan Services Agreement 2009

EDWF Yearly Plans

13. EDWF Yearly Plan 2009-2010 - Final
14. EDWF Yearly Plan 2010-2011 - Final
15. EDWF Yearly Plan 2011-2012 - Rev 0 – Final
16. EDWF Year Plan 2012-2013 - Draft

ERA Correspondence and Audit Information

17. 2010 12410 2010 May 19 Letter received from Paul Reid ERA re EDWF Asset Management plan for the joint venture
18. 2010 June 15, Letter received from Economic Regulation Authority (ERA)

EDWF Post Audit Implementation Plan Update

19. EDWF - 070710-02 - ERA Post Audit
20. EDWF - ERA 2009 Update PAIP
21. ERA Letter 2010 Request PAIP Update
22. ERA Letter 2010 Updated Asset Management Plan for the joint venture
23. R0909EDWF_2 - EDWF 2009 Audit Report

Compliance Reports

24. EDWF - 070710-01 - ERA Compliance Report 0910
25. EDWF - 140709-01 - ERA Compliance Report 0809
26. EDWF - 250711-01 - ERA Compliance Report July 2010 to June 2011
27. ERA Letter D71327
28. ERA Letter Receipt 2010 Generation Licence Compliance Report
29. ERA Letter Receipt 2011 EGL Compliance Report
30. ERA Response 0809

Licence

31. 20090318 EDWF Joint Venture Generation Licence EGL1 Version3
32. EDWF Generation_licence_V2_1-8-05
33. EDWF Licence Map
34. ERA D45983 2010 Generation Licence Compliance Report
35. ERA Licensing fee 2009
36. ERA Perform Audit 2009
37. 20110114 EDWF Holdings 1 Pty Ltd & EDWF Holdings 2 Pty Ltd (t-a Emu Downs Wind Farm Joint Venture) Electricity Generation Licence 1 (EGL001)- 13 January 2011

Financial

38. CAPEX BUDGET EDWF Final 2011 - 2012
39. CAPEX EDWF Manager Budget 2010-2011 20-06-10
40. EDWF - Insurance Renewal 2010-2011
41. Expenditure Plan Rev 1 - 2012-2013
42. Final 2011 - 2012 CAPEX EDWF Manager
43. Final EDWF Manager Budget 2011-2012 29-05-11
44. Fixed Asset Disposals Sept 2010
45. Part 2 Final Draft EDWF Manager Budget 24-05-09
46. 2012 - 2013 EDWF Manager Budget - Final a
47. Acquisition budget (simple redacted) - For 2012 Licence Audit
48. DIVA - June 2012 Results – EDWF
49. FY2013 Budget Presentation template – EDWF
50. Email Notification of change in beneficial ownership of EDWF, APA Group to ERA, 5 July 2011
51. Email EDWF sale, ERA to APA Group, 30 June 2011

52. Email TRIM_ Notification of change in beneficial ownership of EDWF, ERA to APA Group, 5 July 2011

Asset Information

53. EDWF-E-5200 Rev 03 AB - Layout
54. EDWF-E-5201 Rev 07 AB - SLD
55. Fact Sheet
56. Tower Layout
57. Vestas-V82 Wind Turbine

Operations Report

58. EDWF - Annual Operations Report July 2009 to June 2010
59. EDWF - Annual Operations Report July 2010 to June 2011
60. EDWF MCM Info Pack for July 2011 - Final
61. EDWF MCM Info Pack June 2010 - Final
62. EDWF MCM Notes for June 2012
63. EDWF Monthly Operations Review May 2012
64. EDWF O&M Monthly Report - May 2012
65. EDWF O&M Report July to December 2011
66. EDWF O&M Monthly Report - April 2012
67. Calc - Energy 22-05-12
68. Calc - Service Report R2
69. Report Table
70. SERVICE REPORT R2
71. SUBSTATION ENERGY
72. EDWF O&M Report July 2011 to June 2012

Procedures, data, operation and maintenance information

73. EDWF - Vestas - HV Switching Authorisation
74. EDWF HV Equipment Operating Procedures Rev 1
75. EDWF HV Safety Procedures Rev 1
76. EDWF HV Switching Instructions Rev 2
77. EDWF-SMP-001225-E
78. Vestas - EDWF SAA (Executed Copy)

79. Vestas Consent Deed (Services Agreement) - 23Jul09
80. Vestas June 2010 Report - Class I
81. Vestas June 2011 Report - Class I
82. Vestas May 2012 Report - Class I.v1.1
83. EDWF - WP HV Maintenance Schedule 09-10
84. EDWF - WP HV Maintenance Schedule 10-11
85. EDWF - WP HV Maintenance Schedule 11-12
86. WPC Operating Protocol (WE2722624V4)
87. WP - EDWF Connection Agreement Conformed Copy
88. WP - Network Access Agreement Conformed Copy