ORD HYDRO PTY LTD

Performance Audit & Asset Management System Review Report 2022

ELECTRICITY INTEGRATED REGIONAL LICENCE – EIRL4

Audit Report	Authorisation	Name	Position	Date
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GLOSSARY

ADM - Argyle Diamond Mine

AEMO – Australian Energy Market Operator

AMP - Asset Management Plan

AMS – Asset Management System

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

BOP – Balance of Plant

CMMS - Computerised Maintenance Management System

Compliance Reporting Manual - Electricity Compliance Reporting Manual – February 2022

CT – Current Transformer

EIRL4 – The Electricity Integrated Regional Licence for Pacific Hydro Pty Ltd

EKPS - East Kimberley Power System

EMP – Environmental Management Plan

ERA – Economic Regulation Authority

ETAC – Electricity Transfer Access Contract

GES – Geographe Environmental Services

HP – Horizon Power

HPCC – Horizon Power Control Center

LATV – Lake Argyle Tourist Village

MW – MegaWatt

NFDA – Non Financial Delegation of Authority

NIS - Non-Interconnected Systems

NWIS – North West Interconnected System

OHPS – Ord Hydro Power Station

PPA – Power Purchase Agreement

PH – Pacific Hydro

SAMP – Strategic Asset Management Plan

SCADA - Supervisory Control and Data Acquisition

VT – Voltage Transformer

WEM – Wholesale Electricity Market

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

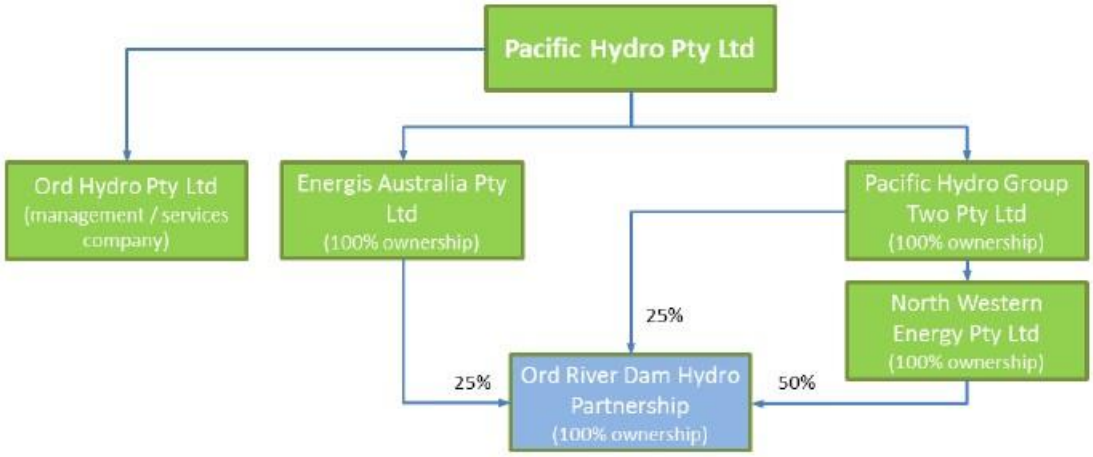
1. EXECUTIVE SUMMARY

Ord Hydro Pty Ltd is the holder of an Electricity Integrated Regional Licence (**EIRL**) issued by the Economic Regulation Authority (**ERA**). For the purposes of this Performance Audit and Asset Management System Review Report, the Power Station owned Ord Hydro Pty Ltd will be referred to as "Ord Hydro" or "the Ord" throughout this report.

Ord Hydro Power Station (**OHPS**) is managed by Pacific Hydro Pty Ltd (**PH**) and jointly owned by North Western Energy Pty Ltd, Pacific Hydro Group Two Pty Ltd & Energis Australia Pty Ltd.

Pacific Hydro (**PH**) is responsible for corporate processes including but not limited to IT systems, cyber security, human resources, document management, Pacific Hydro Management Committee and budget approvals.

Figure 1 Pacific Hydro Operational Schematic



Ord Hydro Pty Ltd holds an Electricity Integrated Regional Licence (**EIRL4**) issued by the Economic Regulation Authority under the *Electricity Industry Act 2004*. This performance audit and asset management review is the 5th audit and review undertaken by the Licensee since commissioning and was conducted in accordance with the 2019 Audit and Review Guidelines – Electricity and Gas Licences (the **Guidelines**) issued by the ERA to assess the effectiveness of the licensee's Asset Management System (**AMS**).

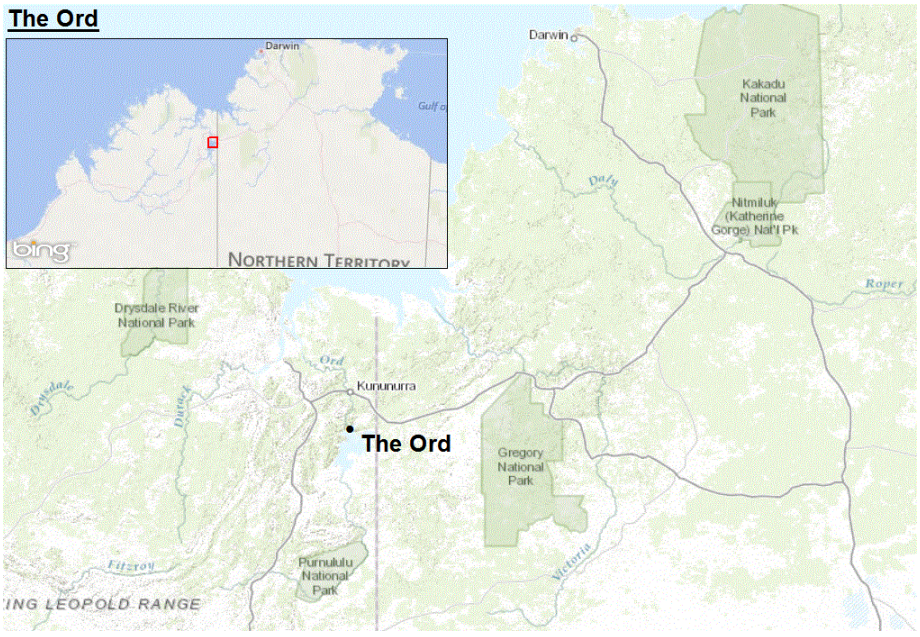
Sections 13 and 14 of the *Electricity Industry Act 2004* require as a condition of every licence that the licensee must, not less than once in every period of 24 months (or any longer period that the Authority allows) calculated from the grant of the licence, provide the Authority with a performance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

The ERA decided to maintain the period covered by the current audit and review at 48 months. As such, the period for the review is 1 July 2018 to 30 June 2022 (**audit or review period**), and due to extensions required and approved by the ERA the report is due to be submitted to the Authority in February 2023.

Asset Overview

The asset consists of four Kvaerner (Francis) turbines, connected to two 19.5MVA Alstom generators with a nominal capacity of 30 MW (MegaWatt). The Ord Hydro site is located approximately 45km's South of one of the main customers it supplies, the township of Kununurra.

Figure 2 Pacific Hydro Site Location



Ord Hydro's generation supplies two key customers:

- Horizon Power (Kununurra & Wyndham Townships) (**KNX**) and
- Argyle Diamond Mine (**ADM**) which has ceased operation

There are 3 connection point KNX substation (Kununurra), ADM substation (ADM mine site) and Lake Argyle Tourist Village (**LATV**). To connect these customers there is approximately 130km's of overhead transmission lines which together with the hydro assets form the remote East Kimberley Power System (**EKPS**). LATV is connected via 22 kV line.

During the audit period the Argyle Diamond Mine ceased operations in November 2020, and the supply of power is now limited to the demand requirements for maintenance and decommissioning activities. The ramped down power supply is expected to continue until 2026 after which no demand is expected to be required

The design life of the Ord power station is nominally 50 years, however operation well beyond this time is anticipated. The current lifecycle forecast is only presented to June 2036, as the Water Supply Agreement

and as such the State Agreement end at this time. It is assumed that with the renegotiation of these agreements, operation will continue beyond this date.

The State Agreement allows Ord Hydro to operate until the expiry of the term of the Lease for the power station, which would occur before the expected expiry of the operational life of the asset. The term expires on 30 June 2036. This term has also been reflected in the Integrated Regional Licence and the Water Supply Agreement.

Key contracts and notable dates applicable to the Ord Hydro include:

- Electricity Integrated Regional Licence - expires 29th June 2036.
- Horizon Energy Power Purchase Agreement (**PPA**) – expired 1 July 2021 (renegotiated during the audit period i.e. 15 October 2020 current expiry date 1 July 2036)
- Water Supply Agreement – expired 1 July 2021 (renegotiated during the audit period current expiry date 1 July 2036)
- Argyle Diamond Mine PPA – anticipated to continue through to 2026 for decommissioning activities

It is understood that Ord Hydro are actively seeking customers to replace the reduction in demand due to ADM closure.

Previous Performance Audit and Asset Management Review Report (2018)

The previous Performance Audit and Asset Management System (**AMS**) review report was for the review period 1st July 2014 to 30th June 2018 and was conducted in accordance with the Audit and Review Guidelines – Electricity and Gas Licences April 2014.

The licensee confirmed that aside from the closure of the Argyle Diamond Mine (**ADM**) which has resulted in reduced demand for supply there have been no substantial changes to the assets or the business since the previous Performance Audit and AMS review.

The 2018 Performance Audit and AMS review reports as well as the ERA's Notice of Assessment are available on the ERA website.

The Performance Audit Report 2018 determined that there were 146 licence obligations applicable to Ord Hydro's licence and found:

- Four were rated A2 (adequate controls, non-compliant)
- Two were rated B2 (generally adequate controls, non-compliant)
- One was rated A/NR (adequate controls, not rated)
- One was rated B/NR (generally adequate controls, not rated)
- 55 were rated NP/1 (not performed, compliant)
- 83 were rated NP/NR (not performed, not rated).

The 2018 audit found six non-compliances. Five non-compliances were resolved during the audit period, or prior to the audit report being finalised.

TABLE 1A Performance Audit Compliant and Control Rating Scales

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

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

As required by the 2014 Guidelines, the licensee developed a post audit implementation plan (**PAIP**) to address licence compliance (refer table 1A) that were rated C, D, 2, 3 or 4 for the following licence obligation:

TABLE 1B Summary of Performance Audit Non-Compliance Ratings included in 2018 PAIP

Ref	Licence Obligation	Control Adequacy	Compliance Rating
01/2018	***Obligation 448A*** *Electricity Industry Metering Code clause 6.2* A network operator must, as soon as practicable and in any event no later than 6 months after the date this Code applies to it, submit to the ERA for its approval the prescribed documents in subclauses 6.2(a)-(d).	B	2

This recommendation contained in the 2018 PAIP was reviewed for effectiveness and implementation in the scope of audit (Refer Appendix 1) and actions taken by the licensee in response to recommendations for compliance with licence obligations in the previous audit report were considered.

The requirements of obligation 448A were still outstanding due to the impractical application of the Metering Code the nature of Ord Hydro's operations. Specifically, the Code was designed for the SWIS and for Network Providers with large numbers of customers. Ord Hydro has just two customers, as such, the requirement for the development of metrology procedure, model service level agreement and mandatory link criteria remain outstanding.

The Asset Management Review Report 2018 determined of the 12 asset management components prescribed in the ERA's Audit and Review Guidelines: Electricity and Gas Licences found:

- 10 components were rated A1 (documentation adequately defined, performing effectively).
- One component was rated B3 (documentation requires some improvement, performance requires corrective action).
- One component was rated B/NR (document requires some improvement, not rated).

Contingency Planning was the asset management component that was rated deficient (B3). This component was also rated deficient in the 2014 review. The ERA has informed Ord Hydro that it was to complete actions that address this deficiency by the due date, December 2019. However, completion of this recommendation was not undertaken during the review period.

There was one asset management process deficiencies identified within the review report (i.e. rated C, D, 3 or 4 – refer Table 2A). It was noted that the 2014 Guidelines left to the discretion of the licensee the need to determine whether to also include in the post-review implementation plan actions to address recommendations made by the auditor that represent opportunities to improve asset management effectiveness (i.e. rated A, B, 1 or 2 – Refer Table 2A). The process and policy and performance rating scales are further defined in Tables 13 & 14.

TABLE 2A Rating Scale Reviews - Process & Policy and Performance

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

As required by the 2014 Guidelines, the licensee developed a post review implementation plan (**PRIP**) to address asset management effectiveness criteria (refer table 2B) that were rated C, D, 3 or 4 for the following asset management criteria:

TABLE 2B Summary of Asset Management Deficient Criteria & Ratings included in 2018 PRIP

Ref	Asset Management Criteria	Process Rating	Performance Rating
03/2018	*9.1 Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks*	B	3

This recommendation contained in the 2018 PRIP was reviewed for effectiveness and implementation in the scope of the review (refer Appendix 2), in line with the Section 5.1.8 of the 2019 Guidelines, actions taken by the licensee in response to recommendations for asset management deficiencies in the previous review report were considered.

1.1 Performance Audit & Asset Management Review Conclusion

As specified in the approved Audit & Review Plan, we have undertaken a reasonable assurance engagement in assessing Ord Hydro's compliance with its Licence obligations and a limited assurance engagement on Ord Hydro's Asset Management System (**AMS**), relating to its Electricity Integrated Regional Licence (EIRL4) for the period from 1 July 2018 to 30 June 2022.

In our opinion, based on the procedures we have performed and the evidence we have obtained, the Audit Team determined that Ord Hydro has established control procedures and control environment commensurate with the nature of its operations and has complied with its licence, with the exceptions detailed in Table 5. The Audit Team also determined that Ord Hydro has established and maintained, an effective asset management system commensurate with its operational and maintenance activities and as such the processes have met the required levels of performance for the duration of the review period.

The licensee's AMS has maintained 3rd party certification for ISO 55000 with BSI since the previous review, however, the Ord Hydro Power Station itself was not subject to a site visit during the review period.

It is also noted that with the changes to the licensing requirements for generators Ord Hydro as less than 100 MW can opt to remove the generation requirements from its licences and as such the associated generation obligations, however, the transmission and applicable retail licence conditions would remain. The decision to maintain EIRL4 for Ord Hydro is for commercial consideration of the Licensee.

1.2 2022 Performance Audit and Asset Management Review Summary of Findings

The Asset Management System Review and the Performance Audit have been conducted in order to assess the effectiveness of Ord Hydro's Asset Management Systems and level of compliance with the conditions of its Electricity Integrated Regional Licence EIRL4.

As required by the Audit Guidelines Section 5.1.6.1, Table 3 lists the number of licence obligations that were given each combination of compliance and controls ratings. The table allows licensees and the ERA to confirm the auditor has rated all relevant licence obligations and provides a simple summary of the licensee's compliance during the audit period.

There were 9 non-compliant licence obligations in current audit period associated with administrative issues, integrity of annual compliance reports and obligations associated with the *2012 Metering Code.* One of the obligations was addressed by the licensee and effectively closed out during the audit period (Refer obligation 105). An explanation of the audit findings is detailed in Appendix 1.

TABLE 3 Compliance and Controls Ratings Summary Table

		Compliance Rating					
		1	**2**	**3**	**4**	**N/R**	**TOTAL**
Controls Rating	**A**	1	3	-	-	-	**4**
	B	1	6	-	-	-	**7**
	C	-	-	-	-	-	-
	D	-	-	-	-	-	-
	N/P	46	-	-	-	85	**131**
	TOTAL	**48**	**9**	-	-	**85**	**142**

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

There were 3 asset management criterion deficiencies (i.e. rated C, D, 3 or 4) identified in the current review and as such recommendations arising from the review are detailed in section 3.6. An explanation of the review findings is detailed in Appendix 2.

TABLE 4 Summary of Asset Management Process Overall Rating

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

Through the execution of the Audit and Review Plan, field work, assessment and testing of the control environment, the information system, control procedures and compliance attitude, the audit team members have gained reasonable assurance that Ord Hydro Pty Ltd had an effective asset management system with internal review processes implemented and had complied commensurate with its activities with its Electricity Integrated Regional Licence, with the exception of obligations detailed in Table 5. It is noted some of these non-compliances were technical non-compliances and were as a result of issues relating to the practical application of the Metering Code (Refer Appendix 1). The Licensee has had an internal change in responsibility for EIRL 4 and as such there was some gaps to understanding of the compliance processes during the audit and review period. The limited effectiveness of the correction actions to address the non-compliance from the previous audit was noted and partly attributable to confusion as to the requirement to comply with the technical non-compliances. It was noted that the Licensee had made several internal attempts to understand the obligations, and this was evident in the obligations register and other compliance and asset management system documentation.

TABLE 5 Summary Performance Audit Non-Compliances & AMS Deficiencies

REF	OBLIGATION / ASSET MANAGEMENT CRITERIA DESCRIPTION	NON-COMPLIANCE/AMS DEFICIENCY & EFFECTIVENESS OF CORRECTIVE ACTION
105*	***Economic Regulation Authority (Licensing Funding) Regulations 2014*** A licensee must pay the prescribed licence fees to the ERA according to clauses 6, 7 and 8 of the Economic Regulation Authority (Licensing Funding) Regulations 2014.	Standing Charges were paid outside the requirements of the obligations on two occasions during the audit period (i.e., Sept 2018 and March 2019). The payment of Standing Charges has been well addressed by the Licensee and future payments were made within the required timeframes. The Licensee demonstrated awareness to the obligation through controls and effective corrective action. As such, no further recommendations were made.
124*	***Electricity Industry Act, section 11*** A licensee must provide the ERA, in the manner prescribed, with any information that the ERA requires in connection with its functions under the Electricity Industry Act.	The 2018 and 2019 Annual Compliance Reports and the 2020 and 2021 Standing Charges data were submitted outside the required timeframes. The Licensee updated the Breach Register in October 2022, however, for the duration of the audit period there were inconsistencies between the licensee's breach register and the annual compliance reports (Refer Appendix for details). Additionally, it was determined during the audit that the compliance reports were consistent with the details in the Asset Management Plans (**AMPs)** and Lifecycle Cost Model (**LCM**) compliance data. Corrective action was taken in October 2022, outside the scope of the audit period. However, the Licensee will review the Breach Register again following the finalisation of the 2022 Performance Audit. The Licensee had established a process for review of its non-compliances (i.e. Obligations Register, however, it was not specific enough to facilitate compliance and as such was not effective. As such a Recommendation 02/2022 was made to address the non-compliance.
319*	***Electricity Industry Metering Code 2012*, Cl 3.1** A network operator must ensure that its meters meet the requirements specified in the applicable metrology procedure and comply with any applicable specifications or guidelines, including any transitional arrangements, specified by the National Measurement Institute under the National Measurement Act.	The Licensee had not established a Metrology Procedure as required by the Metering Code. A non-compliance was noted in relation to the frequency of calibration of Argyle Diamon Mine-Terminal 1 (**ADM-T1**). No corrective action was taken during the audit period and as such a Recommendation 03/2022 was made to address the non-compliance.
348*	***Electricity Industry Metering Code 2012*, Cl 3.13(4)** A check metering installation for a metering point must comply with the prescribed requirements.	The check metering installations on the Ord Hydro network were not calibrated although the main revenue meters were subject to calibration. The Licensee should determine the calibration requirements of the check meters on its Network were required as they were pre 2005 Metering and take action as required to ensure requirements were accurately reflected in operational and maintenance documentation and compliance with the PPAs and Metering Code achieved. No corrective action was taken during the audit period and as such a Recommendation 04/2022 was made to address the non-compliance.
369*	***Electricity Industry Metering Code 2012*, Cl 4.2(1)** A network operator must ensure that its registry complies with the Code and the prescribed clause of the market rules.	The Licensee Electrical Meters Summary (i.e. registry) was not compliant with all relevant requirements of the Metering Code (i.e. refer Standing Data Clause 4.3(1). Standing Data Items were not contained in the meter registry 5, 12, 18 and 19
370*	***Electricity Industry Metering Code 2012*, Cl 4.3(1)**	No corrective action was taken during the audit period in response to the and as such a Recommendations 05/2022 and 06/2022 were made to address the non-compliance.

REF	OBLIGATION / ASSET MANAGEMENT CRITERIA DESCRIPTION	NON-COMPLIANCE/AMS DEFICIENCY & EFFECTIVENESS OF CORRECTIVE ACTION
	The standing data for a metering point must comprise at least the items specified.	
447*	***Electricity Industry Metering Code 2012*, Cl 6.1(1)** A network operator must, in relation to its network, comply with the agreements, rules, procedures, criteria and processes prescribed.	The Licensee has not developed documentation or published its communication rules as required by the Metering Code. It was acknowledged that this was a technical non-compliance and appreciation as the nature of the operations was made by the Audit Team, however, an exemption was cannot be provided by the ERA, and the documentation and publication of the communication rules still remained outstanding. It was understood the ERA were unlikely enforce compliance with these Metering Code requirements give the size and scale of Ord Hydro's operations. However, given non-compliances related to calibration and meter registry standing data, the absence of internal operational and maintenance metrology procedures and the failure to comply following the renewal of the Horizon Power (**HP**) Power Purchase Agreement (**PPA**) recommendations 07/2022, 08/2022 and 09/2022 were made to address the internal compliance processes and the technical non-compliance with appreciation for nature and scale of Ord Hydro's operations.
448A*	***Electricity Industry Metering Code 2012*, Cl 6.2** A network operator must, as soon as practicable and in any event no later than 6 months after the date this Code applies to it, submit to the ERA for its approval the prescribed documents in subclauses 6.2(a)-(d).	
448C	***Electricity Industry Metering Code 2012*, Cl 6.19A(1)** A network operator must publish its communication rules as soon as practicable, and in any event within 6 months after the date this Code applies to it	
4.3**	**Compliance with statutory and regulatory requirements** Investigate any statutory or regulatory breaches and assess corrective action taken Review the adequacy of reporting and monitoring tools	Whilst it was noted Ord Hydro complied with the majority of EIRL obligations, non-compliance was noted throughout the review period for several EIRL4 obligations. There were numerous non compliances reported in the Annual Compliance reports, many being the same non compliances which were not rectified throughout the audit period. While it was acknowledged that these non-compliances were related to the impractical application of the Metering Code to Ord Hydro's operations there were areas of non-compliance that still required addressing (refer to Table 9 for Performance Audit Summary for specific details). Additionally, OH did not address the regulatory requirements of the ERA as evident in the ongoing PAIP and PRIP status updates. Recommendation 10/2022 was made to address the asset management system deficiency and 02/2022 was referenced to improve this AMS deficiency.
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** Confirm the policies and procedures have been followed during the review period by examining the asset register, observing operational procedures, analysing costs, etc.	There were some deficiencies noted with regards to the Licensee's asset register. Whilst it was recognised the asset register mostly met the requirements the inclusion of all assets and the mechanism to ensure the assets were compliant with statutory requirements was not demonstrated. The familiarity with the asset tree was largely dependent on tacit knowledge of the experience plant managers and operators. In order to improve the quality of data in the asset register, accurately document plant and equipment, the statutory requirements (where applicable) and improve the line of sight for drawings relating assets through to condition through to maintenance (WOs) and to reduce room for error and risks in incorrect reference of equipment, Ord Hydro should review the AMS systems and documentation in relation to the assets. In addition, a physical audit of assets should be undertaken against OEM drawings and asset registers and an internal audit against statutory and contractual obligations. Recommendation 11/2022 was made to address the asset management system deficiency.
9.1**	**Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks**	Contingency Plans were developed for Ord Hydro Power line Access, Power transformer and Substations and switchyards. However, testing of the contingency plans and records of the outcomes was not formally undertaken during the review period.

REF	OBLIGATION / ASSET MANAGEMENT CRITERIA DESCRIPTION	NON-COMPLIANCE/AMS DEFICIENCY & EFFECTIVENESS OF CORRECTIVE ACTION
	Determine whether contingency plans have been developed and are current Determine whether contingency plans have been tested. If so, review the results to confirm any improvements identified have been implemented.	Recommendation 12/2022 was made to address the asset management system deficiency.

* Electricity Compliance Reporting Manual 2022
** Table 23 2019 Audit and Review Guidelines – Electricity and Gas Licences

There were 9 recommendations made by the Audit Team to address the technical non-compliances and internal compliance processes during the audit period and there were 3 asset management system deficiencies identified during the review period. Opportunities for improvement identified that relate to the performance audit and review findings have been provided directly to the Licensee and have not been included in this document as required by the 2019 Audit and Review Guidelines – Electricity and Gas Licences section 5.1.8.

It is the auditors' opinion that compliance, awareness to the licence obligations and integrity of reporting by the Licensee could be better implemented and monitored and as such recommendations to improve the compliance and internal monitoring were made (Refer Obligation 124). This is the 5th audit, and it was noted that over the course of the audit periods the same issues were raised as non-compliance primarily due to the impractical requirement to development *Metering Code* documentation and publishing of communication rules for the small scall operations of the Ord Hydro Power Station.

The site visit was conducted on the 7th and 8th of September 2022 and at the Ord Hydro Kununurra office and Ord Hydro power station. This audit report is an accurate representation of the audit team's findings and opinions. The Auditors confirm that the Licensee readily provided assistance to the Auditors, as required by Section 4.1 of the Audit Guidelines (2019).

2. PERFORMANCE AUDIT SCOPE & OBJECTIVES

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

2.1 Performance Audit Scope

The Performance Audit was conducted in accordance with (**IAW**) the following guidance documentation:

- 2019 Audit and Review Guidelines – Electricity and Gas Licences
- the ERA approved Audit & Review Plan
- Electricity Integrated Regional Licence EIRL4
- Electricity Compliance Reporting Manual July 2018, June 2020 and February 2022

- ISO 31000:2018 (risk based approach to auditing using the risk evaluation model)
- ASAE 3000 Standard on Assurance Engagements - Assurance Engagements Other than Audits or Reviews of Historical Financial Information
- ASAE 3100 Standard on Assurance Engagements - Compliance Engagements
- ASAE 3500 Standard on Assurance Engagements - Performance Engagements

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

As specified in the Audit Plan, each licence obligation applicable to EIRL4 and was individually considered in this audit for the duration of the audit period. Specifically, the scope for the Performance Audit included:

- Site visit to the Ord Hydro Power Station and its Kununurra site office.
- Interviews with key OH staff.
- Review, testing and assessment of relevant documents and systems.
- Review of the licensee's Annual Compliance reports and compliance registers
- Preparation of an audit report in accordance with the format outlined in the Guidelines.
- Consideration of the recommendations from the previous audit report and PAIP and assessment of the actions taken by the licensee to address the recommendations (Refer Appendix 1, as determined not required for inclusion in Table 11 of this review report).

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

- Commercial Agreements
  - Power Purchase Agreement (Horizon Power & Argyle Diamond Mine)
  - Insurance Agreements
  - Water Supply Agreement
  - State Agreement
- Licences and Permits
  - Electricity Integrated Regional Licence EIRL4
  - Ministerial Statements
  - DER Licence
- Management Plans with Compliance Requirements
  - Electricity Compliance Reporting Manual (ERA)
  - ISO 55000 Certification Reports
  - Environmental Management Plan
  - Emergency Response Plan
- Statutory Compliance
  - Acts (for example *Electricity Industry Act 2004, Work Health and Safety Act 2020 etc).*
  - Regulations *(for example Economic Regulation Authority (Licensing Funding) Regulations 2014, Work Health and Safety (General) Regulations 2022, etc)*
  - Codes (for example, Electricity Industry (Metering) Code 2012)

- Mandatory Standards

2.2 Performance Audit Objectives

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

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

2.3 Performance Audit Methodology

The performance audit methodology detailed in the Audit and Review Guidelines – Electricity and Gas Licences (March 2019) was used in the execution of the Performance Audit and its application to this audit was detailed in the Audit Plan. The were some obligations removed from the scope of audit as determined not applicable and 2 deviations from the Audit Plan detailed in sections 2.3.1 and 2.3.2.

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

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

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

Ord Hydro's audit priorities were determined in the development of the audit plan ranged from priority 2 to 5 (refer Appendix 1 for detail). The audit procedures focussed on higher priorities, with less extensive coverage of lower priorities. There was no requirement to adjust the audit priority determined in the audit plan. However, the inclusion and assessment of audit priority was undertaken for obligations 319 and 334.

TABLE 6 List of Personnel Who Participated in the Audit

ITEM	NAME	COMPANY	POSITION
1	Adrian Ciccociopo	Pacific Hydro	Production Manager
2	Shawn Tan	Pacific Hydro	Manager, Compliance and Risk Management
3	Matthew Frost	Pacific Hydro	Legal Counsel, Risk & Compliance
4	Raymond Mock	Pacific Hydro	Ord Hydro Manager
5	Stuart Lester	Pacific Hydro	Ord Hydro Maintenance Technician
6	Brian Walter	Pacific Hydro	Ord Hydro Manager

The Performance Audit was conducted during September - October 2022 and included desktop review and two day site visit to execute the audit plan, conduct interview sessions and report writing. In total the audit required a combined total of 100 hours of the Audit Team member's time.

2.3.1 Performance Audit Excluded Conditions

During the audit period, there were some Electricity Compliance Reporting Manual obligations for EIRL4 that have been excluded (Refer Table 7) as they are not applicable to Ord Hydro operations. There were no Type 1 reporting requirements applicable to EIRL4. Excluded compliance obligations were detailed in the approved Audit Plan. Deviations from the Audit Plan are detailed in Section 2.3.2 and Table 8.

TABLE 7 Obligations Excluded from the Audit Report

REF*	OBLIGATION DESCRIPTION	REASON FOR EXCLUSION
362 Type [2]	**Electricity Industry Metering Code, clause 3.24A(1)** If a retailer requests a network operator to install a pre-payment meter at a connection point, then the pre-payment meter must be sufficient to enable the retailer to comply with the retailer's obligations under the Code of Conduct.	**Removed from Audit Scope:** Not Applicable **Justification:** Ord Hydro do not have any pre-payment meters on their network that require a customer to pay for the supply of electricity prior to consumption. Pre-payment meters are only available to electricity customers in areas that have been agreed to by the Minister for Energy
363 Type [2]	**Electricity Industry Metering Code, clause 3.24B(1)** If a retailer requests a network operator to replace a pre-payment meter at a connection point with a meter that is not a pre-payment meter, then the network operator must do so in accordance with this Code and the Code of Conduct.	
448 Type [2]	**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	**Removed from Audit Scope:** Not Applicable **Justification:** Ord Hydro does not have an access contract with Horizon Power and as such this clause is not applicable.

* Electricity Compliance Reporting Manual – June 2020 ^ Deviation from Audit Plan see Table 3

2.3.2 Deviation from the Audit Plan

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

TABLE 8 Deviations from the Audit Plan

REF	OBLIGATION REFERENCE	DEVIATION DESCRIPTION
319 Type [2]	**Electricity Industry Metering Code, clause 3.1** A network operator must ensure that its meters meet the requirements specified in the applicable metrology procedure and comply with any applicable specifications or guidelines, including any transitional arrangements, specified by the National Measurement Institute under the National Measurement Act.	**Added to Audit Scope:** Applicable (see audit priority below) **Justification:** Obligation incorrectly omitted from the Audit Plan. Refer Audit Priority Rating below: CONSEQUENCE: MODERATE; LIKELIHOOD: UNLIKELY; INHERENT RISK RATING: MEDIUM; CONTROL ASSESSMENT: MODERATE; AUDIT PRIORITY: Priority 4
334	**Electricity Industry Metering Code, clause 3.9(7)** A metering installation used to supply a customer with requirements above 1000 volts that requires a VT and whose annual consumption is below 750MWh must meet the relevant accuracy requirements of a Type 3 metering installation for active energy only.	**Added to Audit Scope:** Applicable (see audit priority below) **Justification:** Obligation identified as potentially applicable to the Licensee following the closure of ADM and a reduced annual throughput at the ADM-T1 meter. Refer Audit Priority Rating below: CONSEQUENCE: MODERATE; LIKELIHOOD: UNLIKELY; INHERENT RISK RATING: MEDIUM; CONTROL ASSESSMENT: MODERATE; AUDIT PRIORITY: Priority 4

2.4 Performance Audit Detailed Summary of Ratings

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

TABLE 9 Performance Audit Compliance Summary

Compliance Obligation Reference No.	Licence Reference	Audit Priority	Adequacy of Controls Rating					Compliance Rating				
			A	B	C	D	NP	1	2	3	4	NR
SECTION 8: TYPE 1 REPORTING REQUIREMENTS												
THERE ARE NO TYPE 1 REPORTING REQUIREMENTS APPLICABLE TO EIRL4												
SECTION 12: ELECTRICITY INDUSTRY ACT - LICENCE CONDITIONS AND OBLIGATIONS												
101$^{\Delta\blacklozenge}$	Electricity Industry Act section 13(1) EIRL, condition 5.3.1	5					NP	1				
102$^{\blacklozenge}$	Electricity Industry Act section 14(1)a) EIRL, condition 5.1.1	5					NP	1				
103	Electricity Industry Act section 14(1)(b) EIRL, condition 5.1.4	4					NP	1				
104$^{*\Delta\blacklozenge}$	Electricity Industry Act section 14(1)(c) EIRL, condition 5.1.2 and 5.1.3	4					NP	1				
105	Electricity Industry Act section 17(1) EIRL, condition 4.2.1	4	A						2			
106	Electricity Industry Act section 31(3) EIRL, condition 4.1.1	5		B				1				
107	Electricity Industry Act section 41(6) EIRL, condition 4.1.1	4					NP					NR
SECTION 13: ELECTRICITY LICENCES - LICENCE CONDITIONS AND OBLIGATIONS												
119	Electricity Industry Act section 11 EIRL, condition 4.3.1	4					NP	1				

Compliance Obligation Reference No.	Licence Reference	Audit Priority	Adequacy of Controls Rating					Compliance Rating				
			A	B	C	D	NP	1	2	3	4	NR
121	Electricity Industry Act section 11 EIRL, condition 5.3.2	4					NP	1				
122	Electricity Industry Act section 11 EIRL, condition 5.1.5	4					NP	1				
123	Electricity Industry Act section 11 EIRL, condition 4.4.1	4					NP					NR
124*⊗	Electricity Industry Act section 11 EIRL, condition 4.5.1	3		B					2			
125	Electricity Industry Act section 11 EIRL, condition 3.8.1 and 3.8.2	4					NP					NR
126	Electricity Industry Act section 11 EIRL, condition 3.7.1	4					NP	1				
SECTION 15: ELECTRICITY INDUSTRY METERING CODE - LICENCE CONDITIONS AND OBLIGATIONS												
PART 2 – CODE OBJECTIVES AND ARMS-LENGTH TREATMENT												
317	Electricity Industry Metering Code Cl 2.2(1)(a)	5					NP					NR
318	Electricity Industry Metering Code Cl 2.2(1)(b)	4					NP					NR
PART 3 – METERS AND METERING INSTALLATIONS												
319	Electricity Industry Metering Code Cl 3.1	4		B					2			
320	Electricity Industry Metering Code Cl 3.2(1)	4					NP	1				
323	Electricity Industry Metering Code Cl 3.3A(1)	4					NP	1				
324	Electricity Industry Metering Code Cl 3.3B	4					NP					NR
325Δ	Electricity Industry Metering Code Cl 3.3C	4					NP	1				
326Δ	Electricity Industry Metering Code Cl 3.5(1) and (2)	4					NP	1				
327	Electricity Industry Metering Code Cl 3.5(3)	4					NP	1				
328	Electricity Industry Metering Code Cl 3.5(4)	4					NP	1				
329	Electricity Industry Metering Code Cl 3.5(6)	4					NP					NR
330	Electricity Industry Metering Code Cl 3.5(9)	4					NP					NR
331*	Electricity Industry Metering Code Cl 3.7	4					NP					NR
332	Electricity Industry Metering Code Cl 3.8	4					NP	1				
333Δ	Electricity Industry Metering Code Cl 3.9(3)	4					NP	1				
335	Electricity Industry Metering Code Cl 3.9(9)	4					NP					NR
336	Electricity Industry Metering Code Cl 3.10	4					NP	1				
337	Electricity Industry Metering Code Cl 3.11(1)	4					NP	1				
338	Electricity Industry Metering Code Cl 3.11(2)	4					NP					NR
339+	Electricity Industry Metering Code Cl 3.11(3)	4					NP					NR
340	Electricity Industry Metering Code Cl 3.11A(1)	4					NP	1				
341	Electricity Industry Metering Code Cl 3.11A(3)	4					NP					NR
342	Electricity Industry Metering Code Cl 3.12(1)	4					NP	1				
343	Electricity Industry Metering Code Cl 3.12(2)	4					NP	1				
344	Electricity Industry Metering Code Cl 3.12(3)	4					NP	1				
345	Electricity Industry Metering Code Cl 3.12(4)	4					NP	1				
346	Electricity Industry Metering Code Cl 3.13(1)	4					NP	1				
347	Electricity Industry Metering Code Cl 3.13(3)(c)	4					NP					NR
348	Electricity Industry Metering Code Cl 3.13(4)	4		B					2			
349Δ	Electricity Industry Metering Code Cl 3.14(3)	4					NP					NR
355	Electricity Industry Metering Code Cl 3.20(1)	4					NP					NR
356	Electricity Industry Metering Code Cl 3.20(3)	4					NP					NR

Compliance Obligation Reference No.	Licence Reference	Audit Priority	Adequacy of Controls Rating					Compliance Rating				
			A	B	C	D	NP	1	2	3	4	NR
357	Electricity Industry Metering Code Cl 3.21(1)	4					NP					NR
358	Electricity Industry Metering Code, Cl 3.21(2)	4					NP					NR
359	Electricity Industry Metering Code, Cl 3.22	4					NP					NR
364	Electricity Industry Metering Code, Cl 3.27	4					NP					NR
365	Electricity Industry Metering Code, Cl 3.29	4					NP					NR
PART 4 - THE METERING DATABASE												
366	Electricity Industry Metering Code, Cl 4.1(1)	4					NP	1				
367	Electricity Industry Metering Code, Cl 4.1(2)	4					NP	1				
368	Electricity Industry Metering Code, Cl 4.1(3)	4					NP	1				
369	Electricity Industry Metering Code, Cl 4.2(1)	4		B					2			
370	Electricity Industry Metering Code, Cl 4.3(1)	2		B					2			
371	Electricity Industry Metering Code Cl 4.4(1)	5					NP					NR
372	Electricity Industry Metering Code Cl 4.5(1)	5					NP	1				
373	Electricity Industry Metering Code Cl 4.5(2)	4					NP					NR
374	Electricity Industry Metering Code, Cl 4.6(1)	4					NP					NR
375	Electricity Industry Metering Code, Cl 4.6(2)	4					NP					NR
376	Electricity Industry Metering Code, Cl 4.7(1)	4					NP					NR
377	Electricity Industry Metering Code, Cl 4.8(3)	4					NP					NR
378	Electricity Industry Metering Code, Cl 4.8(3A)	4					NP	1				
379	Electricity Industry Metering Code, Cl 4.8(4)(a)	4					NP	1				
380	Electricity Industry Metering Code, Cl 4.8(4)(b)	4					NP	1				
381	Electricity Industry Metering Code, Cl 4.8(5)	4					NP	1				
382	Electricity Industry Metering Code, Cl 4.9	4					NP	1				
PART 5 - METERING SERVICES												
383	Electricity Industry Metering Code, Cl 5.1 (1)	5					NP					NR
384	Electricity Industry Metering Code, Cl 5.1(2)	5					NP					NR
385	Electricity Industry Metering Code, Cl 5.3(1)	4					NP	1				
386	Electricity Industry Metering Code, Cl 5.4(1)	4					NP	1				
387	Electricity Industry Metering Code, Cl 5.4(1A)	4					NP	1				
388	Electricity Industry Metering Code Cl 5.4(2)	4					NP	1				
389	Electricity Industry Metering Code, Cl 5.5(2)	4					NP					NR
390	Electricity Industry Metering Code, Cl 5.5(2A)	4					NP					NR
391	Electricity Industry Metering Code, Cl 5.6(1)	4					NP					NR
392	Electricity Industry Metering Code, Cl 5.7	4					NP					NR
393	Electricity Industry Metering Code, Cl 5.8	4					NP					NR
394	Electricity Industry Metering Code, Cl 5.9	4					NP					NR
397	Electricity Industry Metering Code, Cl 5.12(1)	4					NP					NR
398	Electricity Industry Metering Code, Cl 5.13	4					NP					NR
399	Electricity Industry Metering Code, Cl 5.14(3)	4					NP					NR
400	Electricity Industry Metering Code, Cl 5.15	4					NP	1				
403	Electricity Industry Metering Code, Cl 5.17A(1)	4					NP					NR
404	Electricity Industry Metering Code, Cl 5.17A(3)	4					NP					NR
405	Electricity Industry Metering Code, Cl 5.18	4					NP					NR
406	Electricity Industry Metering Code, Cl 5.19(1)	5					NP					NR
407	Electricity Industry Metering Code, Cl 5.19(2)	4					NP					NR
408	Electricity Industry Metering Code, Cl 5.19(3)	4					NP					NR
411	Electricity Industry Metering Code, Cl 5.20(1)	2	A					1				

Compliance Obligation Reference No.	Licence Reference	Audit Priority	Adequacy of Controls Rating					Compliance Rating				
			A	B	C	D	NP	1	2	3	4	NR
412	Electricity Industry Metering Code, Cl 5.20(2)	2					NP					NR
413	Electricity Industry Metering Code, Cl 5.20(4)	4					NP					NR
414	Electricity Industry Metering Code, Cl 5.21(2)	4					NP					NR
415	Electricity Industry Metering Code, Cl 5.21(4)	4					NP					NR
416+	Electricity Industry Metering Code Cl 5.21(5)	4					NP					NR
417+	Electricity Industry Metering Code Cl 5.21(6)	4					NP					NR
418	Electricity Industry Metering Code, Cl 5.21(8)	4					NP					NR
419	Electricity Industry Metering Code, Cl 5.21(9)	4					NP					NR
420	Electricity Industry Metering Code, Cl 5.21(11)	4					NP					NR
421	Electricity Industry Metering Code, Cl 5.21(12)	4					NP					NR
422	Electricity Industry Metering Code, Cl 5.22(1)	4					NP	1				
423	Electricity Industry Metering Code, Cl 5.22(2)	4					NP	1				
424	Electricity Industry Metering Code, Cl 5.22(3)	4					NP					NR
425	Electricity Industry Metering Code, Cl 5.22(4)	4					NP					NR
426	Electricity Industry Metering Code, Cl 5.22(5)	4					NP					NR
427	Electricity Industry Metering Code, Cl 5.22(6)	4					NP					NR
428	Electricity Industry Metering Code, Cl 5.23(1)	4					NP					NR
429	Electricity Industry Metering Code, Cl 5.23(3)	4					NP					NR
430	Electricity Industry Metering Code, Cl 5.24(1)	4					NP					NR
431	Electricity Industry Metering Code, Cl 5.24(2)	4					NP					NR
432	Electricity Industry Metering Code, Cl 5.24(3)	4					NP					NR
433	Electricity Industry Metering Code, Cl 5.24(4)	4					NP					NR
434	Electricity Industry Metering Code, Cl 5.25	4					NP					NR
PART 6	**DOCUMENTATION**											
447	Electricity Industry Metering Code, Cl 6.1(1)	2		B					2			
448A	Electricity Industry Metering Code, Cl 6.2	5	A						2			
448B	Electricity Industry Metering Code, Cl 6.18	5					NP					NR
448C	Electricity Industry Metering Code, Cl 6.19A(1)	5	A						2			
448D	Electricity Industry Metering Code, Cl 6.19B(1)	5					NP					NR
449	Electricity Industry Metering Code, Cl 6.20(4)	5					NP					NR
450	Electricity Industry Metering Code, Cl 6.20(5)	4					NP					NR
PART 7 - NOTICES AND CONFIDENTIAL INFORMATION												
451	Electricity Industry Metering Code Cl 7.2(1)	5					NP	1				
452	Electricity Industry Metering Code Cl 7.2(2)	4					NP					NR
453	Electricity Industry Metering Code Cl 7.2(4)	4					NP					NR
454	Electricity Industry Metering Code Cl 7.2(5)	4					NP					NR
455	Electricity Industry Metering Code Cl 7.5	4					NP					NR
456	Electricity Industry Metering Code Cl 7.6(1)	4					NP					NR
PART 8 - DISPUTE RESOLUTION												
457	Electricity Industry Metering Code Cl 8.1(1)	5					NP					NR
458	Electricity Industry Metering Code Cl 8.1(2)	5					NP					NR
459	Electricity Industry Metering Code Cl 8.1(3)	5					NP					NR
460	Electricity Industry Metering Code Cl 8.1(4)	4					NP					NR
461	Electricity Industry Metering Code Cl 8.3(2)	5					NP					NR
16. ELECTRICITY INDUSTRY (NETWORK QUALITY AND RELIABILITY OF SUPPLY) CODE – LICENCE CONDITIONS AND OBLIGATIONS												
462	Electricity Industry (Network Quality and Reliability of Supply) Code, clause 5(1)	5					NP	1				

Compliance Obligation Reference No.	Licence Reference	Audit Priority	Adequacy of Controls Rating					Compliance Rating				
			A	B	C	D	NP	1	2	3	4	NR
463	Electricity Industry (Network Quality and Reliability of Supply) Code, clause 8	5					NP					NR
464	Electricity Industry (Network Quality and Reliability of Supply) Code, clause 9	5					NP	1				
465	Electricity Industry (Network Quality and Reliability of Supply) Code, clause 10(1)	5					NP	1				
466	Electricity Industry (Network Quality and Reliability of Supply) Code, clause 10(2)	5					NP	1				
470	Electricity Industry (Network Quality and Reliability of Supply) Code, clause 14(8)	4					NP					NR
471	Electricity Industry (Network Quality and Reliability of Supply) Code, clause 15(2)	4					NP					NR
477	Electricity Industry (Network Quality and Reliability of Supply) Code, clause 23(1)	5					NP	1				
479	Electricity Industry (Network Quality and Reliability of Supply) Code, clause 24(3)	4					NP					NR
480	Electricity Industry (Network Quality and Reliability of Supply) Code, clause 24(4)	4					NP					NR

2.5 Status of Recommendations 2018 Performance Audit

In executing the Audit Plan and in line with the Audit & Review Guidelines (March 2019) the auditors, when assessing if the licensee has complied with its licence obligations, applied a level of scrutiny that corresponds to a "reasonable assurance engagement". This was further detailed within the audit plan (refer Paragraph 12(a)(i)(a) of ASAE 3000, June 2014). This was the 5th Performance Audit of EIRL4 with the previous audit occurring in 2018. As such, the status of recommendations from the previous audit, and as required by Section 11.3 of the Audit Guidelines (March 2019) are detailed in Table 10.

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

A Resolved during current audit period				
Recommendation Reference (no./year)	**Licence Obligation Reference Number** **Controls and Compliance Rating** **Legislative Obligation** **Details of Inadequate Controls and/or Non-Compliance**	**Auditors' Recommendation**	**Date Resolved**	**Further Action Required (Yes/No/Not Applicable)** **Details of Further Action Required (Including Current Recommendation Reference, if Applicable)**
There were no recommendations made during the previous audit that were resolved during the audit period *Note Obligation 370 has been addressed by Recommendations 05/2022 and 06/2022*				
B Unresolved at end of current audit period				
	Details of Inadequate Controls and/or Non-Compliance			
01/2018	▪ **448** ▪ **B2** ▪ ***Metering Code clause 4.3(1)***	In October 2018, Ord Hydro updated its meter register to accommodate the relevant items that are specified by clause 4.3(1) and provided further clarification on items that are not included due to not being applicable to its operations.		Yes Licensee has only partially addressed the recommendation. Refer to Recommendation 06/2022

2.6 2022 Performance Audit Recommendations and Action Plans

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

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

A Resolved during the current audit period				
Recommendation Reference (no./year)	**Licence Obligation Reference Number** **Controls and Compliance Rating** **Legislative Obligation** **Details of Inadequate Controls and/or Non-Compliance**	**Auditors' Recommendation**	**Date Resolved & Action Taken by the Licensee**	**Auditors Comments**
01/2022	▪ **105** ▪ **A 2** ▪ A licensee must pay the prescribed licence fees to the ERA according to clauses 6, 7 and 8 of the Economic Regulation Authority (Licensing Funding) Regulations 2014. ▪ Due to administrative errors the Standing Charges were paid late on 2 of the 17 invoices due during the audit period.	No further recommendations.	June 2019	The subsequent invoices due were paid within the specified timeframes.

B Unresolved during the current audit period			
Recommendation Reference (no./year)	**Licence Obligation Reference Number** **Controls and Compliance Rating** **Legislative Obligation** **Details of Inadequate Controls and/or Non-Compliance**	**Auditors' Recommendation**	**Auditors Comments**
02/2022	▪ **124** ▪ **B2** ▪ **EIRL, condition 4.5.1** ▪ A licensee must provide the ERA, in the manner prescribed, with any information that the ERA requires in connection with its functions under the Electricity Industry Act. ▪ The 2018 and 2019 Annual Compliance Reports and the 2020 and 2021 Standing Charges data were submitted outside the required timeframes. The Licensee updated the Breach Register in October 2022, however, for the duration of the audit period there were inconsistencies between the licensee's breach register and the annual compliance reports (Refer Appendix for details). Additionally, it was determined during the audit that the compliance reports were consistent with the details in the AMPs and LCM compliance data. It was noted that the Licensee had established a process for review of its non-compliances (i.e. Obligations Register, however, it was not specific enough to facilitate compliance and as such was not effective.	A more robust process for tracking and responding to non-compliance is required. Reviewing the documentation It has been difficult to determine whether the Ord was in non-compliance or not during the period due to incorrect information being recorded (such as stating exemptions to the requirements were provided), and actions claimed to have been taken have not been documented and communicated with the ERA to close the non-compliances. The Licensee should review the policies and procedures for compliance with EIRL4 and detail contained in the obligations register to ensure it assists in meeting compliance with Ord Hydro's legislative obligations, for example specifically those specified within the 2021-2022 Obligation Register. Additionally, training requirements should be reviewed to ensure understanding and awareness of the legislative requirements relating to EIRL4. Revise the CRIS/Obligations to ensure: ➢ the Obligations are referenced accurately against the current Electricity Compliance Reporting Manual (i.e. there is a process established for updating obligations) ➢ include Reportable Field (i.e. obligation type (NR, 1 or 2) as only type 1 and 2 are reportable) ➢ include field for reportable agency/governing body	Refer PAIP

		➢ include compliance criteria field in CRIS to allow internal audit process to be established and create a time dependent audit schedule (i.e. prior to the submission of the Annual Compliance Report 31 August annually to ensure information reported is correct).	
03/2022	▪ **319** ▪ **B2** ▪ **Electricity Industry Metering Code Cl 3.1** ▪ A network operator must ensure that its meters meet the requirements specified in the applicable metrology procedure and comply with any applicable specifications or guidelines, including any transitional arrangements, specified by the National Measurement Institute under the National Measurement Act. ▪ The Licensee had not established a Metrology Procedure as required by the Metering Code. A non-compliance was noted in relation to the frequency of calibration of ADM-T1.	**Metrology Procedure** – With consideration of the possibility of new customers in the future and given the non-compliance relating to calibration, Ord Hydro should develop Metrology Procedures to incorporate the requirements of the Metering Code where applicable and the PPAs. There was an absence of operation and maintenance documentation relating to metering installations and development of specific procedures or the inclusion of the requirements in the AMP or related AMS documentation is required. **Governance -** The Licensee has established various corporate control procedures (i.e. PHA) to mitigate the risk of ineffective asset management governance in PHA operations. However, these processes could be better communicated to employees, internally monitored and reported at a site level. As such the following recommendations are made: ▪ Review the training processes for applicable PHA and Ord Hydro Asset Management Procedures (refer examples detailed above and Strategic Asset Management Plan (**SAMP**) section 9.5) requirements and ensure employees at a site level are aware of the requirements, for example as reflected in PHA.OPS.07.005 Delegation of Authority – Non-Financial section 5.2 ▪ Implement a proactive internal audit schedule for EIRL4 obligations to ensure compliance can be determined prior to submission of the Annual Compliance Report (i.e. before 30 June annually) and to improve the integrity of reporting. Review other internal control processes such as Monthly Reports and determined whether they can be improved to report deviations i.e. Include Governance, Risk and Compliance Summary Table on Monthly Report template similar to HSE summary table to communicate compliance with key areas, for example number of Change Management Forms completed.	Refer PAIP

04/2022	▪ 348 ▪ B2 ▪ **Electricity Industry Metering Code Cl 3.13(4)** ▪ A check metering installation for a metering point must comply with the prescribed requirements. ▪ The check metering installations on the Ord Hydro network were not calibrated although the main revenue meters were subject to calibration.	The Licensee should determine the calibration requirements of the check meters on its Network were required as they were pre 2005 Metering and take action as required to ensure requirements were accurately reflected in operational and maintenance documentation and compliance with the PPAs and Metering Code achieved.	Refer PAIP
05/2022	▪ **369** ▪ **B2** ▪ **Electricity Industry Metering Code, Cl 4.2(1)** ▪ A network operator must ensure that its registry complies with the Code and the prescribed clause of the market rules. ▪ The Licensee Electrical Meters Summary (i.e. registry) was not compliant with all requirements of the Metering Code. Standing Data items 5, 12, 18 and 19 were omitted from the Metering Database (i.e. refer Standing Data Clause 4.3(1)).	Determine to what degree the Meter Database is required to comply with the code as pre 2005 and review the Electrical Meters Summary spreadsheet and ensure that the relevant requirements of the metering code are included.	Refer PAIP
06/2022	▪ **370** ▪ **B2** ▪ **Electricity Industry Metering Code, Cl 4.3(1)** ▪ The standing data for a metering point must comprise at least the items specified. ▪ Standing Data Items were not contained in the meter registry 5, 7, 12, 18, 19, 21, 22, 23, 24, 25, 26.). ▪	As per recommendation 05/2022	Refer PAIP
07/2022	▪ **447** **B2**	**Metrology Procedure -** As per recommendation 03/2022 for obligation 319.	Refer PAIP

	▪ **Electricity Industry Metering Code, Cl 6.1(1)** ▪ A network operator must, in relation to its network, comply with the agreements, rules, procedures, criteria and processes prescribed. ▪ The Licensee has not developed documentation as required by the Metering Code. Appreciation as the nature of the operations was made by the Audit Team, however, an exemption was not provided, and the documentation still remained outstanding. Given non-compliances related to calibration and meter registry standing data, the absence of internal operational and maintenance metrology procedures and the failure to comply following the renewal of the HP PPA.	**Model Service Level Agreement –** It is acknowledged that Ord Hydro will not act as a metering services provider as its network services only two customers. Pacific Hydro has noted that Obligation 448A (i.e. Metering Code Clause 6.2) will remain outstanding until expiry of Power Purchase Agreements. Given ADM has closed and will be ceasing operations in the near future, it is recommended that OH refer to HP Model Service Level Agreement as a benchmark and develop internal procedures that reference the relevant sections. For example, 2.3 Testing and Inspection of Meters **Mandatory Link Criteria** - The Ord has metering installations at 2 customer locations with an installed communications link to the Supervisory Control and Data Acquisition (**SCADA**). OH does not operate as a regular Network Service Provider with multiple remote customers. The meters are not read remotely. It is recommended the communications established be documented within the metrology procedures	
08/2022	▪ **448A** ▪ **A2** ▪ **Electricity Industry Metering Code, Cl 6.2** ▪ A user must, in relation to a network on which it has an access contract, comply with the rules, procedures, agreements and criteria prescribed. ▪ The Licensee had not established the following in accordance with 6.2 of the Metering Code. (a) a proposed model service level agreement; and (b) [not used] (c) a proposed metrology procedure; and ▪ (d) proposed mandatory link criteria under clause 3.6.	As per recommendation 07/2022	Refer PAIP
09/2022	▪ **448C** ▪ **A2** ▪ **Electricity Industry Metering Code, Cl 6.19A(1)**	Ord Hydro should formally respond to the technical non-compliance and **c**ommunicate to the ERA its ongoing position in relation to the requirement for and publishing of communication rules in the PAIP.	Refer PAIP

	▪ A network operator must publish its communication rules as soon as practicable, and in any event within 6 months after the date this Code applies to it. ▪ The Licensee had not developed or published communication rules within 6 months of the Code applying to its operations.	

3. AMS EFFECTIVENESS REVIEW SCOPE & OBJECTIVES

The Asset Management System Review has been carried out as a 'limited assurance engagement'. A limited assurance engagement conducted in accordance with ASAE 3500 required identifying areas where the AMS is likely to be materially ineffective, addressing the areas identified and considering the process used to prepare the AMS. A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks

3.1 AMS Review Scope

The asset management review was conducted in accordance with (**IAW**) the following guidance documentation:

- 2019 Audit and Review Guidelines – Electricity and Gas Licences
- the ERA approved Review Plan
- Electricity Integrated Regional Licence EIRL4
- ISO 31000:2018 (risk based approach to auditing using the risk evaluation model)
- ASAE 3000 Standard on Assurance Engagements - Assurance Engagements Other than Audits or Reviews of Historical Financial Information
- ASAE 3100 Standard on Assurance Engagements - Compliance Engagements
- ASAE 3500 Standard on Assurance Engagements - Performance Engagements

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

The scope of the AMS review included an assessment of adequacy and effectiveness of the Ord Hydro's Asset Management System by evaluating during the review period 1 July 2018 to 30th June 2022 the following.

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

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

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

In order to meet their legal and other obligations, OH has established several material commercial agreements, approvals and compliance requirements associated with the asset management for the Ord Hydro Power Station and these requirements were considered within the scope of the AMS review.

- Commercial Agreements
  - Power Purchase Agreement (Horizon Power and Argyle Diamond Mine)
  - Insurance Agreements
  - Water Supply Agreement
- Licences and Permits
  - Electricity Integrated Regional Licence EIRL4
  - Ministerial Statement
  - DER Licence
- Management Plans with Compliance Requirements
  - Electricity Compliance Reporting Manual (ERA)
- Statutory Compliance
  - Acts (for example *Electricity Industry Act 2004, Work Health and Safety Act 2020* etc).
  - Regulations *(for example Economic Regulation Authority (Licensing Funding) Regulations 2014, Work Health and Safety (General) Regulations 2022, etc)*
  - Codes (for example, Electricity Industry (Metering) Code 2012)
  - Mandatory Standards

3.2 Asset Management System Review Objective

The objective of the review was to provide to the Authority an independent assessment of performance against each asset management process and determined the effectiveness Ord Hydro Power Station's AMS in relation to EIRL4 and to provide recommendations to address any asset management system deficiencies observed.

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

3.3 Asset Management System Review Methodology

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

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

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

- Interview supervisory personnel and operational personnel
- Obtain evidence policies, procedures and controls are in place and controls are working effectively
- Examine compliance reports and breach register
- Physically examine applicable asset infrastructure
- Examine asset management system effectiveness criteria
- Sample output and timeliness procedures
- Walkthrough the process to calculate relevant performance indicators
- Review of key process control and management systems

The Ord Hydro's review priorities determined in the development of the review plan ranged from priority 1 to 5 (refer Appendix 1 for detail). The review procedures focussed on higher priorities, with less extensive coverage of lower priorities. There was no requirement to adjust the review priority determined in the review plan.

TABLE 12 List of Personnel Who Participated in Review

ITEM	NAME	COMPANY	POSITION
1	Adrian Ciccociopo	Pacific Hydro	Production Manager
2	Shawn Tan	Pacific Hydro	Manager, Compliance and Risk Management
3	Matthew Frost	Pacific Hydro	Legal Counsel, Risk & Compliance
4	Raymond Mock	Pacific Hydro	Ord Hydro Manager
5	Stuart Lester	Pacific Hydro	Ord Hydro Maintenance Technician
6	Brian Walter	Pacific Hydro	Ord Hydro Manager

The Review was conducted in conjunction with the Performance Audit during 7th and 8th of September 2022 and included desktop review and half day in the Kununurra Office and one day audit on site to execute the review plan, interview sessions and report writing. In total the review required 100 hours of each of the Audit Teams time.

3.4 Asset Management System Effectiveness Detailed Summary of Ratings

The asset management system was found to be appropriate and met the requirements of the Audit and Review Guidelines – Electricity and Gas Licences (2019). There were 3 asset management system deficiencies where the asset management review performance rating or process and policy rating required recommendations to be made (refer section 5.1.8 of the Audit and Review Guidelines).

There were a number of Opportunities for Improvement that were noted, and they have been provided directly to the Licensee. The 3 deficiencies noted were primarily related to the obligations of the Metering Code, monitoring and achievement of internal compliance processes and improved documented processes.

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

TABLE 13 Asset Management Process and Policy Definition Adequacy Ratings

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

TABLE 14 Asset Management Performance Ratings

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

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

TABLE 15 Asset Management System Effectiveness Summary

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

ASSET MANAGEMENT SYSTEM CRITERA	PROCESS & POLICY RATING	PERFORMANCE RATING
6.4 Failures are analysed, and operational / maintenance plans adjusted where necessary	B	2
6.5 Risk management is applied to prioritise maintenance tasks	A	1
6.6 Maintenance costs are measured and monitored	B	2
7. ASSET MANAGEMENT INFORMATION SYSTEM	**A**	**1**
7.1 Adequate system documentation for users and IT operators	B	2
7.2 Input controls include suitable verification and validation of data entered into the system	B	2
7.3 Security access controls appear adequate such as passwords	A	1
7.4 Physical security access controls appear adequate	A	1
7.5 Data backup procedures appear adequate, and backups are tested	A	1
7.6 Computations for licensee performance reporting are accurate	A	1
7.7 Management reports appear adequate for the licensee to monitor licence obligations	A	1
7.8 Adequate measures to protect asset management data from unauthorised access or theft by persons outside the organisation	A	1
8. RISK MANAGEMENT	**B**	**1**
8.1 Risk management policies and procedures exist and are applied to minimise internal and external risks	B	2
8.2 Risks are documented in a risk register and treatment plans are implemented and monitored	B	2
8.3 Probability and consequences of asset failure are regularly assessed	A	1
9. CONTINGENCY PLANNING	B	**3**
9.1 Contingency plans are documented understood and tested to confirm their operability and to cover higher	B	3
10. FINANCIAL PLANNING	**A**	**1**
10.1 The financial plan states the financial objectives and identifies strategies and actions to achieve those	A	1
10.2 The financial plan identifies the source of funds for capital expenditure and recurrent costs	A	1
10.3 The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets)	A	1
10.4 The financial plan provides firm predictions on income for the next five years and reasonable predictions beyond this period	A	1
10.5 The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services	A	1
10.6 Large variances in actual/budget income and expenses are identified and corrective action taken where necessary	A	1
11. CAPITAL EXPENDITURE PLANNING	**A**	**1**
11.1 There is a capital expenditure plan covering works to be undertaken, actions proposed, responsibilities and dates	A	1
11.2 The capital expenditure plan provides reasons for capital expenditure and timing of expenditure	A	1
11.3 The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan	A	1
11.4 There is an adequate process to ensure the capital expenditure plan is regularly updated and implemented	A	1
12. REVIEW OF AMS	**A**	**2**
12.1 A review process is in place to ensure the asset management plan and the asset management system described in it remain current	B	2
12.2 Independent reviews (e.g., internal audit) are performed of the asset management system	A	2

3.5 Status of Recommendations 2018 Asset Management Review

This was the 5th Asset Management System Review and as such recommendations of the previous review were considered. These recommendations contained in the 2018 Asset Management Review Report were reviewed for effectiveness and implementation in the scope of the review (refer Appendix 2), however, in line with the Section 5.1.8 of the 2019 Guidelines, which states Auditors who wish to make recommendations for asset management processes or effectiveness criteria that received a rating other than those rated C, D, 3 or 4 should provide those recommendations directly to the licensee. However, Recommendation 01/2018 although rated B2 has been rated C3 and as such included in the current review, but Recommendation 02/2018 has not been included in the audit or review report as has not been found deficient and has been addressed with the Licensee directly in the OFI report.

TABLE 16 Ineffective Components Recommendations, Previous Review Implementation Plan

A Resolved during current review period				
Recommendation Reference (no./year)	**Rating** **Asset Management Process and Effectiveness Criterion** **Details of Deficiency Details of Inadequate Controls and/or Non-Compliance**	**Auditors' Recommendation**	**Date Resolved**	**Further Action Required (Yes/No/Not Applicable)** **Details of Further Action Required (Including Current Recommendation Reference, if Applicable)**
There were no asset management system deficiencies resolved during the current review period.				
B Unresolved at end of current review period				
1/2018	▪ **B2** ▪ **5.3 Assets are documented in an Asset Register including asset type, location, material, plans of components, an assessment of assets' physical/structural condition and accounting data** ▪ Although the FIXD asset register provides the base information on assets, further improvements can be made to the asset register to assist Ord Hydro to understand and manage the following aspects of its asset portfolio. We recognise that there is a cost/benefit	Ord Hydro include the following elements in its asset register: □ Further description of asset type □ Asset working environment □ Population sizes □ Material/technology applied □ Age/remaining life/obsolescence □ Logistics data.		YES Refer to Recommendation 11/2022 The AMS deficiency noted in the current review report related more to quality of the information contained within the asset register (i.e. eliminate errors such as incorrect meter serial numbers). It was not determined if the planned implementation of the Enterprise Asset

	balance to achieve in any further expansion asset records to be maintained in FIXD: □ Further description of asset type (e.g. specification, model, brand, version) □ Asset working environment (e.g. environmental conditions) □ Population sizes □ Material/technology applied □ Age (currently captured as engine hours at inspection)/remaining life/obsolescence □ Logistics		Management system was progressing as stated in the previous 2018 Report.
3/2018 **2018 Asset Management Review**	▪ **B3** ▪ **9.1 Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks** ▪ During the review period, Ord Hydro has not tested its contingency plans or maintained evidence of the training required for all relevant staff in relation to the purpose and content of the plans.	Ord Hydro: □ Prepare a training plan and schedule to ensure all relevant staff are sufficiently trained in the purpose and content of each contingency plan □ Schedule and carry-out testing of each contingency plan and emergency response plan.	YES Refer to Recommendation 12/2022 Testing of the Contingency Plans was not undertaken during the review period. Emergency Response drills were undertaken but these were not as per the requirement to address the asset management system deficiency. The contingency plans were intended to ensure continuity of business operations and/or financial stability.

3.6 2022 Asset Management System Recommendations and Action Plans

As stipulated in section 5.3 of the Audit and Review Guidelines – Electricity and Gas Licences (March 2019), the Audit Team noted that the Asset Management Review Post Implementation Plan does not form part of the Audit Opinion. There were 3 recommendations made from the current review that required post review implementation plans.

TABLE 17 Recommendations to Address Current Asset System Deficiencies

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

B Unresolved during current review period

Recommendation Reference (no./year)	Rating Asset Management Process and Effectiveness Criterion Details of Deficiency	Auditors Recommendation	Action taken by the Licensee by the end of the review period
10/2022	▪ **B3** ▪ **4.3 Compliance with statutory and regulatory requirements** ▪ Investigate any statutory or regulatory breaches and assess corrective action taken ▪ Review the adequacy of reporting and monitoring tools	Refer recommendation 02/2022.	The recommendation has not yet been addressed. Refer PRIP
11/2022	▪ **B3** ▪ **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** ▪ Confirm the policies and procedures have been followed during the review period by examining the asset register, observing operational procedures, analysing costs, etc.	There were some deficiencies noted with regards to the Licensee's asset register. Whilst it was recognised the asset register mostly met the requirements the inclusion of all assets and the mechanism to ensure the assets were compliant with statutory requirements was not demonstrated. The familiarity with the asset tree was largely dependent on tacit knowledge of the experience plant managers and operators. In order to improve the quality of data in the asset register, accurately document plant and equipment, the statutory requirements (where applicable) and improve the line of sight for drawings relating assets through to condition through to maintenance (WOs) and to reduce room for error and risks in incorrect reference of equipment, Ord Hydro should review the AMS systems and documentation in relation to the assets. In addition, a physical audit of assets should be undertaken against OEM drawings and asset registers and an internal audit against statutory and contractual obligations.	The recommendation has not yet been addressed. Refer PRIP
12/2022	▪ **B3** ▪ **9.1 Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks** ▪ During the review period, Ord Hydro has not tested its contingency plans or maintained evidence of the training required for all relevant staff in relation to the purpose and content of the plans.	Schedule and carry-out testing and training of each contingency plan. Update the Powerline Access Contingency Plan to reflect emergency repair processes, for example LCM risk #RAORD181010. Ensure all personnel listed in the Contingency Plans are trained as per requirements and records reflected in the Training register. Reference to Contingency Plans should be made within the AMPs and LCMs.	The recommendation has not yet been addressed. Refer PRIP

APPENDIX 1- ORD HYDRO PERFORMANCE AUDIT

SEPTEMBER 2022

TABLE 18 Performance Audit

KEY

* Indicates Audit Priority differs from rating defined in 2018 Audit Report

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

Δ Indicates revision of clause in the Electricity Compliance Reporting Manual during the audit period.

+ Indicates the obligation was not included in the 2018 audit scope but has been included in 2022 audit scope.

⊗ Indicates the obligation non-compliant in 2018 Audit Report or an Annual Compliance Report during the audit period

12. Electricity Industry Act – Licence conditions and obligations				
No.	**2022 AUDIT REPORT EVIDENCE/ /VERIFICATION/FINDING/ACTION**			
101Δ♦ Type [2] Δ	**OBLIGATION*: Electricity Integrated Regional Licence, condition 5.3.1 / Electricity Industry Act, section 13(1)*** A licensee must provide the ERA with a performance audit conducted by an independent expert acceptable to the ERA, not less than once every 24 months (or any longer period that the ERA allows).	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – Deloitte was appointed with the Economic Regulation Authority's (**ERA's**) approval to undertake the Performance Audit for Ord Hydro for the period 1 July 2014 to 30 June 2018 and the report was submitted 25 January 2019 and published to the ERA website on the 20 February 2019. **Documents/Evidence** – ERA Website, 34.1 **Observations:** • 2018 Performance Audit & 2018 Asset Management Review published to ERA website. (Refer https://www.erawa.com.au/electricity/electricity-licensing/licence-holders#O) • There was no PAIP published on the ERA Website. • The audit found six non-compliances. Five non-compliances were resolved during the audit period, or prior to the audit report being finalised. • ERA published notice 20 February 2019 • Noted planning for the current audit occurred during the audit period and the 2022 Performance Audit was undertaken outside the Audit Period (i.e. 1 July 2018 to 30 June 2022)			

	Recommendation: Nil	**Action: Nil**		
102♦ Type [2]	**OBLIGATION*: Electricity Integrated Regional Licence, condition 5.1.1 / Electricity Industry Act, section 14(1)(a)*** A licensee must provide for an asset management system	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee provided for an asset management system (**AMS**) for the duration of the Audit Period. Documentation supporting the AMS was reviewed and Pacific Hydro Australia (**PHA**) was noted to have achieved and maintained certification to ISO 55001. **Documents/Evidence** – 1, 2. 3.1-3.5, 4, 5.1-5.5, 28.8, 29.4 **Observations:** • Pacific Hydro was certified to ISO 55001 for the duration of the audit period • There was no Post Audit Implementation Plan (**PAIP**), or Post Review Implementation Plan (**PRIP**) published on the ERA website. • The audit found six non-compliances. Five non-compliances were resolved during the audit period, or prior to the audit report being finalised. • ERA published notice 20 February 2019 • The responsibility of the AMP development changed from the PHA Engineering department to Operations during the Audit period.			
	Recommendation: Nil	**Action: Nil**		
103 Type [2]	**OBLIGATION: *Electricity Integrated Regional Licence, condition 5.1.2 and 5.1.3 / Electricity Industry Act, section 14(1)(b)*** A licensee must notify details of the asset management system and any substantial changes to it to the ERA.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed that there have not been any substantial changes to the AMS since the ERA was last advised of the details of the system in accordance with section 14(1) of the Act. **Documents/Evidence** – Interview with the Manager, Compliance and Risk Management, Production Manager **Observations:** ▪ The Licensee changed Computerised Maintenance Management System (**CMMS**) from MEX to Maintainly (previously Fixd) outside the audit period.			
	Recommendation: Nil	**Action: Nil**		

104*Δ♦ Type [2]	**OBLIGATION:** ***Electricity Integrated Regional Licence, condition 5.1.4 / Electricity Industry Act, section 14(1)(c)*** A licensee must provide the ERA with a report by an independent expert about the effectiveness of its asset management system every 24 months, or such longer period as determined by the ERA.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – Deloitte was appointed with the ERA's approval to undertake the Asset Management Review for Ord Hydro for the period 1 July 2014 to 30 June 2018 and the report was submitted 25 January 2019 and published to the ERA website on the 20 February 2019. **Documents/Evidence** – ERA Website, 23.1-23.4, 34.1 **Observations:** • 2018 Performance Audit & 2018 Asset Management Review published to ERA website. (Refer https://www.erawa.com.au/electricity/electricity-licensing/licence-holders#O) • There was no PRIP published on the ERA Website. • The auditor made three recommendations in the 2018 review. There were also three recommendations carried forward from the 2014 review. 4 Two of the three recommendations from the 2018 review were process improvement opportunities, and the third recommendation covered the Contingency Planning deficiency. • ERA published notice 20 February 2019 ▪ Noted planning for the current review occurred during the audit period and the 2022 Asset Management Review was undertaken outside the Audit Period (i.e. 1 July 2018 to 30 June 2022)			
	Recommendation: Nil	**Action: Nil**		
105 Type [2]	**OBLIGATION:** ***Electricity Integrated Regional Licence, condition 4.2.1/ Economic Regulation Authority (Licensing Funding) Regulations 2014*** A licensee must pay the prescribed licence fees to the ERA according to clauses 6, 7 and 8 of the Economic Regulation Authority (Licensing Funding) Regulations 2014.	**Audit Priority** **4**	**Controls Rating:** **A**	**Compliance Rating:** **2**
	Finding – The Licensee paid the five Annual Licence charges within one month after the day on which the licence was Granted (i.e. 30 June 2006) and within one month after each anniversary of that day during the audit period (i.e. 30 July annually). Standing Charges were paid within the requirements of *Economic Regulation Authority (Licensing Funding) Regulations 2014 clause 8(2)* for 15 of the 17 invoices applicable during the audit period. **Documents/Evidence** – ERA Licence Payment Report, 24.1-24.4 **Observations:**			

	• It was noted that the 2019 Annual Compliance Report did not report the late payment of the 2018 September Quarter or the 2019 March Quarter Standing Charges.			
	Recommendation: 01/2022 - The late payment of standing charge invoice on 2 of the 17 invoices applicable during the audit period was due to administrative errors in September 2018 and March 2019 and all subsequent invoices were paid on time. As such, no further recommendations are made.	**Action:** ▪ No further recommendation.		
106 Type [NR]	**OBLIGATION:** ***Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Act, section 31(3)*** A licensee must take reasonable steps to minimise the extent, or duration, of any interruption, suspension or restriction of the supply of electricity due to an accident, emergency, potential danger or other unavoidable cause.	**Audit Priority** **5**	**Controls Rating:** **B**	**Compliance Rating:** **1**
	Finding – The Licensee has undertaken risk assessment which is maintained for the site and corporate levels and the Licensee had taken significant measures to ensure the plant performance both contractually and operationally. Corporate Business Continuity and IT Disaster Recovery Plans have been developed. Well established accident and emergency procedures were developed and implemented. Contingency Plans were established for the: ➢ Ord Hydro Powerline Access ➢ Power Transformer ➢ Substations and Switchyards In addition, the licensee has developed an effective AMS, which is certified by an independent third-party to ISO 5001, established operation and maintenance plans, strategic and critical spares. **Documents/Evidence** – 15.3, 16.1, 19.1- 19.4, 22.1 **Observations:** • It was noted training in relation to the Emergency Response Procedures was not undertaken as yet. • The Ord Hydro Power Station (**OHPS**) has full redundancy established for critical equipment, except for the transmission line. • Production Manager has undertaken review to ensure service provider capable of responding to contingent event should the need eventuate.			
	Recommendation: Nil	**Action: Nil**		
107 Type [2]	**OBLIGATION:** ***Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Act, section 41(6)*** A licensee must pay the costs of taking an interest in land or an easement over land.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed that OHPS did not take an interest or an easement over land at the recommendation or direction of the Minister under the Licence during the audit period, as defined by Part 9 the *Land Administration Act 1997*. Land access arrangements have been established.			

	Documents/Evidence – Interview Manager, Compliance and Risk Management. **Observations:** ▪ Obligation specific to the requirements of the *Land Administration Act 1997* in relation to compulsory acquisition of land.			
	Recommendation: Nil	**Action: Nil**		
13 Electricity Licences – Licence Conditions and Obligations				
119 Type [2]	**OBLIGATION: *Electricity Integrated Regional Licence, condition 4.3.1 / Electricity Industry Act, section 11*** A licensee and any related body corporate must maintain accounting records that comply with the Australian Accounting Standards Board Standards or equivalent International Accounting Standards.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding –The Manager, Compliance and Risk Management confirmed, during the audit period, the Pacific Hydro group reporting structure in which the licensee (Ord Hydro Pty Ltd) was a subsidiary, has maintained consolidated general purpose financial statements for the years ending 31 December and these were audited by independent third-party accountants and assessed for compliance with Australian financial reporting standards. **Documents/Evidence** – Interview Manager, Compliance and Risk Management, 36.1-36.4 **Observations:** ▪ Pacific Hydro's financial statements and signed annual audit reports were provided for review for the years ending 31 December 2018, 2019, 2020 and 2021 ▪ The Licensee provided consolidated financial statements of the Company as at and for the twelve month financial period ended 31 December 2018-2021 which comprised the Company and its subsidiaries (together referred to as the "Group"). The Group was a for-profit entity and principal activities during the financial periods covered by the audit period were the development, construction and operation of renewable energy assets.			
	Recommendation: Nil	**Action: Nil**		
121 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 5.3.2 / Electricity Industry Act, section 11** A licensee must comply, and require its auditor to comply, with the ERA's standard audit guidelines for a performance audit	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee engaged the Auditor with a Request for Proposal for OHPS that requested the Auditor to comply with the Economic Regulation Authority's 2019 Audit and Review Guidelines.			

	Documents/Evidence – ERA and Licensee communication, Performance Audit and Asset Management Review Plan 2022. **Observations:** ▪ Copies of communications received from the Authority relating to audit requirements were sent by Licensee through to Auditor to convey requirements specifically the undertaking of audits in compliance with the 2019 Audit and Review Guidelines – Electricity and Gas Licences			
	Recommendation: Nil	**Action: Nil**		
122 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 5.1.5 / Electricity Industry Act, section 11** A licensee must comply, and must require the licensee's expert to comply, with the relevant aspects of the ERA's standard audit guidelines for an asset management system review.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee engaged the Auditor with a Request for Proposal for OHPS that requested the Auditor to comply with the Economic Regulation Authority's 2019 Audit and Review Guidelines. **Documents/Evidence** – ERA and Licensee communication, Performance Audit and Asset Management Review Plan 2022. **Observations:** ▪ Copies of communications received from the Authority relating to audit requirements were sent by Licensee through to Auditor to convey requirements specifically the undertaking of audits in compliance with the 2019 Audit and Review Guidelines – Electricity and Gas Licences ▪ The Review Plan was developed the Audit Team, endorsed by the Licensee and approved by the ERA.			
	Recommendation: Nil	**Action: Nil**		
123 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.4.1 / Electricity Industry Act, section 11** In the manner prescribed, a licensee must notify the ERA, if it is under external administration or if there is a significant change in the circumstances that the licence was granted which may affect the licensee's ability to meet its obligations.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed there were no significant changes in the circumstances that EIRL4 was granted. The Obligations Register specifically referenced the requirement (refer Section 4.1.1), **Documents/Evidence** – Interview Manager, Compliance and Risk Management, 26.1 **Observations:**			

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Obligation was included in the list of the relevant external factors and their related sources of risk, which was located within Pacific Hydro's risk system ("CRIS"). It was understood that the obligations register was an extract of CRIS.
Ord Hydro was not placed under external administration during the audit period.
The Licensee confirmed:

there were no other significant changes in circumstances that affected Ord Hydro's ability to meet its Licence obligations.
going concern was assessed by management and external auditors in respect to the Financial Statements of the Company.
the Financial Statements have been signed off by the Board of Directors and the external auditors.

</td></tr>
<tr><td></td><td colspan="2">Recommendation: Nil</td><td colspan="2">Action: Nil</td></tr>
<tr><td rowspan="3">124*⊗
Type
[2]</td><td colspan="2">OBLIGATION: Electricity Integrated Regional Licence, condition 4.5.1 / Electricity Industry Act, section 11
A licensee must provide the ERA, in the manner prescribed, with any information that the ERA requires in connection with its functions under the Electricity Industry Act.</td><td>Audit Priority</td><td>Controls Rating:</td><td>Compliance Rating:</td></tr>
<tr><td colspan="2"></td><td>3</td><td>B</td><td>2</td></tr>
<tr><td colspan="4">
Finding – During the Audit Period the Licensee was required to provide the Authority with the following information as required in connection with its functions under the Act.

The 2018-2021 Annual Compliance Reports were to be submitted by the 31st of August annually.
Provision of information for the calculation of standing data charges was due 30th September annually for 2018 to 2021.

The 2018 and 2019 Annual Compliance Reports and the 2020 and 2021 Standing Charges data were submitted outside the required timeframes. The Licensee updated the Breach Register in October 2022, however, for the duration of the audit period there were inconsistencies between the licensee's breach register and the annual compliance reports. Additionally, it was determined during the audit that the compliance reports were consistent with the details in the AMPs and LCM compliance data.

The Licensee had established a process for review of its non-compliances (i.e. Obligations Register), however, it was not specific enough to facilitate compliance and as such was not effective. The Licensee indicated that a full review would be undertaken to ensure any inconsistencies were addressed following the completion of the 2022 Performance Audit.

Annual Compliance Reports
<table>
<tr><th>Year</th><th>2018</th><th>2019</th><th>2020</th><th>2021</th><th>2022♦</th></tr>
<tr><td>Date Submitted</td><td>06/09/2018</td><td>26/9/2019</td><td>28/8/2020</td><td>31/8/2021</td><td>11/8/2022</td></tr>
<tr><td>Compliant</td><td>NO</td><td>NO</td><td>YES</td><td>YES</td><td>YES</td></tr>
<tr><td>Obligations Reported</td><td>391** (now 370)
[Type 2]</td><td>448A*
[Type NR]</td><td>448A*
[Type NR]</td><td>448A*
[Type NR]</td><td>448A*
[Type NR]</td></tr>
</table>
</td></tr>
</table>

	* Obligations not required to be reported in the Annual Compliance Report ** Ref different in 2017 Electricity Compliance Reporting Manual	407** (now 386) [Type NR] 432** (now 411) [Type 2] 433** (now 412) [Type 2]		Audit Guideline Table 23 9.1*	Audit Guideline Table 23 9.1*	Audit Guideline Table 23 9.1*
	Integrity of Reporting	**348** – Omitted failure to calibrate check meters **369 & 370** – Omitted failure of registry to comply with the relevant requirements of the Metering Code **447** – Omitted non-compliance with the Code i.e. failure to submit a proposed model service level agreement, metrology procedure and mandatory link criteria to the ERA for its approval. Note: **370** – Breach deemed NA by PH due to PPA, as the validation process resided within power contracts and this pre-dated the code. Note: **407** **(now 386)** Type [NR] as such not reportable (Refer Electricity Compliance Reporting Manual – July 2018)	**105** - Omitted late Standing Charge Payment Sept Q18 and March Q19 **124** - Omitted late submission 2018 Annual Compliance Report **348** – Omitted failure to calibrate check meters **369 & 370** – Omitted failure of registry to comply with the relevant requirements of the Metering Code Note: **370** – Breach deemed NA by PH due to PPA, as the validation process resided within power contracts and this pre-dated the code. **447** – Omitted non-compliance with the Code i.e. failure to submit a proposed model service level agreement, metrology procedure and	**124** -Omitted late submission 2019 Annual Compliance Report **348** – Omitted failure to calibrate check meters **369 & 370** – Omitted failure of registry to comply with the relevant requirements of the Metering Code **447** – Omitted non-compliance with the Code i.e. failure to submit a proposed model service level agreement, metrology procedure and mandatory link criteria to the ERA for its approval. Note: **370** – Breach deemed NA by PH due to PPA, as the validation process resided within power contracts and this pre-dated the code.	**124** - Late Reporting of 2020 Standing Charges Omitted **348** – Omitted failure to calibrate check meters **447** – Omitted non-compliance with the Code i.e. failure to submit a proposed model service level agreement, metrology procedure and mandatory link criteria to the ERA for its approval. Note: **370** – Breach deemed NA by PH due to, as the validation process resided within power contracts and this pre-dated the code. Note: **448A** Type [NR] as such not reportable (Refer Electricity Compliance Reporting Manual – June 2020)	**124**- Late Reporting of 2021 Standing Charges Omitted **319** – Omitted the failure to calibrate ADM-T1 **348** – Omitted failure to calibrate check meters **369 & 370** – Omitted failure of registry to comply with the relevant requirements of the Metering Code **447** – Omitted non-compliance with the Code i.e. failure to submit a proposed model service level agreement, metrology procedure and mandatory link criteria to the ERA for its approval. Note:**370** – Breach deemed NA by PH due to PPA, as the validation process resided

		mandatory link criteria to the ERA for its approval. Note: **448A** Type [NR] as such not reportable (Refer Electricity Compliance Reporting Manual – July 2018)	Note: **448A** Type [NR] as such not reportable (Refer Electricity Compliance Reporting Manual – June 2020)		within power contracts and this pre-dated the code. Note: **448A** Type [NR] as such not reportable (Refer Electricity Compliance Reporting Manual – February 2022)

Standing Data

Year	2018	2019	2020	2021	2022♦
Date Submitted	06/09/2018	13/09/2019	19/10/2019	04/10/2021	26/09/2021
Compliant	YES	YES	NO	NO	YES

♦*Note provided for information only outside the audit scope.*

Evidence – Annual Compliance Reports 2018-2021, email communications with ERA, ERA Licence Payment Report, 25.1

Observations:

- Electricity Integrated Regional Licence were required under the *Economic Regulation Authority (Licensing Funding) Regulations 2014* to report electricity generation (MW of generation capacity), electricity retail (i.e. number of customers), electricity transmission (km of transmission line).
- It was noted until 1 January 2013, Ord Hydro's licence by default also included electricity distribution. On 1 January 2013, every electricity integrated regional licence was amended by the Authority to only permit those activities that were originally applied for by the licensee. Ord Hydro had not undertaken any electricity distribution activities before the licence amendment.
- Submission of Standing data for 2022 outside the audit scope but it was sighted and confirmed.
- Payment of annual licence fees compliant for 15 out of 17 invoices due during the audit period.
- Awareness to the requirement was not well demonstrated by the Licensee with as the Obligations Register (i.e. CRIS) was not comprehensive in compliance requirements and the AMP did not make specific to reference the obligations.

	▪ Noted the Licensee undertook yearly self-assessment of obligations refer CRIS however these were not effective in identifying non-compliance as information not prescriptive enough, for example Obligation 124 in CRIS Obligations Register stated incorrectly "No Specific Request was made" and as such did not consider the annual reporting requirements. ▪ The obligations register and CRIS provide a good structure to create an internal audit process but are not used effectively. ▪ Noted the CRIS Obligations Register 2021-2022 (not dated with a review date) did not reflect the updated EIRL requirements on the Electricity Compliance Reporting Manual February 2022, for example refer Obligation 101. ▪ Noted the Licensee did not seem to fully understand the reporting obligations as Type NR obligations were included in the Annual Compliance report, for example 448A as well as asset management criteria from Table 23 of the Audit Guidelines. ▪ Inconsistencies were noted in the reporting of compliance associated with the Licence between the AMP Compliance KPIs, Annual Compliance Reports, Ord Hydro Breach Register, the Obligations Register, Corporate Annual Compliance Report (refer CY 2020) and LCM Compliance data.			
	Recommendation: 02/2022 A more robust process for tracking and responding to non-compliance is required. Reviewing the documentation, in some instances it was difficult to ascertain whether the Ord was in non-compliance or not during the period due to incorrect information being recorded (such as stating exemptions to the requirements were provided when they had not been), and actions claimed to have been taken have not been documented and communicated with the ERA to close the non-compliances. In order to address the issues related to the integrity of reporting, the Licensee should review the policies and procedures for compliance with EIRL4 and detail contained in the obligations and the breach register were aligned to assist in meeting compliance with Ord Hydro's legislative obligations, for example specifically those specified within the 2021-2022 Obligation Register and Breach Register. Additionally, training requirements should be reviewed to ensure understanding and awareness of the legislative requirements relating to EIRL4. Revise the CRIS/Obligations to ensure: ➢ the Obligations are referenced accurately against the current Electricity Compliance Reporting Manual (i.e. there is a process established for updating obligations) ➢ include Reportable Field (i.e. obligation type (NR, 1 or 2) as only type 1 and 2 are reportable) ➢ include field for reportable agency/governing body. ➢ include compliance criteria field in CRIS to allow internal audit process to be established and create a time dependent audit schedule (i.e. prior to the submission of the Annual Compliance Report 31 August annually to ensure information reported is correct). Note a specific example of Obligation 124 was provided in the OFI Report directly to the Licensee.	**Action:** ▪ Refer PAIP		
125	**OBLIGATION: Electricity Integrated Regional Licence, condition 3.8.1 and 3.8.2 / Electricity Industry Act, section 11**	**Audit Priority**	**Controls Rating:**	**Compliance Rating:**

Type [2]	A licensee must publish any information as directed by the ERA to publish, within the timeframes specified.	**4**	**NP**	**NR**
	Finding – The Licensee confirmed that other than the annual compliance reports and request for standing data described above, the ERA did not direct Ord Hydro to publish any other information during the audit period. **Documents/Evidence** – Interview Manager, Compliance and Risk Management, EIRL4 **Observations:** ▪ EIRL4 Clause 2.1.1(d) prohibited the License from selling electricity to small use customers. ▪ It was noted that under section 28 of the Electricity Industry (Network Quality and Reliability of Supply) Code 2005, Ord Hydro was exempt from publishing an annual performance report each year as it was not permitted to contract small use customers under the Licence.			
	Recommendation: Nil	**Action: Nil**		
126 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 3.7.1 / Electricity Industry Act, section 11** All notices must be in writing, unless otherwise specified.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – During the audit period the Licensee maintained records of communication with the Authority, primarily via mail or email communication. All responses were in writing and specific notices in relation to the Electricity Integrated Regional Licence were reviewed as part of the audit. **Documents/Evidence** – Interview Manager, Compliance and Risk Management, ERA Communication, 21.1, 21.2, 23.1 -23.5, 241.1-24.4 **Observations:** ▪ Examples of communications provided refer Appendix 3, for example AMS Updates, submission of compliance reports, etc.			
	Recommendation: Nil	**Action: Nil**		
15 Electricity Industry Metering Code – Licence Conditions and Obligations				
317 Type	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 2.2(1)(a)** A network operator must treat all Code participants that are its associates on an arms-length basis.	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **1**

[NR]	**Finding** – The Licensee confirmed that during the audit period Ord Hydro treated all Code participants that were its associates on an arms-length basis. **Documents/Evidence** – 22.1 **Observations:** ▪ Confirmed by the Production Manager. ▪ Code participants included the two PPA off-takers.			
	Recommendation: Nil	**Action: Nil**		
318 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 2.2(1)(b)** A network operator must ensure that no Code participant that is its associate receives a benefit in respect of the Code, unless the benefit is attributable to an arm's length application of the Code or is also made available to all other Code participants on the same terms and conditions.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed that for the duration of the audit period no Code Participant that was an associated of OHPS received a benefit in respect of the Metering Code and that Ord Hydro treated all Code participants that were its associates on an arms-length basis. **Documents/Evidence** – 22.1 **Observations:** ▪ Confirmed by the Production Manager. ▪ Code participants included the two PPA off-takers.			
	Recommendation: Nil	**Action: Nil**		
PART 3 – METERS AND METERING INSTALLATIONS				
319 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.1** A network operator must ensure that its meters meet the requirements specified in the applicable metrology procedure and comply with any applicable specifications or guidelines, including any transitional arrangements, specified by the National Measurement Institute under the National Measurement Act.	**Audit Priority** **4**	**Controls Rating:** **B**	**Compliance Rating:** **2**

	Finding –The Production Manager confirmed for the duration of the audit period Ord Hydro maintained 5 main, 5 check meters and one spare meter on its network to the satisfaction of its customers. However, as noted in previous Performance Audits, Ord Hydro have not developed a Metrology Procedure in accordance with the Code. It was noted this was a technical non-compliance and that the scale and nature of Ord Hydro's operations makes some Metering Code requirements impractical (such as those specified in Clause 6.2), as the Code was designed for the larger network operators of the SWIS and not for smaller network operators with limited metering installations. The Licensee has also established Power Purchase Agreements (**PPAs**) with its customers within which were various mechanisms relating to the metering requirements of the interested parties. Production Manager confirmed that OHPS meters conformed to the requirements of AS1284.13 for the main meters (i.e. revenue meters) with the exception of ORD ADM - T1 which was last calibrated on 25/01/2018 and due for calibration 3 yearly as required by the PPA. This was due to a PH employee assuming the meter was out of service due to the closure of the mine and no longer required calibration. It was noted there was an absence of formalised operational and maintenance metering procedures and the disjointed and inconsistent communication of requirements (i.e. notations in comments on metering database and extra tabs within the database). There was also a lack of reference to metering requirements in the AMS documentation. With regards to transitional arrangements (refer Metering Code Clause 3.14), all OHPS meters were commissioned prior to *2005 Metering Code*, as such check meters were not required to be installed. However, it was noted that the metering installations had both import/export revenue and import/export check meters. OHPS metering installations used metering class Current Transformers (**CTs**) and Voltage Transformers (**VTs**) in compliance with Table 3 (Refer Appendix 1 of the *Metering Code).* A review of the compliance and control procedures relating to the non-compliance for calibration of ORD ADM – T1 indicated the following; ➢ A task was raised in the CMMS for ORD ADM – T1, however, this was closed without being undertaken due to a misunderstanding as to the requirements to undertake following the closure of ADM. ➢ Non-Financial Delegation of Authority (**NDFA**) specified Ord Hydro Manager (OHM) and Ord Hydro Technician (OHT) were not authorised to approve "Changes to Content of Routine Plans Including Service Check Lists" or "Changes to Annual Schedule of Routine Works" ➢ There were no metering installation management procedures to communicate requirements. CMMS routines were not descriptive enough either. ➢ Change Management Form was not completed as specified by the Change Management Procedure. ➢ Training Records did not reflect training in Asset Management Framework (refer NFDA Procedure) ➢ Reports generated from Maintainly did not accurately reflect records, for example only 2 meter calibration in Work Undertaken from 01-07-2018 until 01-07-2022 - Ord Hydro, however Production Manager confirmed system contained them all except the spare and reports were provided. ➢ Applicable PHA Asset Management Procedures established. o PHA.OPS.12.001 Change Management Procedure o PHA.OPS.07.005 Delegation of Authority – Non Financial o PHA.OPS.09.005 Maintenance Management Procedure o PHA.OPS.09.099 Workflows in CMMS **Documents/Evidence –** 9.1, 12, 22.1,23.1-23.5, 24.1-24.4, 26.1, 30.1, 35

Observations:

- The Station Manager confirmed the calibration of meters was undertaken every 3 years as specified in the PPAs (i.e. due 2021 and 2018 during the audit period) and that records of calibration were maintained on site. Calibration records were provided for ORD KNX-T1, ORD KNX-T2 and ORD LATV.
- It was noted that the Spare Meter was not maintained in the Electrical Meters Summary spreadsheet and could not be readily located in Maintainly (due to search function issues) but was listed on the Asset Register exported from the CMMS (refer document 9.1). Additionally, it was not able to be determined whether the Spare Meter was calibrated.
- It was understood Maintainly was used to schedule the calibration requirements, however, only LATV and KNX T1 were included on Maintainly export Work Undertaken from 01-07-2018 until 01-07-2022 - Ord Hydro (potentially due to search as Production Manager confirmed in Maintainly).
- Calibration for ORD ADM-T1 was also not specified on Scheduled Work from 01-01-2022 until 31-12-2022 - Ord Hydro (refer document 10)
- Note ADM - T2 Main Import/Export & ADM - T2 Check Import/Export were owned by ADM but maintained as courtesy by PH. Noted T2 meters were not in the asset register.
- Noted one bidirectional meter (i.e. ADM T2) was capable of measuring and recording electricity flows in each direction as required by 2012 Metering Code Clause 3.3A(2).
- The Site Manager confirmed that the Calibration Certifications for all metering installations complied with AS 1284.13 Electricity metering In-service compliance testing. A triennial calibration maintenance was undertaken during the audit period as required by 2012 Metering Code Clause 3.11A(4).
- It was understood OHPS's revenue meters were designed to meet the specifications of the NMI under the National Measurement Act, including the requirements of measurement display.
- Note the OHPS was built and commissioned in 1996 prior to the 2005 Metering Code, for example Type 1 metering installations and Type 2 metering installations
- It was understood none of the metering installations were equipped with communications links and were not required to have them installed under the Metering Code (Ref 3.14(2).)
- commissioned or committed to before the 2005 Metering Code commenced that do not incorporate check metering installations are not required to install check metering installations retrospectively. It was noted that all of the OHPS main meters have check meters.
- It was noted both the PPAs referred to metering requirements and contained obligations with relation to Good Industry Practice (Electricity). HP PPA metering obligations (refer S1.1)
- It was noted PHA.OPS.07.005 Delegation of Authority – Non Financial section 5.2 specified requirement for basic induction/training processes regarding PHA asset management framework. However, basic induction or training for asset management framework was not reflected in the Training Records provided for review.
- A copy of AS1284.13 was not provided for review during the audit.

Recommendation: 03/2022 – Metrology Procedure – With acknowledgement that this was a technical non-compliance and consideration of the possibility of new customers in the future and given the non-compliance relating to calibration, for its own internal compliance purposes Ord Hydro should develop Metrology Procedures to incorporate the requirements of the relevant requirements of the Metering Code where applicable and the PPAs. There was an absence of operation and maintenance documentation relating to metering installations and development of specific procedures or the inclusion of the requirements in the AMP or related AMS documentation is required. Review of AS1284.13 and the requirements of the *National Measurement Act* 1960 to ensure compliance is also recommended.	**Action: Refer to PAIP**

	Governance - The Licensee has established various corporate control procedures (i.e. PHA) to mitigate the risk of ineffective asset management governance in PHA operations. However, these processes could be better communicated to employees, internally monitored and reported at a site level. As such the following recommendations are made: ▪ Review the training processes for applicable PHA and Ord Hydro Asset Management Procedures (refer examples detailed above and SAMP section 9.5) requirements and ensure employees at a site level are aware of the requirements, for example as reflected in PHA.OPS.07.005 Delegation of Authority – Non Financial section 5.2. ▪ Implement a proactive internal audit schedule for EIRL4 obligations to ensure compliance can be determined prior to submission of the Annual Compliance Report (i.e. before 30 June annually) and to improve the integrity of reporting. ▪ Review other internal control processes such as Monthly Reports and determined whether they can be improved to report deviations i.e. Include Governance, Risk and Compliance Summary Table on Monthly Report template similar to HSE summary table to communicate compliance with key areas, for example number of Change Management Forms completed. ▪ Ord Hydro should consider if contractual requirements for compliance with the *Metering Code* are appropriate.			
320 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.2(1)** An accumulation meter must at least conform to the requirements specified in the applicable metrology procedure and display, or permit access to a display of the measurements that are specified in subclauses 3.2(1)(a)(b) using dials, a cyclometer, an illuminated display panel or some other visual means	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed that there was no Metrology Procedure established for the duration of the audit period the accumulation meters (i.e. revenue and check import/export meters) conformed to the requirements of the PPAs (which referenced the *Metering Code* or specified acceptable criteria), specifically OHPS conformed to the requirements for both Main and Check meters (Import and Export access, limits of error). The Station Manager confirmed that OHPS metering installations: ➢ used dials ➢ a cyclometer ➢ and a means of visual display ➢ were not subject to time of use tariffs. **Documents/Evidence –** 22.1,23.1-23.5, 24.1-24.4, 26.1, 35 **Observations:**			

	▪ The PPAs applicable during the audit period referenced the *Metering Code* or contained references in relation to specific metering obligations as contractually agreed by Pacific Hydro and their customer (i.e. HP or ADM) ▪ The OHPS had only 5 meter installations (for both revenue and check), two were located in the KNX switchyard, one at LATV, one at ADM (note ADM had an additional metering installation which OH calibrate and maintain but owned by ADM) and a spare meter which was used while meter was being calibrated. ▪ Ord Hydro's revenue meters were registered with the National Measurement Institute (NMI) and are designed to meet the specifications of the NMI under the *National Measurement Act* (Part VII Cl 18KA), including the requirements of measurement display. ▪ Ord Hydro meters were alarmed, monitored by SCADA and read monthly.			
	Recommendation: Nil	**Action: Nil**		
323 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.3A(1)** A network operator must ensure that bi-directional electricity flows do not occur at a metering point unless the metering installation for the metering point is capable of separately measuring and recording electricity flows in each direction.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed that OHPS had one bi-directional meter installation on their network (owned and located by ADM) and the meter was capable of separately measuring and recording electricity flows in each direction. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.9, 35 **Observations:** ▪ The remaining meters did not have bidirectional energy flows occurring at the metering point. ▪ Bidirectional status of ADM T1 Main Import/Export meter reflected on the Meter Serial Nos spreadsheet.			
	Recommendation: Nil	**Action: Nil**		
324 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.3B** If a user is aware of bi-directional electricity flows at a metering point that was not previously subject to a bi-directional flows or any changes in a customer's or user's circumstances in a metering point that will result in bi-directional flows, the user must notify the network operator within 2 business days.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed that OHPS did not become aware of changes in bi-directional electricity flow in a metering point within ADM and Horizon Power's network, which was not previously subject to bi-directional electricity flow and as such was require meet notification requirements.			

	Documents/Evidence – 22.1,23.1-23.5, 24.1-24.4, 26.1, 35 **Observations:** ▪ The Licensee did not receive any requests from users in relation to bi-directional flows at a metering point which was not previously subject to bi-directional electricity flows or any changes in a customer's circumstances in a metering point which will result in bi-directional electricity flows.			
	Recommendation: Nil	**Action: Nil**		
325Δ Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.3C** An accumulation meter or an interval meter that separately measures and records bi-directional electricity flows at the metering point must record: • the net electricity production transferred into the network; and • the net electricity consumption transferred out of the network	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed that in relation metering of bi-directional electricity flows, the ADM T2 metering installation that had the capability to separately measure and record bidirectional electricity flows at the metering point and recorded. ➢ the net electricity production transferred into the network that exceeded electricity consumption; and ➢ the net electricity consumption transferred out of the network that exceeded electricity production. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8, 35 **Observations:** ▪ All such import and export energy data were recorded within Ord Hydro's metering database monthly. ▪ Note a new T2 meter was installed during the previous audit period (22/3/2017) as reflected in the metering spreadsheet (i.e. Doc Ref 27.8).			
	Recommendation: Nil	**Action: Nil**		
326Δ Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.5(1) and (2)** A network operator must ensure that there is a metering installation at every connection point on its network that is not an unmetered connection point. Unless it is a Type 7 metering installation, the metering installation must meet the functionality requirements prescribed.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed that for the duration of the audit period OHPS maintained metering installations at every connection point on its network None of OHPS meters were Type 7 and they met the following functionality requirements:			

	➢ contained a device which had a visible or otherwise accessible display as detailed in clause 3.2(1); and ➢ had a measurement element for active energy; and ➢ as required by Table 3 in Appendix 1, had a measurement element for reactive energy; and ➢ permitted collection of *data* at the level of accuracy required by clause 3.9. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8, 35 **Observations:** ▪ Ord Hydro maintains 6 meter installations (i.e. for the five connection points within its network and a spare). ▪ Production Manager confirmed OHPS meters exceeded Type 2 specification. ▪ Noted the for majority of the audit period (prior to the closure of ADM) the annual throughput at connection point of OHPS metering installations was 100-<100 GWh (i.e. Type 2). LATV was significantly less. ▪ With regard to Metering Code Clause 3.9 Metering installation types and accuracy requirements: ➢ OH did not have type 7 meters on its network. ➢ Met the requirements for the applicable Type of metering installation specified in Table 3 in Appendix 1. ➢ There were no disagreements or disputes in relation to meter type. ➢ The Production Manager confirmed PH did not have Type 4 or 5 metering installations ➢ No compensation was carried out for OHPS metering installations.			
	Recommendation: Nil	**Action: Nil**		
327 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.5(3)** For each metering installation on its network, a network operator must provide, install, operate and, subject to subclause 3.7(5), maintain the metering installation in the manner prescribed, unless otherwise agreed.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee has entered into PPAs with its two customers which specified the requirements to maintain the metering installation. The PPAs established with Pacific Hydro's customers reference: ➢ Metering Code obligations ➢ Good industry practice (Electricity) ➢ Metering installations comply with Cl 3.9 (refer observation 326 above) **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8, 35			

	Observations: ▪ Meter Calibration required to be undertaken on a 3 year basis as per PPA ▪ Records maintained in Computerised Maintenance Management System (CMMS). ▪ PH maintain ADM T2 meter although not contractually obligated as courtesy in service provision. ▪ Noted calibration records reviewed confirmed metering equipment was suitable for a range of operating conditions to which it was exposed (for example, temperature) and operated within its defined limits.			
	Recommendation: Nil	**Action: Nil**		
328 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.5(4)** Except for a Type 7 metering installation, a network operator must ensure that the metering point for a revenue metering installation is located as close as practicable to the connection point in accordance with good electricity industry practice.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Station Manager confirmed that Ord Hydro's meters are located as close as practicable to the connection points within its network. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8, 35 **Observations:** ▪ Refer to Single Line Diagrams (SLDs) for further details.			
	Recommendation: Nil	**Action: Nil**		
329 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.5(6)** A network operator may only impose a charge for providing, installing, operating or maintaining a metering installation in accordance with the applicable service level agreement that it has with the user.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – A review of the PPAs Ord Hydro has executed with its customers, confirmed they did not provide for Ord Hydro to impose a charge for providing, installing, operating or maintaining its meters. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8, 35 **Observations:**			

	▪ Ord Hydro confirmed that it has not imposed such a charge during the period subject to audit. ▪ Pricing Schedules redacted in the PPA copies provided.			
	Recommendation: Nil	**Action: Nil**		
330 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.5(9)** If a network operator becomes aware that a metering installation does not comply with the Code, it must advise affected parties of the non-compliance and arrange for the non-compliance to be corrected as soon as practicable.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed for the duration of the audit period (aside from the absence of a Metrology Procedure) that Ord Hydro did not identify any of its metering installations to be non-compliant with the *Metering Code*. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8, 35 **Observations:** ▪ The Station Manager confirmed there were no replacements undertaken for meters and all calibration reports were within acceptable limits of accuracy. ▪ The omission of the ADM-T1 calibration was noted outside the scope of the audit period.			
	Recommendation: Nil	**Action: Nil**		
331* Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.7** All devices that may be connected to a telecommunications network must be compatible with the telecommunications network and comply with all applicable State and Commonwealth enactments.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed for the duration of the audit period, there were no telecommunication links in use with respect to the metering installations in the network. **Documents/Evidence** – Interview Station Manager, 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8, 35 **Observations:** ▪ Only electronically accessible through existing SCADA based communication channels (i.e. power line carrier communication or integrated services digital network). ▪ It was understood basic telecommunication service was provided by Telstra and considered to be in compliance with the applicable requirements			
	Recommendation: Nil	**Action: Nil**		

332 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.8** Subject to clause 3.27, a network operator must ensure that, consistent with the standards of good electricity industry practice, each metering installation on its network is secured by devices or methods that hinder unauthorized access and enable unauthorized access to be detected.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed it met the requirement in relation to prohibition on installing metering installation and that the metering installations were located in secured building/cabinets limited to those personnel with authorised access only. **Documents/Evidence** – Site Inspection, 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8, 35 **Observations:** ▪ Site inspected for Ord Hydro Station and Kununurra Switchyard (note ADM was not visited) confirmed metering installations secured behind high barbed fencing in Kununurra Town and prohibited access through fence at Ord Hydro site. Noted LATV metering on the Ord Switch Yard (OSY). ▪ It was noted that all PH metering installations met the requirements under the Metering Code for Type 1 installations (annual throughput above 1,000 GWh).			
	Recommendation: Nil	**Action: Nil**		
333$^{\Delta}$ Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.9(3)** Subject to subclauses 3.9(4), 3.9(5) and 3.9(7), each metering installation must meet at least the requirements for that type of metering installation as specified in Table 3 in Appendix 1 of the Code for metering installations on the SWIN or in Table 3A in Appendix 1 for metering installations on a network other than the SWIN.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Production Manager confirmed each metering installation met at least the requirements for that Type 1 of metering installation specified in Table 3 in Appendix 1. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8, 35 **Observations:** ▪ It was noted there were no disagreements or disputes in relation to the type of metering installation installed on OHPS network. ▪ Refer observations for obligation 320.			
	Recommendation: Nil	**Action: Nil**		
334		**Audit Priority**	**Controls Rating:**	**Compliance Rating:**

Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.9(7)** A metering installation used to supply a customer with requirements above 1000 volts that requires a VT and whose annual consumption is below 750MWh must meet the relevant accuracy requirements of a Type 3 metering installation for active energy only.	**4**	**NP**	**1**
	Finding – The licensee confirmed Ord Hydro did not have any customers with annual consumption below 750MWh. Accordingly, Ord Hydro had no obligations under clause 3.9(7) of the Metering Code for the audit period. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8, 35 **Observations:** ▪ The Western Power Calibration laboratory confirmed all metering installations were calibrated as Type 1 meters and as such exceeded the requirements for minimum acceptable class.			
	Recommendation: Nil	**Action: Nil**		
335 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.9(9)** If compensation is carried out within the meter, then the resultant metering system error must be as close as practicable to zero.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Site Manager confirmed no compensation has been carried out within Ord Hydro's meters during the audit period. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8, 35 **Observations:** ▪ All CT's and VT's comply with error requirements as sighted in the calibration data and specifications (0.2 CT/VT/MWh for type 1)			
	Recommendation: Nil	**Action: Nil**		
336 Type	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.10** A network operator must ensure that any programmable settings in any of its metering installations, data loggers or peripheral devices, which may affect the resolution of displayed or stored data, satisfy the relevant requirements specified in the applicable	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**

[2]	metrology procedure and comply with any applicable instructions by the National Measurement Institute under the National Measurement Act.			
	Finding – The Licensee confirmed Ord Hydro's meters were designed to meet the specifications of the NMI under the *National Measurement Act* and that any programmable settings within any of its metering installations, data loggers or peripheral devices, that did not affect the resolution of displayed or stored data. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8, 35 **Observations:** ▪ The Licensee has not developed a metrology procedure for Ord Hydro's network as confirmed in the previous audit reports.			
	Recommendation: Nil	**Action: Nil**		
337 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.11(1)** A network operator must ensure that a metering installation on its network is operating consistently with good electricity industry practice to measure and record data and permits the collection of data within the time specified in the applicable service level agreement, for at least the percentages of the year specified.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed that with respect to the reliability of metering installations Ord Hydro had established procedures for checking metering data on a monthly basis, including cross referencing with hourly SCADA meter reads for any discrepancies. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8, 35 **Observations:** ▪ Metering checked monthly and cross checked with SCADA data hourly with any discrepancies alarmed. ▪ There were no Service Level Agreements or % of year applicable, all metering requirements were detailed in the Power Purchase Agreement (PPA) instead			
	Recommendation: Nil	**Action: Nil**		
338 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.11(2)** If an outage or malfunction occurs to a metering installation, the network operator must repair the metering installation in accordance with the applicable service level agreement.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**

	Finding – The Licensee confirmed that during the audit period there was no outage or malfunction of the metering installations. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8, 35 **Observations:** ▪ Note the PPAs specified requirements in relation to reliability of metering installations. ▪ It was understood metering discrepancies could be determined from the check meters (monthly) and SCADA information (hourly).			
	Recommendation: Nil	**Action: Nil**		
339+ Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.11(3)** A Code participant who becomes aware of an outage or malfunction of a metering installation must advise the network operator as soon as practicable.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed that during the audit period there was no outage or malfunction of the metering installations. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8, 35 **Observations:** ▪ Note the PPAs specified requirements in relation to reliability of metering installations. ▪ The meters were located in OSY, KNX and ADM switchyards. There were no meters located at the LATV these meters were located as the OSY. ▪ It was understood metering discrepancies could be determined from the check meters (monthly) and SCADA information (hourly).			
	Recommendation: Nil	**Action: Nil**		
340 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.11A(1)** A network operator must ensure that the meters on its network are systematically sampled and tested for accuracy in accordance with AS 1284.13	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding –The calibration reports for the metering installations confirmed that Ord Hydro ensured that the meters on its network were systematically (i.e. triennially) sampled and tested for accuracy in accordance with AS1284.13. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8, 35			

	Observations: ▪ The Licensee's revenue meters were maintained in accordance with AS1284.13 and were subject to a three yearly calibration schedule, with calibration performed by an external contractor. ▪ The Station Manager confirmed the calibration reports during the audit period stated compliance with AS1284.13. Calibration report not provided for review. ▪ It was understood metering discrepancies could be determined from the check meters (monthly) and SCADA information (hourly).			
	Recommendation: Nil	**Action: Nil**		
341 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.11A(3)** Subject to clause 3.11A(3), if a "population" of meters is deemed to have failed under AS 1284.13, the network operator must ensure that all of the meters in that population are removed and replaced with new meters within 3 years of the testing of the population.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Station Manager confirmed that there were no failures of the "population" of meters and no meters were required to be removed or replaced during the audit period. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8, 35 **Observations:** ▪ The Station Manager confirmed the calibration reports during the audit period stated compliance with AS1284.13. Calibration report not provided for review.			
	Recommendation: Nil	**Action: Nil**		
342 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.12(1)** A network operator must ensure that each metering installation complies with at least the prescribed design requirements.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed Ord Hydro's meters were designed to meet the specifications of the NMI under the *National Measurement Act.* **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8, 35 **Observations:** ▪ It was understood the Main Meters were registered with National Measurement Institute (NMI).			

	Recommendation: Nil	**Action: Nil**		
343 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.12(2)** A network operator must ensure that instrument transformers in its metering installations comply with the relevant requirements of any applicable specifications or guidelines, including any transitional arrangements, specified by the National Measurement Institute under the *National Measurement Act* and any requirements specified in the applicable metrology procedure.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed that its metering installations (i.e. instrument transformers, revenue metering installation and check metering installation) complied with the *National Measurement Act* **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8, 35 **Observations:** ▪ Calibrations reports referred to compliance requirements. ▪ Transitional arrangements were not applicable as check metering was already installed during commissioning.			
	Recommendation: Nil	**Action: Nil**		
344 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.12(3)** A network operator must provide isolation facilities of a standard consistent with good electricity industry practice, to facilitate testing and calibration of the metering installation.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Station Manager confirmed isolation facilities were provided and a spare meter was maintained to install whilst the meters were being calibrated. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8, 35 **Observations:** ▪ Spare meter was referenced in the Meter register (i.e. Meter Serial Nos spreadsheet)			
	Recommendation: Nil	**Action: Nil**		

345 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.12(4)** A network operator must maintain drawings and supporting information, of a standard consistent with good electricity industry practice, to detail the metering installation for maintenance and auditing purposes.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed Ord Hydro maintained drawings and other technical specification documents relating to metering installation arrangements. Compliant. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8, 35 **Observations:** ▪ The Licensee maintained SLD's and other metering/CT/VT Technical Specification documentation (including calibration results) in soft copy. It was understood digital copies were also maintained.			
	Recommendation: Nil	**Action: Nil**		
346 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.13(1)** A network operator must procure the user, or the user's customer, to install, or arrange for the installation of, a full check metering installation or partial check metering installation in accordance with the prescribed requirements.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirm full check metering was included on all Ord Hydro's metering installations. There were no partial meters. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ PH was responsible for all metering management under the PPA's. ▪ The metering installations for CTs, VTs and check meters complied with the prescribed requirements. ▪ Full check metering was reflected in drawings, meter registers and other support AMS documentation.			
	Recommendation: Nil	**Action: Nil**		

347 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.13(3)(c)** A partial check metering installation must be physically arranged in a manner determined by the network operator, acting in accordance with good electricity industry practice.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – There were no partial check metering installed on Ord Hydro's network. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ It was understood metering discrepancies could be determined from the check meters (monthly) and SCADA information (hourly).			
	Recommendation: Nil	**Action: Nil**		
348 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.13(4)** A check metering installation for a metering point must comply with the prescribed requirements.	**Audit Priority** **4**	**Controls Rating:** **B**	**Compliance Rating:** **2**
	Finding – The Production Manager confirmed Pacific Hydro's check metering installations were not calibrated and have not been calibrated since commissioning. The main meters (i.e. tariff meters) were calibrated 3 yearly and a metering tolerance as specified in the PPAs was monitored against the check and main meters. A review of the Electrical Meters Summary confirmed compliance with the prescribed requirements for error levels permitted under the PPAs and Clause 3.9 (i.e. as referenced in Table 3 the 2012 Metering Code). **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ Data validation processes were established to identify metering discrepancies could be determined from the check meters (monthly) and SCADA information (hourly). ▪ The SCADA information was alarmed and as such potential discrepancies could be identified effectively.			
	Recommendation: 04/2022 – The Licensee should determine the calibration requirements of the check meters on its Network were required as they were pre 2005 Metering and take action as required to ensure requirements were accurately reflected in operational and maintenance documentation and compliance with the PPAs and Metering Code achieved.	**Action:** Refer PAIP		
349$^{\Delta}$ Type	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.14(3)**	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**

[2]	If, under clause 3.14(2), a metering installation uses metering class CTs and VTs that do not comply with the Table 3 or Table 3A in Appendix 1 (as applicable), then the network operator must take the actions specified in order to achieve the accuracy requirements in Table 3 or Table 3A in Appendix 1 (as applicable).			
	Finding – The Production Manager confirmed that Ord Hydro's meters complied with Table 3 as such there were not requirements to install meters of a higher class accuracy or apply accuracy calibration factors within the meter. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ Ord Hydro's Metering installations were commissioned prior to commencement of the 2005 Metering Code and although not required to install check metering this was already installed on the network in accordance with the PPA's ▪ Noted there were no meters with communications links on the Ord Hydro Network.			
	Recommendation: Nil	**Action: Nil**		
355 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.20(1)** If reasonably requested by a Code participant, a network operator must provide enhanced technology features in a metering installation.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – There were no requests by ADM or HP to provide enhanced technology features in any metering installation during the audit period. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ The PPAs detailed metering requirements.			
	Recommendation: Nil	**Action: Nil**		
356 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.20(3)** A network operator may only impose a charge for the provision of metering installations with enhanced technology features in accordance with its applicable service level agreement with the user.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**

	Finding – Ord Hydro did not have SLA established with its customers. PPAs have been established with both ADM and HP. Charges for the provision of metering installations with enhanced technology features were not specified in the current PPAs and no charges for the provision of metering installations were made during the audit period. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ There have been no disputes in relation to metering services provided during the audit period.			
	Recommendation: Nil	**Action: Nil**		
357 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause Cl 3.21(1)** Meters containing an internal real time clock must maintain time accuracy as prescribed. Time drift must be measured over a period of 1 month.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed that Ord Hydro's meters did not contain an internal real time clock. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ Data validation processes were established to identify metering discrepancies could be determined from the check meters (monthly) and SCADA information (hourly).			
	Recommendation: Nil	**Action: Nil**		
358 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.21(2)** If a metering installation includes measurement elements and an internal data logger at the same site, it must include facilities on-site for storing the interval energy data for the periods prescribed.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed Ord Hydro did not use internal data loggers at the same site where meters have been installed. As such, the obligations relating to onsite storing of interval energy data were not applicable. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35			

	Observations: ▪ Data validation processes were established to identify metering discrepancies could be determined from the check meters (monthly) and SCADA information (hourly).			
	Recommendation: Nil	**Action: Nil**		
359 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.22** A network operator providing one or more metering installations with enhanced technology features must be licensed to use, and access, the metering software applicable to all devices being installed and be able to program the devices and set parameters.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed during the audit period Ord Hydro held the required licence for using and accessing the basic metering software associated with its meters and Ord Hydro staff were trained in setting the parameters of meters. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ The PPAs specified metering requirements.			
	Recommendation: Nil	**Action: Nil**		
364 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / 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.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Site Manager confirmed there were no new metering installations installed on Ord Hydro network during the audit period. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ Noted meter energy data spreadsheet contains records of any meter changes and there were none specified during the audit period.			
	Recommendation: Nil	**Action: Nil**		
365	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 3.29**	**Audit Priority**	**Controls Rating:**	**Compliance Rating:**

Type [2]	A network operator must publish a list of registered metering installation providers, including the prescribed details, and update the list at least annually.	**4**	**NP**	**NR**
	Finding – The Licensee confirmed Ord Hydro did not engage any metering installation service providers. As such, the obligation related to publishing a list of service providers did not apply. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ Noted meter changed during the previous audit period did not belong to Pacific Hydro. ▪ The Licensee only has two customers, and their metering requirements were specified in the Power Purchase Agreements.			
	Recommendation: Nil	**Action: Nil**		
PART 4 - THE METERING DATABASE				
366 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 4.1(1)** A network operator must establish, maintain and administer a metering database containing standing data and energy data for each metering point on its network.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed and provided the Electrical Meters Summary Database and Energy Data spreadsheets. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ Ord Hydro maintained and administered standing data and energy data on two separate spreadsheets, for each metering point on its network ▪ Energy data was recorded in the “Energy.xls” spreadsheet and standing data was recorded in the “Electrical Meters Summary Database”.			
	Recommendation: Nil	**Action: Nil**		
367 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 4.1(2)** A network operator must ensure that its metering database with its associated links, circuits, information storage and processing systems are secured by devices or methods consistent with a good industry practice (to hinder unauthorised access and enable unauthorised access to be detected).	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**

	Finding – Ord Hydro's Kununurra office building had physical and remote security measures in place that were visible during the site visit. The metering database was stored on the network which is password protected and backed up. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ The Licensee has established IT Policies and Procedures for data security.			
	Recommendation: Nil	**Action: Nil**		
368 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 4.1(3)** A network operator must prepare and, if applicable, implement a disaster recovery plan to ensure that it is able, to rebuild the metering database and provide energy data to Code participants within 2 business days after the day of any disaster.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The licensee ensured for the duration of the audit period that Disaster Recovery Plans existed for all IT infra structure in PH (hardware/systems). **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ OH backed up the metering database overnight to its server, which allows OH to recover the database if required. There were also offsite backup arrangements.			
	Recommendation: Nil	**Action: Nil**		
369 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 4.2(1)** A network operator must ensure that its registry complies with the Code and the prescribed clause of the market rules.	**Audit Priority** **4**	**Controls Rating:** **B**	**Compliance Rating:** **2**
	Finding – For the duration of the audit period the Licensee maintained a database (Electrical Meters Summary). However, Non-Compliance with the Metering Code was noted as detailed in 370. It was noted Ord Hydro was required to have a registry that complied with the code, but it was not a participant in the Wholesale Electricity Market (**WEM**) and therefore there would not be an expectation that its registry complied with the WEM rules. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:**			

	▪ Noted some of standing data items for example Data communication details in respect of the metering point, were not applicable. ▪ It was noted the impact of this missing information was limited as the Licensee has 2 customers and their supply arrangements were detailed in their PPAs.			
	Recommendation: 05/2022 Determine to what degree the Meter Database is required to comply with the code as pre 2005 and review the Electrical Meters Summary spreadsheet and ensure that the relevant requirements of the metering code are included.	**Action:** Refer PAIP		
370⊗ Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 4.3(1)** The standing data for a metering point must comprise at least the items specified.	**Audit Priority** **2**	**Controls Rating:** **B**	**Compliance Rating:** **2**
	Finding – For the duration of the audit period the Licensee maintained a database (Electrical Meters Summary) which had columns for the some of the minimum required information with the exception of: Standing Data Items 5, 12*, 18** and 19. It was noted that this some of information was able to be determined but was not contained within the meter database as defined in the Metering Code. Further noted that 14, 16 were refenced but incomplete as left blank within the meter registry. As noted in 369 Ord Hydro was required to have a registry that complied with the code, but it was not a participant in the WEM and therefore there would not be an expectation that its registry complied with the WEM rules. Note *12 the Metering Installation type (i.e. 16) was included but the meter type (i.e. interval vs accumulation meter) was not. **18 was partly covered by referencing the date of calibration, however current test and calibration program details, test results and test certificates, although they could be determined by cross referencing the certificates, were not included in the Meter Registry. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ Noted the Licensee indicated some of standing data items were not applicable. for example #21 and 22-26 Data communication details in respect of the metering point ▪ Notes #7 was addressed by separate columns of the Meter Registry (i.e. Column B & H) but did not reference the drawings. ▪ It was noted the impact of this missing information was limited as the Licensee has 2 customers and their supply arrangements were detailed in their PPAs. ▪ The previous audit report noted a non-compliance with this obligation for 5, 17, 19-26. ▪ Metering Code 2012 Table 2 Instrument transformer connected ratio were referenced in the Electrical Meters Summary (Ref Columns AM (CTs) and AN (VTs)) ▪ Noted the 2015-20147 Annual Compliance Reports noted a non-compliance with the requirements and stated that the PPAs met the requirements and as such were not required. An acknowledgement from the ERA in relation to exemption from this obligation has not been determined.			

	Recommendation: 06/2022 – As per Recommendation 05/2022.	**Action: Refer to PAIP**		
371 Type [NR]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 4.4(1)** If there is a discrepancy between energy data held in a metering installation and in the metering database, the affected Code participants and the network operator must liaise to determine the most appropriate way to resolve the discrepancy.	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed that for the duration of the audit period, there were no discrepancies in metering data. However, should discrepancies arise they would be managed in accordance with the PPA, which had Dispute Resolution provisions. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ OH liaised with its customers when resolving metering discrepancies or queries.			
	Recommendation: Nil	**Action: Nil**		
372 Type [NR]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 4.5(1)** A Code participant must not knowingly permit the registry to be materially inaccurate.	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee not knowingly permit the registry to be materially inaccurate over the audit period. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ Access to the registry was limited to site operators, Engineering Operation Services and Australian Operations Departments only. ▪ Although there were some discrepancies in Metering Code Standing data, they were not materially inaccurate.			
	Recommendation: Nil	**Action: Nil**		
373 Type	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 4.5(2)**	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**

[2]	Subject to subclause 5.19(6), if a Code participant, other than a network operator, becomes aware of a change to, or inaccuracy in, an item of standing data in the registry, then it must notify the network operator and provide details of the change or inaccuracy within the timeframes prescribed.			
	Finding – The Licensee confirmed there has not been notifications from its customers in relation to standing data. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ Nil			
	Recommendation: Nil	**Action: Nil**		
374 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 4.6(1)** If the network operator is notified of a change to, or inaccuracy in, an item of standing data by a Code participant that is the designated source for the item of standing data under Table 2 in clause 4.3(1) then the network operator must update the registry to address the issue.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – Refer to Obligation 373 **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ Refer to 373			
	Recommendation: Nil	**Action: Nil**		
375 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 4.6(2)** If a network operator is notified of a change to, or inaccuracy in, an item of standing data by a Code participant which is not the designated source for the item of standing data, or otherwise becomes aware of a change to or inaccuracy in an item of standing data, then the network operator must determine whether the registry should be updated, and update the registry as required.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**

	Finding – Refer to Obligation 373 **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:**			
	Recommendation: Nil	**Action: Nil**		
376 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 4.7(1)** If standing data for a metering point is updated in the registry, the network operator must, within 2 business days after the update (or such other time as is specified in the applicable service level agreement) notify the update to the current user and each previous user, if the updated standing data relates to a period or periods when the previous user was the current user.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed there has not been notifications to its customers in relation to standing data during the audit period. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:**			
	Recommendation: Nil	**Action: Nil**		
377+ Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 4.8(3)** A network operator must allow a user who is a retailer or a generator to have local and, where a suitable communications link is installed, remote access to the energy data for metering points at its associated connection points, using a password provided by the network operator that provides 'read only' access.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed that Ord Hydro and its customers do not use a communication links for the revenue meters. Remote access has not been requested to HP nor has it been provided to HP. Therefore, the obligation related to providing remote access with password to energy data does not apply.			

	Documents/Evidence – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ Meter data is read monthly as referenced in Electrical Meters Summary Database and as reflected in the Energy spreadsheet.			
	Recommendation: Nil	**Action: Nil**		
378+ Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 4.8(3A)** A network operator must allow a user who is a retailer or a generator to have access to data held in its metering database for metering points at its associated connection points, by the prescribed methods, using a password provided by the network operator which provides 'read only' access.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed that requirements in relation to Ownership, security and rights of access to data were addressed in the PPA. . **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ There were only 2 customers on the Licensee's network during the audit period.			
	Recommendation: Nil	**Action: Nil**		
379 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 4.8(4)(a)** A network operator must have devices and methods in place to ensure that energy data held in its metering installation is secured from unauthorised local or remote access using the methods prescribed.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed that all meters were secured through physical and logical means to prevent and/or detect unauthorised access **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ Ord Hydro's building had physical security measures in place sighted during the site visit for KNX and OSY ▪ The metering database was stored on Ord Hydro's network drive, which was password protected.			

	▪ The Licensee had remote monitoring through SCADA which was alarmed.			
	Recommendation: Nil	**Action: Nil**		
380 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause** 4.8(4)(b) A network operator must have devices and methods in place to ensure that the data held in its metering database is secured from unauthorised local, or remote, access using the methods prescribed.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed that all meters were secured through physical and logical means to prevent and/or detect unauthorised access **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ Ord Hydro's building had physical security measures in place sighted during the site visit for KNX and OSY ▪ The metering database was stored on Ord Hydro's network drive, which was password protected. ▪ The Licensee had cyber security policies established.			
	Recommendation: Nil	**Action: Nil**		
381 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause** 4.8(5) Without limiting subclause 4.8(4), a network operator must ensure that electronic passwords and other electronic security controls are only issued to the specified authorised personnel and otherwise keep its records of electronic passwords, and other electronic security controls, secure from unauthorised access.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed that only authorised personnel of PH had access with electronic passwords to the metring installations and meter access was undertaken by Ord Hydro personnel. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ The Licensee had cyber security policies and systems established. ▪ There were no specific procedures established with relation to meter access and calibration.			

	Recommendation: Nil	**Action: Nil**		
382 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 4.9** A network operator must retain energy data in its metering database for each metering point on its network, including any energy data that has been replaced under subclause 5.24, for at least the periods, and with the level of accessibility, prescribed.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed that during the audit period, Ord Hydro maintained energy data in the spreadsheet "Energy.xls" (i.e. Meter Database or Meter Registry) and that: ➢ the Energy.xls spreadsheet retained historical data in a readily accessible format for at least 13 months. ➢ once archived, indefinitely (i.e. in excess of five years and 11 months) in a format that was accessible within a reasonable period of time. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ It was understood that historic energy data readings were maintained in the SCADA. ▪ The Licensee is foreign owned and there were requirements to implement AESCSF standard, which incorporated increased controls with regards to cyber security and system protection. The Manager Compliance and Risk Management confirmed the programs commenced implementation during the audit period.			
	Recommendation: Nil	**Action: Nil**		
PART 5 - METERING SERVICES				
383 Type [NR]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.1(1)** A network operator must use all reasonable endeavours to accommodate another Code participant's requirement to obtain a metering service and requirements in connection with the negotiation of a service level agreement.	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed that the PPAs established with its customers meet the requirements for Ord Hydro to use reasonable endeavours to provide access to metering services and that there were no other code participants that had access to Pacific Hydro's transmission network or required a metering service. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ The Licensee had PPAs with its two customers that addressed their metering requirements. ▪ There were no new customers during the audit period. ▪ A new PPA was executed during the audit period for Horizon Power. The original PPA expired on 1 July 2021 and new agreement was executed on 15 October 2020.			

	▪ The Licensee confirmed that during the audit period there were no disputes in relation to the metering services provided under the PPA.			
	Recommendation: Nil	**Action: Nil**		
384 Type [NR]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.1(2)** Without limiting subclause 5.1(1), a network operator must: • expeditiously and diligently process all requests for a service level agreement. • negotiate in good faith with a Code participant regarding the terms for an agreement; and • to the extent reasonably practicable in accordance with good electricity industry practice, permit a Code participant to acquire a metering service containing only those elements of the metering service which the Code participant wishes to acquire.	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – Refer to obligation 383. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:**			
	Recommendation: Nil	**Action: Nil**		
385 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.3(1)** A network operator must, for each metering point on its network, obtain energy data from the metering installation and transfer the energy data into its metering database by no later than 2 business days after the date for the scheduled meter reading for the metering point (or such other time as is specified in the applicable service level agreement).	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed that during the audit period all obligations to read meters were complied with. The Station Manager confirmed energy data collected from meters was recorded in the SCADA and put into the “Energy.xls” spreadsheet on the same day. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:**			

	▪ It was noted that with respect to ADM, an ADM representative read the meter relevant to Ord Hydro's supply and provided the meter reading to Station Manager, Ord Hydro verified the read against SCADA data and entered the read into the Energy.xls" spreadsheet on the same day. ▪ HP meters meter readings were performed by appointed Ord Hydro personnel. ▪ Ord Hydro used check meters to perform the required energy data validation processes. ▪ It was noted that actual meter readings were undertaken on a continuous basis and in 30 minute intervals. As such, even though the meter had interval meter capabilities it was used as an accumulation meter as there were no time dependent or varied tariffs applied.			
	Recommendation: Nil	**Action: Nil**		
386*⊗ Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.4(1)** A network operator must, for each meter on its network, at least once in every 12-month period undertake a meter reading that provides an actual value that passes the validation processes in Appendix 2	**Audit Priority** **4**	**Controls Rating:** **A**	**Compliance Rating:** **1**
	Finding – The Production Manager confirmed that Ord Hydro has implemented a monthly data validation process that encapsulates the validation process requirements of appendix 2 of the Code. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ The metering data validation process was contained in the energy.xls ▪ The Production Manager confirmed there were constant validation processes established with regards to meter data as the SCADA was set to alarm, additionally a spreadsheet for the monthly report drew from data in the PI database and there were error checks established on this.			
	Recommendation: Nil	**Action: Nil**		
387 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.4(1A)** The meter reading referred to in clause 5.4(1) must not be undertaken by the customer associated with the meter and must be undertaken by a person who is employed or appointed by the network operator and who is suitably skilled in accordance with good electricity industry practice to carry out meter readings.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed that Ord Hydro's processes provided for suitably skilled Ord Hydro representatives to personally conduct or validate all meter reads. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35			

	Observations: ▪ OH personnel read the meters in PH's metering installations and records the energy data (except for ADM meter) on "Energy.xls". ▪ Due to the distance to ADM site from Ord Hydro site the ADM meter was read by its representative. ▪ OH personnel verified ADM's data by reading SCADA data remotely.			
	Recommendation: Nil	**Action: Nil**		
388+ Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.4(2)** A user must, when reasonably requested by a network operator, assist the network operator to comply with the network operator's obligation under subclause 5.4(1).	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed that when PH made any requests of its customers in relation to subclause 5.4(1) during the period subject to audit they were facilitated. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ It was noted that when PH was unable to access the meter to undertake a meter reading and obtain the energy data, the user (i.e. ADM) assisted the PH to obtain access to the meter at a mutually agreed time ▪ Apart from ADM meters, the meters were located at Ord Hydro's HV switchyards (KNX and OSY) with full access at all times.			
	Recommendation: Nil	**Action: Nil**		
389 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.5(2)** Subject to subclause 5.5(2A) (b), a network operator may impose a charge for the provision of data, but only if • a user has requested the energy data to the extent permitted by, and in accordance with the applicable service level agreement between it and the user; and • if a customer has given a direction under subclause 5.17A(1), in accordance with the prescribed conditions.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee's PPAs with its customers did not provide for imposing a charge for providing energy data or standing data on request. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35			

	Observations: ▪ The Production Manager confirmed no charges had been imposed and no requests for energy data (other than for billing purposes) were made during the audit period.			
	Recommendation: Nil	**Action: Nil**		
390 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.5(2A)** A network operator must not impose a charge for the provision of standing data and for the provision of energy data if another enactment prohibits it doing so.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – Refer obligation 390. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:**			
	Recommendation: Nil	**Action: Nil**		
391* Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.6(1)** Subject to subclause 5.6(2), a network operator must provide validated, and where necessary, substituted or estimated energy data for a metering point to the user for the metering point and the IMO within the timeframes prescribed in subclause 5.6(1)(2).	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed energy data, including validated was provided to Ord Hydro's customers in accordance with the respective PPAs. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ It was understood there was no substituted or estimated data provided during the audit period.			
	Recommendation: Nil	**Action: Nil**		
392 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.7** If a replacement energy data value is inserted in a metering database for a metering point, the network operator must provide replacement energy data to the user for the metering point and the IMO within the timeframes prescribed.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**

	Finding – The Licensee confirmed there were no instances during the audit period where substituted or estimated energy data was provided to customers **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ The Wholesale Electricity Market (**WEM**) supplies electricity to the south-west of Western Australia via the South West Interconnected System (SWIS), as such, Ord Hydro's network was not part of the WEM, Ord Hydro is not required to provide data to Australian Energy Market Operator (**AEMO**). ▪ The Licensee confirmed no other users had access to Ord Hydro's transmission network other than its customers.			
	Recommendation: Nil	**Action: Nil**		
393 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.8** A network operator must provide a user with whatever information the network operator has that is necessary to enable the user to comply with its obligations under the Code of Conduct, within the time necessary for the user to comply with the obligations.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed metering information was provided to Ord Hydro's customers in accordance with the respective PPAs. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ Ord Hydro did not receive any requests for energy data, standing data or bulk standing data from HP in relation to the obligations under the Code of Conduct. ▪ The PPAs specified requirements for the provision of information.			
	Recommendation: Nil	**Action: Nil**		
394 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.9** A network operator must provide standing data, provided to or obtained by it under this Code, to users where required to do so under any enactment.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – Refer Obligation 393 **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35			

	Observations:			
	Recommendation: Nil	**Action: Nil**		
397 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.12(1)** If a user gives a network operator an energy data request for a metering point in accordance with the communication rules, and the energy data request relates only to a time or times for which the user was the current user at the metering point, then the network operator must provide a user with a complete set of energy data for the metering point within the timeframes prescribed.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – Refer Obligation 393 **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:**			
	Recommendation: Nil	**Action: Nil**		
398 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.13** If the current user for a metering point gives the network operator a standing data request for the metering point in accordance with the communication rules, then the network operator must: ▪ provide the current user with a complete current set of standing data for a metering point; and ▪ advise whether there is a communications link for the metering point, within 2 business days after the receipt of the request.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – Refer Obligation 393 **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:**			

	Recommendation: Nil	**Action: Nil**		
399 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.14(3)** If a user makes a bulk standing data request, the network operator must in accordance with the communication rules, acknowledge receipt of the request and provide the requested standing data within the timeframes prescribed.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – Refer Obligation 393 **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:**			
	Recommendation: Nil	**Action: Nil**		
400 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.15** If a network operator provides energy data to a user or the IMO, it must also provide the date of the meter reading in accordance with the requirements specified.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed that energy data was provided to its customers in accordance with PPAs for billing purposes, this included dates of meter reads. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ The customer invoices were not reviewed during the audit.			
	Recommendation: Nil	**Action: Nil**		
403 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.17A(1)** A network operator must provide data for a metering point from its metering database to a person if (and to the extent that) the customer associated with the metering point gives the network operator a direction to do so that complies with subclause 5.17A(2).	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**

	Finding – The Licensee confirmed Ord Hydro did not receive any directions from a customer to provide data for a metering point from its metering database during the audit period. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ Ord Hydro did not receive any requests for energy data, standing data or bulk standing data from HP in relation to the obligations under the Code of Conduct. ▪ The PPAs specified requirements for the provision of information.			
	Recommendation: Nil	**Action: Nil**		
404 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.17A(3)** A network operator must comply with a direction under subclause 5.17A(1) within the timeframes prescribed.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding –. The Licensee confirmed aside from routine billing, there were no directions to provide that energy data and standing data. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ There were no disputes associated with the PPAs during the audit period. ▪ The Licensee confirmed response to any request for data from ADM / HP would be complied with in accordance with PPA's			
	Recommendation: Nil	**Action: Nil**		
405+ Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.18** If a user collects or receives information regarding a change in the energisation status of a metering point then the user must provide the network operator with the prescribed information, including the stated attributes, within the timeframes prescribed.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed that Ord Hydro did not receive any directions from a customer to provide information regarding a change in the energisation status of a metering point during the audit period. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:**			

	▪ It was noted that ADM had closed during the audit period but still required limited power for decommissioning activities.			
	Recommendation: Nil	**Action: Nil**		
406+ Type [NR]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / 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 collect information from customers, if any, that assists the network operator in meeting its obligations described in the Code and elsewhere, and provide that information to the network operator.	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed Ord Hydro had no requirements to collect of any information relating its customers meters or connection points. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:**			
	Recommendation: Nil	**Action: Nil**		
407+Δ⊗ Type [NR]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / 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 prescribed information in relation to the site of each connection point with which the user is associated. Note: The prescribed information listed in clause 5.19(2) was changed by the Electricity Industry (Metering) Amendment Code 2018.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – Refer to Obligation 406. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:**			
	Recommendation: Nil	**Action: Nil**		

408+ Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.19(3)** Subject to subclauses 5.19(3A) and 5.19(6), the user must, within 1 business day after becoming aware of any change in an attribute described in subclause 5.19(2), notify the network operator of the change.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – Refer to Obligation 406. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:**			
	Recommendation: Nil	**Action: Nil**		
411⊗ Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.20(1)** A network operator must, by not later than 6 months after the date this Code applies to the network operator, develop, in accordance with the communication rules, an Energy Data Verification Request Form.	**Audit Priority** **4**	**Controls Rating:** **A**	**Compliance Rating:** **1**
	Finding – The Production Manager confirmed that Ord Hydro did not receive any energy data verification requests during the audit period. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.12, 31.1-31.3, 35 **Observations:** ▪ The Licensee has developed an Energy Data Verification Request Form (June 2018) however this was not required to be use during the audit period. Compliance was noted for the duration of the audit period.			
	Recommendation: Nil	**Action: Nil**		
412⊗ Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.20(2)** An Energy Data Verification Request Form must require a Code participant to provide the information prescribed.	**Audit Priority** **2**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Production Manager confirmed that Ord Hydro did not receive any request for verification of energy data.			

	Documents/Evidence – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.12, 31.1-31.3, 35 **Observations:** ▪ The Licensee has developed an Energy Data Verification Request Form (June 2018) however this was not required to be use during the audit period. Compliance was noted for the duration of the audit period (Refer document 27.12 - PHA.OPS.09.096.01 The Ord – Energy Data Verification Form) ▪ It was noted that Ord Hydro's PPAs with its two customers detailed its metering obligations, including the provision of metering data.			
	Recommendation: Nil	**Action: Nil**		
413 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.20(4)** If a Code participant requests verification of energy data under subclause 5.20(3), the network operator must, in accordance with the metrology procedure: • subject to subclause 5.20(5), use reasonable endeavours to verify energy data; and • inform the requesting Code participant of the result of the verification and provide the verified energy data to that Code participant within the timeframes prescribed.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – Refer Obligation 412. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.12, 31.1-31.3, 35 **Observations:**			
	Recommendation: Nil	**Action: Nil**		
414 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.21(2)** A network operator must comply with any reasonable request under subclause 5.21(1).	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed during the audit period there were no requests by its customers to test or audit the accuracy of metering installation, the energy data from the metering installation or the standing data for the metering installation. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.12, 31.1-31.3, 35 **Observations:**			

	▪ It was noted that Ord Hydro's PPAs with its two customers detailed its metering obligations, including the provision of metering data and verification processes.			
	Recommendation: Nil	**Action: Nil**		
415 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.21(4)** A test or audit under subclause 5.21(1) is to be conducted in accordance with the metrology procedure and the applicable service level agreement.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed for the duration of the audit period neither customer required a test or audit of the metering installation for accuracy, energy data or standing data. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.12, 31.1-31.3, 35 **Observations:** ▪ The Licensee has not established a metrology procedure, however, the PPA addressed the requirements in relation to testing and verification. ▪ Routine calibration was undertaken in accordance with the PPAs. ▪ There were no customer disputes during the audit period in relation to metering services.			
	Recommendation: Nil	**Action: Nil**		
416+ Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.21(5)** A Code participant must not request a test or audit under subclause 5.21(1) unless the Code participant is a user and the test or audit relates to a time or times at which the user was the current user, or the Code participant is the IMO.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – Refer to obligation 415. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.12, 31.1-31.3, 35 **Observations:**			
	Recommendation: Nil	**Action: Nil**		

417+ Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.21(6)** A Code participant must not make a request under subclause 5.21(1) that is inconsistent with any access arrangement or agreement.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – Refer to obligation 415. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.12, 31.1-31.3, 35 **Observations:**			
	Recommendation: Nil	**Action: Nil**		
418 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.21(8)** A network operator may only impose a charge for the testing of the metering installations, or auditing of information from the meters associated with the metering installations, or both, in accordance with the applicable service level agreement between it and the user.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – Ord Hydro's PPAs with its customers dd not provide for Ord Hydro to impose a charge for undertaking a test of metering installations and/or auditing of information from the meters associated with the metering installations. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.12, 31.1-31.3, 35 **Observations:** ▪ Ord Hydro has not established separate service level agreements with its customers			
	Recommendation: Nil	**Action: Nil**		
419 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.21(9)** Any written service level agreement entered into under subclause 5.21(7) must include a provision that no charge is to be imposed if the test or audit reveals a non-compliance with this Code.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding –Refer Obligation 418.			

	Documents/Evidence – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.12, 31.1-31.3, 35 **Observations:**			
	Recommendation: Nil	**Action: Nil**		
420 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.21(11)** If a test or audit shows that the accuracy of the metering installation or information from the meter associated with the metering installation does not comply with the requirements under this Code, the network operator must: ▪ advise the affected parties as soon as practicable of errors detected under a test or audit, the possible duration of the errors; and ▪ must restore the accuracy of the metering installation in accordance with the applicable service level agreement.[12] [12] Clause 5.21(11)(c) gives the network operator an option to make corrections to the energy data for a period up to 12 months before the date of the test or audit.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed that there have been no errors in the accuracy of Ord Hydro's meters during the audit period. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.12, 31.1-31.3, 35 **Observations:** ▪ Ord Hydro did not impose such a charge during the audit period			
	Recommendation: Nil	**Action: Nil**		
421 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.21(12)** The original stored error correction data in a meter must not be altered except during accuracy testing and calibration of a metering installation.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed stored correction data in a meter was not altered except during calibration. Ord Hydro's Revenue meters were sent for certification every three years, where they were tested for accuracy, with Ord Hydro retaining the results in its CMMS. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.12, 31.1-31.3, 35			

	Observations: ▪ All meters were calibrated during the audit period as per the requirements of the PPA with the exception of ADM-T1.			
	Recommendation: Nil	**Action: Nil**		
422 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.22(1)** A network operator must validate energy data in accordance with this Code applying, as a minimum, the prescribed rules and procedures set out in Appendix 2 and must, where necessary, substitute and estimate energy data under this Code applying, as a minimum, the prescribed rules and procedures set out in Appendix 3.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed for the duration of the audit period, energy data was validated in accordance with the prescribed rules and procedures as set out in Appendix 2 of the Metering Code. There were no instances where Ord Hydro was required to substitute or estimate energy data in line with the rules and procedures set out in Appendix 3 of the Metering Code. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.12, 31.1-31.3, 35 **Observations:** ▪ It was noted there were check meters in place and remote access to meter readings via SCADA and Programmable Logic Controller (**PLC**). As such, there was no instance where substitute and estimate data was used and therefore the need to apply the rules in Appendix 3. ▪ Calibration records and meter testing reports and check meter and revenue meters were installed.			
	Recommendation: Nil	**Action: Nil**		
423 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.22(2)** The network operator must use check metering data, where available, to validate energy data provided that the check metering data has been appropriately adjusted for differences in metering installation accuracy in accordance with subclause 3.13.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The License confirmed that for the duration of the audit period Ord Hydro used check meters for each of its five, Type 1, metering installations. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.12, 31.1-31.3, 35 **Observations:** ▪ It was noted that the check metering arrangements met the requirements of clause 3.13 of the Metering Code. ▪ Check meters were not calibrated separately.			

	▪ Revenue meters were calibrated offsite once every three years. Refer obligation 341. ▪ Energy data from check meters were referenced against the revenue meter for accuracy			
	Recommendation: Nil	**Action: Nil**		
424$^{\Delta}$ Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.22(3)** If a check meter is not available or energy data cannot be recovered from the metering installation within the time required under this Code, or if clause 5.22(7) applies, then the network operator must prepare substitute values using a method contained in Appendix 3 (or in the case of a substitution under clause 5.22(7), a method contained in the metrology procedure) and agreed where necessary with the relevant Code participants.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed for the duration of the audit period all check meters were available and there were no requirements to prepare substitute values. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ The Energy.xls spreadsheet included data for all meters throughout the audit period, except where the meter was offline, due to customer maintenance requirements i.e. ADM. At all times data was available for import/export on at least one of the metering installations.			
	Recommendation: Nil	**Action: Nil**		
425 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.22(4)** If a network operator detects a loss of energy data or incorrect energy data from a metering installation, it must notify each affected Code participant of the loss or error within 24 hours after detection.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed that the check meter and SCADA data could be used to check accuracy of energy data when PH detects a loss of energy data or incorrect energy data. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ The PPA specified notification timeframes.			
	Recommendation: Nil	**Action: Nil**		

426 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.22(5)** Substitution or estimation of energy data is required when energy data is missing, unavailable or corrupted, including in the circumstances described in this subclause.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – There were no instances where Ord Hydro was required to substitute or estimate energy data. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.12, 31.1-31.3, 35 **Observations:**			
	Recommendation: Nil	**Action: Nil**		
427 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.22(6)** A network operator must review all validation failures before undertaking any substitution.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – Refer to obligation 426. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.12, 31.1-31.3, 35 **Observations:** ▪ Data between main and check meter was recorded for inconsistencies, monthly check reports and monitoring via the PI System.			
	Recommendation: Nil	**Action: Nil**		
428 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.23(1)** If a network operator determines that there is no possibility of determining an actual value for a metering point, then the network operator must designate an estimated or substituted value for the metering point to be a deemed actual value for the metering point.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding –There were no instances where Ord Hydro was not able to determine an actual value for a metering point, as such there were no instances where substitute and estimate data was used. A deemed actual value arises when the meter is destroyed or otherwise permanently unreadable.			

	Documents/Evidence – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.12, 31.1-31.3, 35 **Observations:** ▪ There were no instances in which substitution or estimation of energy data was required due to energy data being missing, unavailable or corrupted. .			
	Recommendation: Nil	**Action: Nil**		
429 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.23(3)** If a network operator has designated a deemed actual value for a metering point, then the network operator must: ▪ repair or replace the meter or one or more of components of metering equipment (as appropriate) at the metering point; and subclauses 5.24(3(c) and 5.24(4) apply in respect of the estimated or substituted value which was designated to be the deemed actual value.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – There were no instances during the audit period where OH determined that there was a deemed actual value at a metering point (i.e. an estimated or substituted value designated as such for a metering point under clause 5.23(1)). **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ The Licensee has high speed data loggers to capture KWh at the metering points, SCADA recorders, monthly invoicing and check meters. ▪ Reporting processes were also established incident reports and monthly reports.			
	Recommendation: Nil	**Action: Nil**		
430 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.24(1)** If a network operator uses an actual value (first value) for energy data for a metering point, and a better quality actual or deemed actual value is available (second value), the network operator must replace the first value with the second value if doing so would be consistent with good electricity industry practice.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed there were no instances where actions were taken to replace energy data with better data (i.e. replace the first actual with deemed second value or better quality data),			

	Documents/Evidence – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.12, 31.1-31.3, 35 **Observations:** ▪ Controls included alarmed failure reports, SCADA and meter database			
	Recommendation: Nil	**Action: Nil**		
431 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.24(2)** If a network operator uses a deemed actual value (first value) for energy data for a metering point, and a better quality deemed actual value is available (second value), then the network operator must replace the first value with the second value if doing so would be consistent with good electricity industry practice.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – Refer Obligation 430. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.12, 31.1-31.3, 35 **Observations:**			
	Recommendation: Nil	**Action: Nil**		
432*⊗ Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.24(3)** If a network operator uses an estimated or substituted value (first value) for energy data for a metering point, and a better quality actual, deemed, estimated or substituted value is available (second value), then the network operator must replace the first value with the second value if doing so would be consistent with good electricity industry practice or the user and its customer jointly request it to do so.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – Refer Obligation 430. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.12, 31.1-31.3, 35 **Observations:**			

	Recommendation: Nil	**Action: Nil**		
433*⊗ Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.24(4)** A network operator (acting in accordance with good electricity industry practice) must consider any reasonable request from a Code participant for an estimated or substituted value to be replaced under subclause 5.24.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – Refer Obligation 430. **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.12, 31.1-31.3, 35 **Observations:** ▪ The PPAs specified meter data requirements.			
	Recommendation: Nil	**Action: Nil**		
434 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 5.25** A network operator must ensure the accuracy of estimated energy data in accordance with the methods in its metrology procedure and ensure that any transformation or processing of data preserves its accuracy in accordance with the metrology procedure.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed that during the audit period, there was no requirement for estimation and processing of data to maintain data quality **Ref 422** **Documents/Evidence** – 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ The Licensee had not established a metrology procedure. ▪ There was no requirement to transform or process data. ▪ The meters were routinely calibrated in accordance with their PPAs.			
	Recommendation: Nil	**Action: Nil**		
PART 6	**DOCUMENTATION**			
447⊗	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 6.1(1)**	**Audit Priority** **2**	**Controls Rating:** **B**	**Compliance Rating:** **2**

Type [2]	A network operator must, in relation to its network, comply with the agreements, rules, procedures, criteria and processes prescribed.			
	Finding – As referenced in Obligation 319, the Licensee confirmed for the duration of the audit period complied with the requirements of the PPAs with its customers. Ord Hydro did not comply with clause 6.2 of the Metering Code, which required a network operator to submit a proposed model service level agreement, metrology procedure and mandatory link criteria to the ERA for its approval. However, the Audit Team noted that this is a technical non-compliance, and the ERA are unlikely to require the Licensee to comply, as there are no other users of Ord Hydro's transmission network and no foreseeable prospect of a request to use the network on a large scale, Ord Hydro's circumstances have not triggered the intent of the Metering Code for such documents to be prepared for the purpose of another user. It was also noted that Ord Hydro was not part of the SWIS or subject to WEM rules. It was noted Ord Hydro has not established a formal position on its approach for addressing the technical requirements of clause 6.2 of the Metering Code. Refer to Recommendation 1/2018, PAIP Status Updates and obligation 319, and 448A. Given obligation 319 and the fact PH did encounter some issues in relation to metering installations frequency of calibration requirements. the internal development of operational and maintenance procedures relating to the metering installation on the network would improve the licensee's control procedures and controls rating. **Documents/Evidence** – 1, 2, 3.1-3.5, 4, 5.1-5.5, 6.1-6.2, 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** • The Licensee did not implement recommendation 1/2018 from the previous Performance Audit • PPAs were provided for review with compliance of a selected sample of requirements verified, such as voltage fluctuations and harmonics. • Note Obligation 447 was rated NP NR in the previous audit and was not captured in the PAIP and also not included in the Annual Compliance Reports Obligation 448A (which is Type NR) was reported in Annual Compliance Reports (2019-2022).			
	Recommendation: 07/2022 – Metrology Procedure - As per recommendation 03/2022 for obligation 319. **Model Service Level Agreement –** It is acknowledged that this is a technical non-compliance and Ord Hydro will not act as a metering services provider for large number of customers, as its network services only two customers. Pacific Hydro has noted that Obligation 448A (i.e. Metering Code Clause 6.2) will remain outstanding until expiry of Power Purchase Agreements. Given ADM has closed and will be ceasing operations in the near future, it is recommended that OH refer to HP Model Service Level Agreement as a benchmark and develop internal procedures that reference the relevant sections. For example, 2.3 Testing and Inspection of Meters **Mandatory Link Criteria** – It is acknowledged that this is a technical non-compliance Ord Hydro has metering installations at 2 customer locations with an installed communications link to the SCADA. OH does not operate as a regular Network Service Provider with multiple remote customers. The meters are not read remotely. It is recommended the current communications established be documented within the metrology procedures for completeness.		**Action: Refer PAIP**	

448A*⊗ Type [NR]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 6.2** A network operator must, as soon as practicable and in any event no later than 6 months after the date this Code applies to it, submit to the ERA for its approval the prescribed documents in subclauses 6.2(a)-(d).	**Audit Priority** **5**	**Controls Rating:** **A**	**Compliance Rating:** **2**

Finding –The Licensee confirmed Ord Hydro does not have nor does it propose to have a model service level agreement, a metrology procedure or mandatory link criteria. It was noted that Ord Hydro was granted a regional integrated licence which included Metering Code obligations of a Generator, Network Provider and a Retailer. Whilst it has an Electricity Integrated Regional Licence, OH operates purely as a Generator. It has two customers on its network whose relationship is governed by the Power Purchase Agreement (which pre-dates the Metering Code). Ord Hydro's Licence contains transmission and retail exemptions for compliance with the Electricity (Customer Transfer) Code 2016 (i.e. refer Schedule 1 EIRL4). It was understood, the ERA, although appreciative of the nature of Ord Hydro's operations, have not provided and were not able to provide PH with an exemption from the Metering Code obligations, which has resulted in the long standing non-compliances with the Metering Code.

The previous Performance Audit noted that in its role of a network operator, Ord Hydro had not complied with clause 6.2(a)-(d) of the Metering Code, which required the following documents to be submitted by June 2013 to the ERA for approval: (Deloitte Audit January 2019)

- Proposed model service level agreement
- Proposed metrology procedure
- Proposed mandatory link criteria

The Auditors acknowledged that this was a technical non-compliance and the ERA were aware of the nature of the operations and unlikely to require compliance as there were no other users of Ord Hydro's transmission network, Ord Hydro was not part of the WEM and no foreseeable prospect of a request to use the network.

Ord Hydro had understood that this obligation:

- Was intended to apply to networks with multiple users (i.e., SWIS/WEM) and a large number of meters
- Was not practicable or necessary owing to:
  - Power purchase agreements in place with its two customers address the customers' requirements
  - There are no additional users on the network
  - The small number of meters installed.

Documents/Evidence – 1, 2, 3.1-3.5, 4, 5.1-5.5, 6.1-6.2, 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35

Observations:

- The ERA considers that the Power Purchase Agreements that Ord Hydro has in place with its customers document the metering procedures deemed necessary for their commercial activities. (ERA Notice 20/2/2019).

	▪ Noted in the 2019 Annual Compliance report in regard to obligation 448A, The Licensee stated "The Ord will take a review of all metering (and other) obligations and identify those that apply to its business. It will closely work with the ERA to develop a position on obligations that do not apply to its operations." This does not appear to have been fully undertaken. ▪ It was noted HP has a model service level agreement which sets out terms and conditions on which metering services will be supplied by the network operator to a user. Individual metering service level agreements between a service provider and its users were based on this document. A copy of HP 2017 Model SLA was available on their website https://www.horizonpower.com.au/globalassets/media/documents/manuals-standards/metering/horizon-power-metrology-procedure-2017.pdf?v=492c5b ▪ The ERA has published HP Metering Code documents on its website https://www.erawa.com.au/electricity/electricity-access/horizon-power-metering-code-documents			
	Recommendation: 08/2022 – As per recommendation 07/2022 for obligation 447.	**Action: Refer PAIP**		
448B Type [NR]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 6.18** A network operator must publish the document within 10 business days after notification of the ERA's approval under subclauses 6.13(1)(a)(i), 6.16 or 6.17.	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed that during the audit period, Ord Hydro did not prepare any relevant document for submission, ERA approval or publication. **Documents/Evidence** – 1, 2, 3.1-3.5, 4, 5.1-5.5, 6.1-6.2, 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ Refer Obligation 448A			
	Recommendation: Nil	**Action: Nil**		
448C Type [NR]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 6.19A(1)** A network operator must publish its communication rules as soon as practicable, and in any event within 6 months after the date this Code applies to it.	**Audit Priority** **5**	**Controls Rating:** **A**	**Compliance Rating:** **2**
	Finding – The Licensee confirmed that during the audit period, Ord Hydro has not published its communication rules. It was noted this was an ongoing technical non-compliance as the Code required the Network Operator to publish its communication rules with 6 months. Although Ord Hydro has not done this the ERA appreciates that Ord was unlikely to require communication rules due to the nature of the operations. As such, there has been no requirement for the Licensee to publish communication rules from previous audit reports. **Documents/Evidence** – 1, 2, 3.1-3.5, 4, 5.1-5.5, 6.1-6.2, 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ Refer Obligation 448A			

	▪ Noted Ord Hydro was not part of the SWIS or the AEMO managed WEM.			
	Recommendation: 09/2022 – Ord Hydro should formally respond to the technical non-compliance and **c**ommunicate to the ERA its ongoing position in relation to the requirement for and publishing of communication rules in the PAIP.	**Action: Refer PAIP.**		
448D Type [NR]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 6.19B(1)** Once communication rules have been published for a network under clause 6.19A, or amended under clause 6.21(3), the communication rules may only be amended thereafter in accordance with the communication rules made under subclause 6.7(1)(k) or clause 6.19C.	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed in accordance with Clause 6.2 Ord Hydro has not developed communication rules. It was noted that this was a technical non-compliance and although the Code requires the Licensee to have communications rules the ERA has not enforced this requirement in previous audits due to the communications rules not being necessary for the size of the Ord Hydro's operation, **Documents/Evidence** – 1, 2, 3.1-3.5, 4, 5.1-5.5, 6.1-6.2, 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ For clarification purposes, it was noted the 2012 Metering Code (refer page 6041) noted that the **"communication rules"** incorporate and largely comprise the suite of technical documents known as the **"build pack"**. This is a Western Power document designed for the SWIS (i.e. an electricity grid in the southwestern part of Western Australia) and was not relevant to Ord Hydro which was not part of the SWIS or the AEMO managed WEM.			
	Recommendation: Nil	**Action: Nil**		
449 Type [NR]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 6.20(4)** A network operator must amend any document in accordance with the ERA's final recommendation.	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed that during the audit period, Ord Hydro had not submitted a proposed model service level agreement, metrology procedure or mandatory link criteria to the ERA for its approval. Compliance with this obligation cannot be made. **Documents/Evidence** – 1, 2, 3.1-3.5, 4, 5.1-5.5, 6.1-6.2, 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ Refer Obligation 448A			

	Recommendation: Nil	**Action: Nil**		
450 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 6.20(5)** The network operator must publish any document that has been amended under subclause 6.20(4).	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – Refer to Obligation 449. **Documents/Evidence** – 1, 2, 3.1-3.5, 4, 5.1-5.5, 6.1-6.2, 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ Refer Obligation 448A			
	Recommendation: Nil	**Action: Nil**		
PART 7 - NOTICES AND CONFIDENTIAL INFORMATION				
451* Type [NR]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 7.2(1)** Code participants must use reasonable endeavours to ensure that they can send and receive a notice by post, facsimile and electronic communication and must notify the network operator of a telephone number for voice communication in connection with the Code.	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed obligations relating to communication were specified with the PPA. **Documents/Evidence** – 1, 2, 3.1-3.5, 4, 5.1-5.5, 6.1-6.2, 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ The Licensee had established and evidenced post, electronic and voice communication channels commensurate with the expectations of a major business. The use of facsimile technology has been superseded and was not generally used by code participants.			
	Recommendation: Nil	**Action: Nil**		

452 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / 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.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed that during the audit period, Ord Hydro had not made any changes to its contact details. **Documents/Evidence** – 1, 2, 3.1-3.5, 4, 5.1-5.5, 6.1-6.2, 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ The Production Manager confirmed that although the Licensee Name changed within the ERA payments systems from Pacific Hydro Ltd to North Western Energy Pty Ltd, Pacific Hydro Group Two Pty Ltd & Energis Australia Pty Ltd there have been not changes to contact details or parent company ownership.			
	Recommendation: Nil	**Action: Nil**		
453 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 7.2(4)** If requested by a network operator with whom it has entered into an access contract, the Code participant must notify its contact details to a network operator within 3 business days after the request.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Licensee confirmed that during the audit period, Ord Hydro was not a "user" under the Metering Code and as such was not required to have an access contract in place. **Documents/Evidence** – 1, 2, 3.1-3.5, 4, 5.1-5.5, 6.1-6.2, 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ The 2012 Metering Code noted that the service level agreement may be contained in an access contract.			
	Recommendation: Nil	**Action: Nil**		
454 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 7.2(5)** A Code participant must notify any affected network operator of any change to the contact details it notified to the network operator under subclause 7.2(4) at least 3 business days before the change takes effect.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**

	Finding – Refer to Obligation 453. **Documents/Evidence** – 1, 2, 3.1-3.5, 4, 5.1-5.5, 6.1-6.2, 22.1,23.1-23.5, 24.1-24.4, 26.1, 27.8-27.10, 31.1-31.3, 35 **Observations:** ▪ The Licensee confirmed that its customers did not advise OH of changes to it contact details. The PPAs detailed communication requirements.			
	Recommendation: Nil	**Action: Nil**		
455 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 7.5** A Code participant must subject to subclauses 5.17A and 7.6 not disclose, or permit the disclosure of, confidential information provided to it under or in connection with the Code and may only use or reproduce confidential information for the purpose for which it was disclosed, or another purpose contemplated by the Code	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Production Manager confirmed that there has been no disclosure of confidential information during the audit period and no instance of disclosure of information. Therefore, these obligations cannot be rated for compliance. **Documents/Evidence** – 31.1-31.3 **Observations:** ▪ The PPAs reference confidentiality requirements.			
	Recommendation: Nil	**Action: Nil**		
456 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 7.6(1)** A Code participant must disclose or permit the disclosure of confidential information that is required to be disclosed by the Code.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – Refer Obligation 455. **Documents/Evidence** – 31.1-31.3			

	Observations:			
	Recommendation: Nil	**Action: Nil**		
PART 8 - DISPUTE RESOLUTION				
457 Type [NR]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 8.1(1)** If any dispute arises between any Code participants, then (subject to subclause 8.2(3)) representatives of disputing parties must meet within 5 business days after a notice given by a disputing party to the other disputing parties and attempt to resolve the dispute by negotiations in good faith.	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – The Production Manager confirmed that there have been no disputes between code participants regarding metering during the period subject to the audit. Therefore, these obligations cannot be rated for compliance. **Documents/Evidence** – 31.1-31.3 **Observations:** ▪ The PPAs reference dispute resolution processes.			
	Recommendation: Nil	**Action: Nil**		
458 Type [NR]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 8.1(2)** If a dispute is not resolved within 10 business days after the dispute is referred to representative negotiations, the disputing parties must refer the dispute to a senior management officer of each disputing party who must meet and attempt to resolve the dispute by negotiations in good faith.	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – Refer Obligation 457 **Documents/Evidence** – 31.1-31.3 **Observations:**			

	Recommendation: Nil	**Action: Nil**		
459 Type [NR]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 8.1(3)** If the dispute is not resolved within 10 business days after the dispute is referred to senior management negotiations, the disputing parties must refer the dispute to the senior executive officer of each disputing party who must meet and attempt to resolve the dispute by negotiations in good faith.	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – Refer Obligation 457 **Documents/Evidence** – 31.1-31.3 **Observations:**			
	Recommendation: Nil	**Action: Nil**		
460 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 8.1(4)** If the dispute is resolved by representative negotiations, senior management negotiations or CEO negotiations, the disputing parties must prepare a written and signed record of the resolution and adhere to the resolution.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – Refer Obligation 457 **Documents/Evidence** – 31.1-31.3 **Observations:**			
	Recommendation: Nil	**Action: Nil**		
461 Type [NR]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry Metering Code, clause 8.3(2)** The disputing parties must at all times conduct themselves in a manner which is directed towards achieving the objective in subclause 8.3(1).	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**

	Finding – Refer Obligation 457 **Documents/Evidence** – 31.1-31.3 **Observations:**			
	Recommendation: Nil	**Action: Nil**		
16. ELECTRICITY INDUSTRY (NETWORK QUALITY AND RELIABILITY OF SUPPLY) CODE – LICENCE CONDITIONS AND OBLIGATIONS				
462 Type [NR]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry (Network Quality and Reliability of Supply) Code, clause 5(1)** A distributor or transmitter must, as far as reasonably practicable, ensure that electricity supply to a customer's electrical installations complies with prescribed standards.	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed that it met its obligation to observe standards in relation to supply quality requirements (including voltage fluctuations and harmonics) were specified in the relevant PPAs. **Documents/Evidence** – 3.1-3.5, 4, 5.1-5.5, 22.4, 31.1-31.3 **Observations:** ▪ Quality and reliability trends were monitored by the Station Manager, Ord Hydro online via SCADA monitors. ▪ There were various alarms set point to monitor quality and reliability and ensure they were within the prescribed standards. ▪ The Production Manager monitored power supply across Pacific Hydro's operations, including the Ord Hydro network. ▪ Faults and system disturbances were analysed with the help of the trends.			
	Recommendation: Nil	**Action: Nil**		
463 Type [NR]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry (Network Quality and Reliability of Supply) Code, clause 8** A distributor or transmitter must, so far as reasonably practicable, disconnect the supply of electricity to installations or property in specified circumstances, unless it is in the interest of the customer to maintain the supply.	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**

	Finding – The Licensee confirmed there were no instances in which Ord Hydro was required to disconnect the supply of electricity to its customers' electrical installations. **Documents/Evidence** – 3.1-3.5, 4, 5.1-5.5, 22.4, 31.1-31.3 **Observations:** ▪ Controls established included power quality obligations covered in the PPAs and Standard Operating Procedures.			
	Recommendation: Nil	**Action: Nil**		
464 Type [NR]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry (Network Quality and Reliability of Supply) Code, clause 9** A distributor or transmitter must, as far as reasonably practicable, ensure that the supply of electricity is maintained, and the occurrence and duration of interruptions is kept to a minimum.	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed that it planned the outages and informed its customers about the upcoming outages to keep the occurrence and duration of interruptions to a minimum. **Documents/Evidence** – 1, 2, 3.1-3.5, 4, 5.1-5.5, 22.4, 31.1-31.3 **Observations:** ▪ Planned outages communicated and detailed in the Asset Management Plans (**AMPs**) ▪ PH coordinated with customers to use their power backup (diesel powered generators) during planned maintenance ▪ With regards to unplanned outages, it was mutually agreed that Horizon Power and ADM would start diesel generators if the power had not been restored within a specified timeframe. ▪ Management reports monitored the number and duration of outages.			
	Recommendation: Nil	**Action: Nil**		
465 Type [NR]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry (Network Quality and Reliability of Supply) Code, clause 10(1)** A distributor or transmitter must, so far as reasonably practicable, reduce the effect of any interruption on a customer.	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – As per obligation 464. **Documents/Evidence** – 1, 2, 3.1-3.5, 4, 5.1-5.5, 22.4, 31.1-31.3			

	Observations: ▪ The duration of outages was minimised and therefore the effect minimised on the customers. Planned outage timings were developed in conjunction with customers to minimise the effect of the outages.			
	Recommendation: Nil	**Action: Nil**		
466 Type [NR]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry (Network Quality and Reliability of Supply) Code, clause 10(2)** A distributor or transmitter must consider whether, in specified circumstances, it should supply electricity by alternative means to a customer who will be affected by a proposed interruption.	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed there were contingency supply plans established within the PPAs in specified circumstances for both HP and ADM. **Documents/Evidence** – 1, 2, 3.1-3.5, 4, 5.1-5.5, 22.4, 31.1-31.3 **Observations:** ▪ ADM has its own power backup facility to supply electricity to the mine during Ord Hydro outages. ▪ HP had its own backup generator in Kununurra to meet its obligations with its customers.			
	Recommendation: Nil	**Action: Nil**		
470 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry (Network Quality and Reliability of Supply) Code, clause 14(8)** A distributor or transmitter must, on request, provide to an affected customer a free copy of an instrument issued by the Minister and of any notice given under section 14(7) of the *Electricity Industry (Network Quality and Reliability of Supply) Code 2005*.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – As there were no such requests made during the audit period these obligations cannot be rated for compliance. **Documents/Evidence** – 3.1-3.5, 4, 5.1-5.5, 22.4, 31.1-31.3 **Observations:** ▪ There was no relevant instrument issued by the Minister.			
	Recommendation: Nil	**Action: Nil**		

471 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry (Network Quality and Reliability of Supply) Code, clause 15(2)** A distributor or transmitter that agrees with a customer to exclude or modify certain provisions must set out the advantages and disadvantages to the customer of doing so in their agreement.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding –The Licensee confirmed that during the audit period, no provisions of the Electricity Industry (Network Quality and Reliability of Supply) Code 2005 were excluded or modified by Ord Hydro. **Documents/Evidence** – 3.1-3.5, 4, 5.1-5.5, 22.4, 31.1-31.3 **Observations:** ▪ The Licensee has Power Purchase Agreements with its customers. During the audit period the Horizon Power PPA was re-executed.			
	Recommendation: Nil	**Action: Nil**		
477 Type [NR]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry (Network Quality and Reliability of Supply) Code, clause 23(1)** A distributor or transmitter must take all such steps as are reasonably necessary to monitor the operation of its network to ensure compliance with specified requirements.	**Audit Priority** **5**	**Controls Rating:** **NP**	**Compliance Rating:** **1**
	Finding – The Licensee confirmed that during the audit period, Ord Hydro maintained power quality equipment in accordance with clause 23 of the Code and monitored its network operations to ensure compliance with the requirements of its customer PPAs and any additional requirement prescribed by the Code. **Documents/Evidence** – 3.1-3.5, 4, 5.1-5.5, 22.4, 31.1-31.3 **Observations:** ▪ The Licensee has Power Purchase Agreements with its customers which specified requirements in relation to voltage, frequency and harmonics			
	Recommendation: Nil	**Action: Nil**		
479 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry (Network Quality and Reliability of Supply) Code, clause 24(3)** A distributor or transmitter must complete a quality investigation requested by a customer in accordance with specified requirements.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**

	Finding – The Licensee confirmed there were no requests by its customers to undertake quality investigations, as such compliance with the 20 day requirement cannot be determined. **Documents/Evidence** – 3.1-3.5, 4, 5.1-5.5, 22.4, 31.1-31.3 **Observations:** • Compliance with the Quality Standards was stipulated in the PPAs with PH's two customers,			
	Recommendation: Nil	**Action: Nil**		
480 Type [2]	**OBLIGATION: Electricity Integrated Regional Licence, condition 4.1.1 / Electricity Industry (Network Quality and Reliability of Supply) Code, clause 24(4)** A distributor or transmitter must report the results of an investigation to the customer concerned.	**Audit Priority** **4**	**Controls Rating:** **NP**	**Compliance Rating:** **NR**
	Finding – Refer to obligation 479. **Documents/Evidence** – 3.1-3.5, 4, 5.1-5.5, 22.4, 31.1-31.3 **Observations:**			
	Recommendation: Nil	**Action: Nil**		

Note:

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

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

APPENDIX 2 – ORD HYDRO ASSET MANAGEMENT REVIEW

AUGUST 2022

TABLE 19 Audit Review Ratings and Recommendations

1. ASSET PLANNING □ Assess the adequacy of the asset planning process □ Assess the adequacy of the asset management plan □ Assess whether the asset management plan is up-to-date and implemented in practice □ Assess whether the asset management plan clearly assigns responsibilities and whether these have been applied in practice **Key Process** – *Asset planning strategies focuses on meeting customer needs in the most effective and efficient manner (delivering the right service at the right price).* **Outcome** – *Asset planning is integrated into operational or business plans, providing a framework for existing and new assets to be effectively utilised and their service optimised.*			OVERALL EFFECTIVENESS RATING	
			PROCESS & POLICY RATING*	PERFORMANCE RATING
			B	**1**
No.	**2022 REVIEW REPORT EVIDENCE/ /VERIFICATION/FINDING/ACTION**			
1.1	**OBLIGATION: Asset management plan covers the processes in this table*** *Table 23 of the 2019 Audit and Review Guidelines – Electricity and Gas Licences	**Review Priority** **4**	**P&P* Rating:** **B**	**Performance Rating:** **2**
	Finding – All Asset Management Plans (AMPs) applicable for the duration of the review period were provided and supporting Life Cycle Cost Models (LCM) The AMPs incorporated the following elements: ➢ Asset Overview ➢ Lifecycle Overview ➢ Key Performance Indicators ➢ Condition Assessment ➢ Risk (inclusive of contingency plans) ➢ Improvement Opportunities ➢ Cost Forecast ➢ Major Works ➢ Generation Forecast Development ➢ Major Changes since previous AMP **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5,6, 29.1-29.4 **Observations:** ▪ PHAs Business Planning process was presented and shown to be an iterative planning process driven by strategy and the risk appetite of the Board. AMPs were developed and updated based on feedback from the board, the monitoring processes, changes in the project assumptions, risks and changes in scope, budget or schedule. ▪ All Asset Management Plans (AMPs) applicable for the duration of the review period were provided and supporting Life Cycle Cost Models (LCMs) ▪ The AMP and LCM do not specifically better reference contingency plans, although referenced in the LCM risk assessment.			

	▪ Pacific Hydro was certified to ISO 55000 for the duration of the review period.			
	Recommendation: None		**Action: Nil**	
1.2	**OBLIGATION: Planning processes and objectives reflect the needs of all stakeholders and are integrated with business planning**	**Review Priority 5**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding – Asset objectives were based on PHAs strategic objectives inclusive of stakeholder expectations and formalised through strategic planning process and the annual Business Plan. The AMPs identified the asset objectives for the OHPS. The SAMP referenced the role of stakeholders in setting the requirements and expectations for the asset objectives. The SAMP (2021) detailed the key steps in developing asset objectives and depicted how they related to the business planning cycle. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5,6, 31.1 -31.3, 32 **Observations:** ▪ The obligations of the PPA with Horizon Power were captured within the AMP and LCM ▪ Key contracts were referenced in the AMP (i.e. PPAs, Water Supply Agreement and EIRL4). ▪ Planning and conducting asset outages were conducted in consultation with customers (Horizon Power) to limit and control loss of supply. ▪ The Production Manager confirmed there have been no disputes with Horizon Power during the audit period.			
	Recommendation: None		**Action: Nil**	
1.3	**OBLIGATION: Service levels are defined in the Asset Management Plan**	**Review Priority 4**	**P&P* Rating: B**	**Performance Rating: 1**
	Finding –The PPA's applicable to OHPS were referenced in the AMP and the KPIs detailed were aligned with business objectives, inclusive of stakeholder requirements. Details of specific service levels were not defined in the AMP, however, the LCM, which contained the data and modelling that underpinned the AMP defined service levels. Additionally, the performance of the OHPS was reported monthly and results collected and presented in the Monthly Executive Report (MER) which was provided to senior leadership team and the Board. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5,6, 8.1-8.2, 31.1-31.3, 32 **Observations:** ▪ Redacted PPA's were provided to determine the service levels required from the PPA's ▪ The AMP detailed the Site Performance against business objective but does not define full service levels of the PPA requirements such as the permitted number of unplanned outages in a 12 month period, identified as risk in Register – see Risk # RAORD181014			

	▪ From discussions with the Regional Asset Manager and Ord Hydro Production Manager it was determined that Kununurra required a nominal supply of MW per year and when operating ADM would then take the remaining available power. However, since mine closure but during the audit period this was reduced significantly. ▪ Copies of the monthly production reports were provided for review. The MER was not reviewed.			
	Recommendation: Nil		**Action:** Nil	
1.4	**OBLIGATION: Non-asset options (e.g. demand management) are considered**	**Review Priority 3**	**P&P* Rating: B**	**Performance Rating: 2**
	Finding – The closure Argyle Diamond Mine closure resulted in between 15 and 25MW of power becoming available for alternate applications. Pacific Hydro was currently seeking alternative applications for the available power, including the opportunity to develop a hydrogen production facility. The Ord Feasibility Study was published in March 2021. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5,6, 8.1-8.2, 31.1-31.3, 32 **Observations:** ▪ Although during the Audit period ADM ceased operations and subsequently now only receives minimal power to enable essential maintenance. ▪ The Licensee received a grant for The Ord Feasibility Study from the Western Australian Government's Renewable Hydrogen Fund, which was administered by the Department of Jobs, Tourism, Science and Innovation. The study was undertaken by a third party and considered the potential options for production and storage of either hydrogen or ammonia. There was no outcome achieved during the review period. ▪ Asset disposal considerations were incorporated in the AMP. ▪ Ord Hydro's operations do not routinely contemplate non-asset solutions and as such comparative assessments were not made.			
	Recommendation: None		**Action: Nil**	
1.5	**OBLIGATION: Lifecycle costs of owning and operating assets are assessed**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding – Lifecycle costs of the are maintained and in the LCM and assessed annually. Major works, Capex and Opex are identified, and the major works planned for the next 3 years are detailed in the AMP's. The AMP demonstrated current asset condition and a summary of the poor/critical components, detailing the future plans to replace or repair these components. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5,6, 8.1-8.2, 31.1-31.3, 32 **Observations:** ▪ Alternative customers were being sought to in order to counter the forecast loss of ADM's load. Commercially sensitive aspects redacted in the Business Pan			

	▪ Summary of Life Cycle costs sighted in AMP (spreadsheets not made available) recognised additional costs of turbine O/H's, SCADA upgrade due to obsolescence and ADM transmission line decommissioning.			
	Recommendation: None		**Action: Nil**	
1.6	**OBLIGATION: Funding options are evaluated**	**Review Priority 5**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding – Costs of generation were calculated annually as part of AMP. Future planned Capex and Opex project cost were included in the calculation. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5,6, 8.1-8.2, 31.1-31.3, 32 **Observations:** ▪ Opex and Capex costs have been revised down to due to the loss of demand and revenue from the closure of ADM.			
	Recommendation: None		**Action: Nil**	
1.7	**OBLIGATION: Costs are justified, and cost drivers identified**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding – Cost forecast were maintained and calculated in the annual Life Cycles Models. Additionally, CAPEX and OPEX driven from risk mitigation strategies was also assessed in the LCM in the Activity Forecast tables. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5,6, 8.1-8.2, 31.1, 32 **Observations:** ▪ The LCM costs provided justification and included site management and staffing costs (i.e. non O&M Costs - OPEX), transmission and market costs, CAPEX (i.e. refurbishment costs such as turbines), financing costs, total cost of generation ($/MWh), fixed and variable operating and maintenance costs (O&M), fuel costs and the levelized cost of energy (LCOE).			
	Recommendation: None		**Action: Nil**	
1.8	**OBLIGATION: Likelihood and consequences of asset failure are predicted**	**Review Priority 2**	**P&P* Rating: B**	**Performance Rating: 2**

	Finding – Detailed risk assessments and asset condition assessments were maintained. These were annually assessed as part of the business planning cycle and recorded in the LCM and AMP. The actual Risk Ratings were inconsistent, and it was difficult to determine which controls were in place and which were proposed as options. Due to this inconsistent methodology, the Likelihood of failure was not accurately judged. For example, with regards to the decrease in Current Risk for the Main Transformer failure # RAORD181013 from 2019 to 2020 the Current Risk was reduced from 17 to 13, however, there were no changes made to the description or mitigation strategies. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5,6, 8.1-8.2, 31.1, 32 **Observations:** ▪ The AMP and LCM identified the turbines as a risk to OH operations and planned overhaul was detailed within these processes. ▪ Period of reduced demand with closure of ADM provided an opportunity for planning. ▪ External consultant engaged to perform condition inspection and recommend repair options. Noted detailed scope of works was not completed as yet. ▪ Thorough inspections of assets were undertaken during audit period and detailed asset condition reports including images were presented during the audit. ▪ A report conducted in 2011 identified all spares critical to operation. These were all held on site and levels maintained by site personnel.			
	Recommendation: None		**Action: Nil**	
1.9	**OBLIGATION: Asset management plan is regularly reviewed and updated**	**Review Priority 5**	**P&P* Rating: B**	**Performance Rating: 2**
	Finding – AMP and LCM were reviewed during strategy workshops and updated annually. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5,6, 8.1-8.2, 31.1, 32 **Observations:** ▪ Workshop were held annually to discuss and assess current business strategic objectives and direction. Considered input from all parts of the business, including performance of assets against current AMPs. ▪ Following the workshops the Lifecycle cost and generation models were updated based on identified issues, and objectives in Business Plan. ▪ There were some minor administrative errors in the update of the AMPs and updating of supporting documentation. Noted that the document management system was used to source current versions of documentation. ▪ The process commenced in September and the Final Document was normally approved and published in one month from budget approval for the preceding year.			
	Recommendation: None		**Action: Nil**	

2. ASSET CREATION AND ACQUISITION □ Assess the adequacy of policies and procedures covering the creation and acquisition of assets □ Select a sample of asset creations/ acquisitions over the review period and confirm adequate procedures have been followed and actual costs are as predicted **Key Process** – *Asset creation/acquisition is the provision or improvement of assets.* **Outcome** – *The asset acquisition framework is economic, efficient and cost-effective; it reduces demand for new assets, lowers service costs and improves service delivery.*			**OVERALL EFFECTIVENESS RATING**	
			PROCESS & POLICY RATING*	**PERFORMANCE RATING**
			A	**1**
No.	**2022 REVIEW REPORT EVIDENCE/ /VERIFICATION/FINDING/ACTION**			
2.1	**OBLIGATION: Full project evaluations are undertaken for new assets, including comparative assessment of non-asset options**	**Review Priority 4**	**P&P* Rating: B**	**Performance Rating: 1**
	Finding – The Production Manager confirmed CAPEX projects were identified through the Risk Assessment process. The AMP illustrated Major Capex projects which were approved and scheduled to be implemented within the next 3 year period. The projects costs were integrated into the yearly financial budgeting. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5,6.1-6.2, 15.1 **Observations:** ▪ No Capex Business Cases were provided for review. However, Production Manager confirmed they were completed for PLCC upgrade or implementation of online DGA monitoring systems. ▪ Australian Procurement Procedure was place for the actual procedure of assets.			
	Recommendation: None		**Action: Nil**	
2.2	**OBLIGATION: Evaluations include all life-cycle costs**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding – Capex projects were evaluated for complete lifecycle of site to CY2036 and were maintain in the Life Cycle Model. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5,6.1-6.2, 15.1 **Observations:** • Lifecycle Cost Summary included in the AMP and the LCM throughout the audit period.			

	Recommendation: None		**Action: Nil**	
2.3	**OBLIGATION: Projects reflect sound engineering and business decisions**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding – Based on previous projects implemented on site, such as the PLCC upgrade or implementation of online DGA monitoring systems, projects were evaluated in terms of engineering effectiveness and effective outcome. External vendors (OEMs) were involved in the final design and implementation of project deliverables. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5,6.1-6.2, 15.1 **Observations:** ▪ Noted that a system stability study to determine any potential risk with current load or adding new load to breach the PPA was being planned (refer LCM risk #RAORD181014).			
	Recommendation: None		**Action: Nil**	
2.4	**OBLIGATION: Commissioning tests are documented and completed**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding – The Site Manager confirmed all new assets and equipment were fully commissioned and tested by vendor as part of handover. Commissioning tests were included in OEM manuals provided at handover. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5,6.1-6.2, 15.1 **Observations:** • Commission of the online DGA monitoring systems was undertaken during the review period.			
	Recommendation: None		**Action: Nil**	
2.5	**OBLIGATION: Ongoing legal / environmental / safety obligations of the asset owner are assigned and understood**	**Review Priority 5**	**P&P* Rating: B**	**Performance Rating: 2**
	Finding – The asset objectives for the OHPS incorporated compliance. Compliance was measured in terms of the number of reportable compliance breaches affecting stakeholders in the AMP. Key Stakeholders were identified in the AMP's: ➢ Water Authority of Western Australia ➢ Lenders - CBA, NAB, ICBC, CCB, DNB ➢ Landowners – Overhead Power Lines (poles)			

	➢ Customers – Horizon Power and Argyle Diamond Mine (PPA's) It was noted the Licensee reported an update on the asset management deficiency relating to Contingency Planning (refer section 9.1) in the 2021 Annual Compliance Report. This was not required to be reported as part of the PRIP update and the Electricity Compliance Reporting Manual required reporting of Type 1 and Type 2 obligations only. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5,24.1-25.1, 26.1. 24.3, 28.1-28.7 **Observations:** ▪ AMP identified safety risks as well as operations risks demonstrating understanding of all obligations ▪ Compliance processes were established and reporting in relation to environmental obligations was undertaken. ▪ Water Corporation determined the amount of power generation permitted based to control the usage of water. The water levels held in the lake were monitored and included in monthly reports and the and in the AMPs. ▪ ERA not included in the AMPs list of key stakeholders but included in the statistics of compliance for some years. ▪ Audit and Compliance Committee established. ▪ Noted the AMPs did not include the EIRL or ERA as a stakeholder, however compliance statistics incorporated the breaches of the EIRL licence. Administrative update required.	
	Recommendation: None	**Action: Nil**

3. ASSET DISPOSAL	OVERALL EFFECTIVENESS RATING	
□ Assess the adequacy of policies and procedures covering the identification of under-performing assets, disposal of assets and replacement strategy □ Determine whether a regular review of the performance of assets is undertaken □ Select a sample of disposals over the review period and confirm adequate procedures have been followed **Key Process** – *Asset disposal is the consideration of alternatives for the disposal of surplus, obsolete, under-performing or unserviceable assets.* **Outcome** – *The asset management framework minimises holdings of surplus and underperforming assets and lowers service costs.* *The cost-benefits of disposal options are evaluated.*	**PROCESS & POLICY RATING***	**PERFORMANCE RATING**
	A	**1**

No.	2022 REVIEW REPORT EVIDENCE/ /VERIFICATION/FINDING/ACTION			
3.1	**OBLIGATION: Under-utilised and under-performing assets are identified as part of a regular systematic review process**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding – Since the closure of the ADM, the OHPS was being underutilised because of the reduced the demand on the power plant. Performance of the plant was monitored and was meeting the current reduced demands. Maintenance schedules and LCM were revised accordingly. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5 31.1, 33 **Observations:** ▪ AMP discussed the decommissioning of the transmission lines to AMD and potential opportunity to supply and new Hydrogen plant. ▪ The Licensee received a grant for The Ord Feasibility Study from the Western Australian Government's Renewable Hydrogen Fund. The study was undertaken by a third party and considered the potential options for production and storage of either hydrogen or ammonia. There was no outcome achieved during the review period. ▪ The Production Manager confirmed. Ord Hydro did not dispose of any of its power plant and transmission network assets due to assets being surplus, under-performing or unserviceable ▪ Replacement of asset components were due to condition, wear and tear and obsolescence identified through asset planning and condition monitoring			
	Recommendation: None		**Action: Nil**	
3.2	**OBLIGATION: The reasons for under-utilisation or poor performance are critically examined and corrective action or disposal undertaken**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding – The Power Station was being underutilised due to the 2020 closure of the Argyle Diamond Mine and the significant reduction in its supply requirements (i.e. from approximately 10MW to 0.4MW). Prior to 2020 and mine closure, the full capacity of the station was used by Horizon Power supplying Kununurra and the ADM supply.			

	Documents/Evidence – 1, 2, 3.1-3.4, 5,5.1-5.5 31.1, 33 **Observations:** ▪ The power station does not have an extensive amount of assets (equipment). ▪ Removal of any of the components would remove the ability of the station to meet additional demand should new customers and PPA's be found. ▪ Asset disposal requirements were incorporated in the AMP 2020 to 2022 for the Ord.			
	Recommendation: None		**Action: Nil**	
3.3	**OBLIGATION: Disposal alternatives are evaluated**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: NR**
	Finding – No assets were removed and disposed of during the audit period. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5 31.1, 33 **Observations:** ▪ The Ord Feasibility Study published April 2021. ▪ Pacific Hydro continues to evaluate alternative customers for the spare capacity available post ADM shutdown.			
	Recommendation: None		**Action: Nil**	
3.4	**OBLIGATION: There is a replacement strategy for assets**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding – A report was conducted in 2011 which identified all critical spares. All critical spares were held on site and stock levels maintained by onsite personnel. There were no scheduled replacement maintenance strategies the CMMS (i.e., Maintainly). All replacements were made on condition derived from inspection or failure. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5 31.1, 33 **Observations:** ▪ Pacific Hydro has a corporate standard for Spares Management referenced in the SAMP.			
	Recommendation: None		**Action: Nil**	

4. ENVIRONMENTAL ANALYSIS □ Review achievement of performance and service standards over the review period □ Investigate any statutory or regulatory breaches and assess corrective action taken □ Review the adequacy of reporting and monitoring tools **Key Process** – *Environmental analysis examines the asset management system environment and assesses all external factors affecting the asset management system.* **Outcome** – *The asset management system regularly assesses external opportunities and threats and identifies corrective action to maintain performance requirements.*			OVERALL EFFECTIVENESS RATING	
			PROCESS & POLICY RATING*	PERFORMANCE RATING
			B	**2**
No.	**2022 REVIEW REPORT EVIDENCE/ /VERIFICATION/FINDING/ACTION**			
4.1	**OBLIGATION: Opportunities and threats in the asset management system environment are assessed**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding – The following PHA documentation was in place during the audit period to identify the opportunities or threats to the strategic planning of their Asset Management System. This included ➢ Asset Management Policy ➢ Strategic Asset Management Plan ➢ Maintenance Management Procedure The Risk Management Process was also detailed in PHA documentation to manage the risks associated with the operation of assets and ensure they were managed and controlled. The Risk Management framework and process was well documented and comprehensively detailed the process to capture, assess and control risks, both operational and corporate. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5 31.1, 33 **Observations:** ▪ AMP was developed collaboratively developed with inputs of both corporate and site personnel. ▪ The responsibility of the AMP development has changed from the PHA Engineering department to Operations during the Audit period. ▪ The SAMP stated the Asset Management System will be subjected to annual reviews to confirm its adequacy ▪ PHA was certified to be incompliance with ISO550001 during the audit period. Ord Hydro site was not included in a site visit during the audit period, primarily due to COVID restrictions on travel.			
	Recommendation: None		**Action: Nil**	

4.2	**OBLIGATION: Performance standards (availability of service, capacity, continuity, emergency response, etc.) are measured and achieved**	**Review Priority** **4**	**P&P* Rating:** **B**	**Performance Rating:** **2**

Finding – The Production Manager confirmed during the audit period performance standards were detailed in the PPA's for Horizon Power (HP) or Argyle Diamond Mine (ADM). Due to the closure of ADM in 2020 the power station has had spare capacity so there was very little risk of not being able to meet service requirements. KPI's were included in the AMP. These detailed annual target performance of the station, the previous years results. Performance measures were also captured in the monthly operations reports.

Please note: the Emergency Response Procedures have been captured under section 9 - Contingency Planning of the previous ERA Audit, The Audit Team consider that the measure of the Emergency Response Plans would be better captured under this section of the report as there are Emergency Response requirements in the PPAs. These Emergency Response procedures were not considered applicable to the Contingency Plans of the OHPS.

All Emergency Response scenarios were not able to be tested during the audit period. This was a continued deficiency form the 2018 Audit and the 2014 audit, the reason for failure complete this action during the current audit period was due to *"The state of Victoria was in a prolonged lockdown due to the second wave of COVID-19. OHPL office in Melbourne will reopen in 2021."*

Documents/Evidence – 23.1-23.5, 24.1-24.11

Observations:

- Contingency Planning was the asset management component that was rated deficient (B3) in the 2018 Asset Management Review by the previous auditor. This component was also rated deficient in the 2014 review. The ERA informed Ord Hydro that it was to complete actions that addressed this deficiency by the due date, December 2019. The agreed actions were not completed for reasons relating to COVID and travel restrictions. The plans which were not in place are now being considered as Emergency Response plans not contingency plans in that the plans will not ensure the continued operation of the power station.
- The following Emergency response plans have been tested during the audit period
  - First Aid Drill – Scenario fall from height casing fracture.
  - Stretcher Drill – Scenario use of the stretcher in an emergency.
  - Full review of Safety plans, including Emergency Management preparedness, Emergency
  - Response Plan.
  - High voltage refresher training.
  - Audiometric testing with ADM.
  - Lifting operation using a gantry crane.
- PHA have post audit advised the remote exercise to the outstanding contingency and emergency response plan was conducted on 5th October 2021. This was not communicated at the time of the audit or to the ERA in the year PRIP Status Updates.

Recommendation: Nil	**Action:** Nil

4.3	**OBLIGATION: Compliance with statutory and regulatory requirements**	**Review Priority 4**	**P&P* Rating: B**	**Performance Rating: 3**
	Finding – Whilst it was noted Ord Hydro complied with the majority of EIRL obligations, non-compliance was noted throughout the review period for several EIIRL4 obligations. There were numerous non compliances reported in the Annual Compliance reports, many being the same non compliances which were not rectified throughout the audit period. While it was acknowledged that these non-compliances were related to the impractical application of the Metering Code to Ord Hydro's operations there were areas of non-compliance that still required addressing (refer to Table 5 for Performance Audit Summary for specific details). Additionally, OH did not address the regulatory requirements of the ERA as evident in the ongoing PAIP and PRIP status updates. **Documents/Evidence** – 23.1-23.5, 24.1-24.11 **Observations:** ▪ The Licensee had established a process for review of its non-compliances (i.e. Obligations Register, however, it was not specific enough to facilitate compliance and as such was not effective. ▪ Non-Compliances reported in the annual compliance reports (refer obligation 124 Appendix 1) were repetitive and not well understood by the Licensee, for example including Type NR obligations in Annual Compliance Reports ▪ Inaccurate information as to the status of no-compliances and corrective actions was also noted.			
	Recommendation: 10/2022 – Refer recommendation 02/2022.		**Action:** Refer PRIP	
4.4	**OBLIGATION: Service standard (customer service levels etc.) are measured and achieved.**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 2**
	Finding – Service levels were defined and measure in the customer PPA's. Monthly Operations Reports detail actual and budgeted generation which is derived from per PPA. The Ord SCADA had full sight of all HP switching yard and readings, this facility has been provided in the accommodation house provided by PHA to permit 24Hr monitoring. **Documents/Evidence** – monthly reports **Observations:** ▪ Service Levels were specified in Power Purchase Agreements (PPA's) ▪ Service levels were well defined in the contracts and reported on in monthly operations reports ▪ It was noted that PI was installed, and historic data was available to monitor the power stations generation. Although the PI System operation was not able to be fully demonstrated during the audit.			
	Recommendation: None		**Action: Nil**	

5. ASSET OPERATIONS □ Assess the adequacy of policies and procedures covering operations functions □ Assess the adequacy of staff resourcing and training □ Confirm the policies and procedures have been followed during the review period by examining the asset register, observing operational procedures, analysing costs, etc. □ Assess the significance of exceptions identified and whether adequate corrective action has been taken **Key Process** – *Asset operations is the day-to-day running of assets (where the asset is used for its intended purpose).* **Outcome** – *The asset operation plans adequately document the processes and knowledge of staff in the operation of assets so service levels can be consistently achieved.*	**OVERALL EFFECTIVENESS RATING** **PROCESS & POLICY RATING*** **B**	 **PERFORMANCE RATING** **2**

No.	2022 REVIEW REPORT EVIDENCE/ /VERIFICATION/FINDING/ACTION			
5.1	**OBLIGATION: Operational policies and procedures are documented and linked to service levels required**	**Review Priority** **4**	**P&P* Rating:** **A**	**Performance Rating:** **1**
	Finding – The Licensee has developed key operational systems, processes and documents to ensure service levels are achieved. The AMP and LCM detailed the operational performance against targeted budget performance, with consideration of risk, contingency plans identified contingency events, OEM manuals and operating procedures Additionally, service levels were monitored and reported regularly in monthly reports from Site Manager. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5, 7.8, 7.8.1, 32 **Observations:** • Plant availability was monitored in the LCM, AMP and Monthly Operations Reports to measure performance against service agreements. • Major and Minor Capex projects were detailed and assessed in the LCM. • Critical alarms listing in SCADA and DCS linked to service levels in the PPA. • Workflows in CMMS Corporate Procedure established. Referenced the need to evaluate the priority and criticality of a scope of work in the WO. • Communications Protocol established with Horizon Power Control Centre (**HPCC**). The operational procedure ensured HPCC was in direct communication with OHPS operators or control rooms. It provided a single point of contact to better coordinate HV switching and other related activities affecting HP and OHPS networks.			
	Recommendation: None		**Action: Nil**	

5.2	**OBLIGATION: Risk management is applied to prioritise operations tasks**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding – The Licensee has established key documents, processes and systems to reduce the risk of operational tasks. Onsite operation and maintenance staff were qualified and experienced to understand the operational risks and prioritised the tasks to mitigate or reduce these to as low as practicable and maintain safe and efficient operation of the OHPS. Additionally, the AMPs operational processes have evolved during the audit period and now link projects and operational tasks to asset condition assessments and risk assessments, which are reflected in the AMP and the LCM. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5, 7.1 - 7.7.1, 7.8.1, 32 **Observations:** Management of Change procedure sighted and discussed, MOC process was followed to change the date of a scheduled PM to formally accept the risk based with this change. NFDA was established to ensure chain of command was always in place to deal with operational decisions. Defect Reporting Procedure in place and examples Risks associated with safety operational risks were identified and managed through systems and procedures, for example, High and Low Voltage Safety Procedures and Permit to Work systems.			
	Recommendation: None		**Action: Nil**	
5.3	**OBLIGATION: Assets are documented in an asset register including asset type, location, material, plans of components, and an assessment of assets' physical/structural condition**	**Review Priority 4**	**P&P* Rating: B**	**Performance Rating: 3**
	Finding – Ord Hydro utilised the CMMS, Maintainly (previously FIXD) for its asset register for the generation, network and other maintainable assets. While it was understood the plant and equipment were relatively limited and staff understood the descriptions due to operational experience and training. There was some inconsistency in the asset description between the fixed asset register, the asset condition table in the AMP, the Maintenance Plan and the Asset Register (Maintainly) and not all assets in the Asset Register were reflected in the Condition Assessment, for example AMP Condition Assessment referred to lighting and the asset register did not show lighting assets where some maintenance would be required. Asset that were managed, but not owned by the Licensee were not in Maintainly (i.e T2 main meter) however assets that were not owned and were maintained by the customer (i.e ADM T2 132/11kV transformer 20/27MVA were in the asset register). Contradictory as no maintenance was done on ADM T2 132/11kV transformer 20/27MareVA but T2 main meter was calibrated as a courtesy to ADM. Additionally, the serial numbers of the asset did not match that of the asset itself and other documentation, for example OPS LATV Main Export revenue meter serial number in Maintainly 3333 and in the Meter Register 1110340450). Although not all the required information was contained within Maintainly, the materials, plans and an assessment of the assets physical/structural condition could be determined with expertise in supporting AMS documentation.			

	Documents/Evidence – Maintainly, MEX, 1, 2, 3.1-3.4, 5,5.1-5.5, 7.8, 7.8.1,7.9, 27.9, 32, 36.5 **Observations:** • The condition of the assets were comprehensively assessed in the LCM and provided a clear picture of the assets, their criticality and condition. • Statutory or contractual obligations of the asset were not reflected in the asset register (i.e. CMMS/Maintainly). • A demonstration of Maintainly was provided on site, however it was noted to be not User Friendly. However, we were provided with an extract from Maintainly. In general the search functions were cumbersome by site and management personnel. • There was a CMMS - Fixd User Guide (i.e. Maintainly) which did not address the search requirements specifically. • Prior to Maintainly, OHPS used MEX as a CMMS. Noted that site operational personnel still maintained the MEX system in conjunction with Maintainly due to the superior performance of data interrogation. The Production Manager was aware of the limitations of Maintainly and continued to review options acceptable at a corporate level. • Noted the Licensee has access to PI System to contextualize and visualize data. Although not fully implemented for OHPS as yet.			
	Recommendation:11/2022 – There were some deficiencies noted with regards to the Licensee's asset register. Whilst it was recognised the asset register mostly met the requirements the inclusion of all assets and the mechanism to ensure the assets were compliant with statutory requirements was not demonstrated. The familiarity with the asset tree was largely dependent on tacit knowledge of the experience plant managers and operators. In order to improve the quality of data in the asset register, accurately document plant and equipment, the statutory requirements (where applicable) and improve the line of sight for drawings relating assets through to condition through to maintenance (WOs) and to reduce room for error and risks in incorrect reference of equipment, Ord Hydro should review the AMS systems and documentation in relation to the assets. In addition, a physical audit of assets should be undertaken against OEM drawings and asset registers and an internal audit against statutory and contractual obligations.		**Action:** Refer PRIP.	
5.4	**OBLIGATION: Accounting data is documented for assets**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding – Accounting data for assets was provided for review in a spreadsheet for Ord Fixed Asset Register. The financial information contained within the asset register detailed acquisition and retirement date, capital costs, depreciation rate and aligned with information in the LCM and Maintainly asset registers. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5, 6.1, 6.2, 7.8.1, 32, 36.1-36.5 **Observations:** • It was not determined what accounting system was used to maintain the asset register.			
	Recommendation: None		**Action: Nil**	

5.5	**OBLIGATION: Operational costs are measured and monitored**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding – The Station Manager confirmed Monthly Generation reports detailed the generation budgets and actual performance levels. Any variations to this due to outages were captured in this report. Unbudgeted Maintenance and operational expenditure approvals were set to reduce unbudgeted operational costs. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5, 6.1, 6.2, 7.8.1, 32 **Observations:** • Due to the closure of ADM and subsequent loss of demand, OPEX/CAPEX costs have been revised down during the review period. • Delegation of Authority processes were established and confirmed during the site visit.			
	Recommendation: None		**Action: Nil**	
5.6	**OBLIGATION: Staff resources are adequate, and staff receive training commensurate with their responsibilities**	**Review Priority 4**	**P&P* Rating: B**	**Performance Rating: 2**
	Finding – The Station Manager confirmed adequate staff were available onsite (or on call) at all times to perform the planned maintenance routines and react to corrective requirements. All staff brought on were required to have minimum qualification requirements such as HV switching. Training records were maintained. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5, 6.1, 6.2, 7.8.1, 7.9, 30.1, 30.2, 32 **Observations:** • New staff receive job descriptions which included personal KPI's and receive on job training for Ord Hydro specific systems (such as the use of Maintainly). • Training Manager & Rapid Global used to record training records. • Noted that Maintainly was not included in the training report. • Service Providers and specific expertise were sourced for outages and technical projects as required. • Remote monitoring capabilities were demonstrated.			
	Recommendation: None		**Action: Nil**	

6. ASSET MAINTENANCE □ Assess the adequacy of policies and procedures covering maintenance functions □ Confirm the policies and procedures have been followed during the review period by examining maintenance schedules, analysing costs, etc. □ Assess the significance of exceptions identified and whether adequate corrective action has been taken **Key Process** – *Asset maintenance is the upkeep of assets.* **Outcome** – *The asset maintenance plans cover the scheduling and resourcing of the maintenance tasks so work can be done on time and on cost.*	**OVERALL EFFECTIVENESS RATING**	
	PROCESS & POLICY RATING*	**PERFORMANCE RATING**
	B	**2**

No.	**2022 REVIEW REPORT EVIDENCE/ /VERIFICATION/FINDING/ACTION**			
6.1	**OBLIGATION: Maintenance policies and procedures are documented and linked to service levels required**	**Review Priority** **2**	**P&P* Rating:** **B**	**Performance Rating:** **2**
	Finding – Maintenance plans and procedures were setup in Maintainly and were primarily based on OEM recommendations or the risk assessment mitigation plans which considered PPA service levels. Technicians were provided with a rolling monthly list of Work Orders to be carried out. Technicians planned and scheduled the tasks based on availability of equipment. Additional safety procedures such as the Lock Out Tag Out procedures were provided in addition to the monitoring and inspection procedures. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5,6.1, 7.1-7.9 **Observations:** • Maintenance activities were primarily based on the OEM's recommendations. In general, there were no replacement strategy maintenance plans, they were inspection and monitoring. • Additional monitoring or replacement tasks were proposed in the Risk Register and assessed for effectiveness and required implementation. For example, the Main Transformer Failure – Surge Arrestors instead on being checked were replaced to ensure in optimal condition to reduce the risk of Main TFMR failure. • Full suite of OEM's was contained on site at the station and also electronic versions were held in SharePoint. • The AMPs showed asset condition review, risk analysis and replacement strategy to mitigate risk. • The LCM maintained a history of the condition assessment basis. • The OHPS turbines were noted to be in need of overhaul, and as reflected in the LCM 2022 the period of low demand presents a good opportunity to perform these works.			
	Recommendation: None		**Action: Nil**	

6.2	**OBLIGATION: Regular inspections are undertaken of asset performance and condition**	**Review Priority** **2**	**P&P* Rating:** **B**	**Performance Rating:** **2**
	Finding – Maintenance plans for regular inspections were contained in Maintainly and conducted as per frequency determined by OEM recommendations. The results of inspections were documented and saved against WO. SCADA continuously monitored the performance of the plant. A condition assessment was included in the AMP and supporting LCM detailed further justification for condition assessment rating. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5,6.1, 7.1-7.9 **Observations:** • PI was capabilities were available for data trending and visualisation but was not being fully utilised to monitor the performance of the plant, there were no performance trends being continuously monitored. It was noted the plant was running below full capacity at this time so SCADA was sufficient, should additional demand be found this could be an effective improvement to monitor the performance of the plant. • A consultant was engaged to perform a condition inspection and to recommend a range of repair options. Costs were included in 2022 AMP; however the detailed scope of these works was still being determined. It was understood that the majority preparation of refurbishment (including development of repair standards and specifications, spare parts procurement, reversing engineering for key components, labour resource security, etc.) would be conducted in 2022 and the actual work may be implemented in 2023. • Sighted completed inspection report of Turbines, report included photographic evidence of condition			
	Recommendation: None		**Action: Nil**	
6.3	**OBLIGATION: Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule**	**Review Priority** **2**	**P&P* Rating:** **A**	**Performance Rating:** **1**
	Finding – Scheduled maintenance was performed as per Maintainly requirements in the prescribed timeframes and tracked in the LCM. The Maintenance Management Procedure specified allowable tolerance in scheduled maintenances for Critical and General Scheduled Maintenance. Servicing outside of these tolerances or waivers to service, required approval by authorised personnel with the appropriate NFDA as a Maintenance Extension/Waiver in a Change Management Form. The primary source of Corrective Maintenance was defects identified in the assets during preventative maintenance and repair during breakdowns. Significant defects require a Defect Report as per Defect Reporting procedure and minor defects were raised as a task in the CMMS. Emergency Maintenance and unplanned maintenance was tracked in the LCM. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5,6.1,6.2, 7.1-7.9 **Observations:** • The AMPs, the Lifecycle Cost Model (LCM) and the CMMS contained a list of maintenance strategies or requirements from OEMs, licenses and regulations as well as internal requirements based on asset condition and performance (risk based), and operator experience (i.e. input to workshops).			

	• Preventative Maintenance Plans were loaded into Maintainly and the WOs were available a month ahead. • Corrective Maintenance was entered into CMMS as required and dependent on risk subject to defects reporting procedure. • Site personnel had daily meetings to review and plan the schedules for completion each day. • Changes to maintenance plans were documented as per the Maintenance Management Procedure. • Due to closure of the Argyle Diamond Mine and subsequent drop in Ord Hydro demand, the power station has excess capacity and has a full redundancy of critical assets (except Transmission Lines) which allowed maintenance to be conducted without major interruption. • The overhaul of the Turbines, which will be a major project, has been planned for 2023. • Emergency procedures (contingency plans) were available for major equipment failure: ➢ Power Lines ➢ Power Transformers ➢ Substations and Switchyards. • Defect Reporting Procedure aligned with Enterprise Risk Management Framework of PH Australia, and the Non-Financial Delegation of Authority Procedure (NFDA).			
	Recommendation: None		**Action: Nil**	
6.4	**OBLIGATION: Failures are analysed, and operational/maintenance plans adjusted where necessary**	**Review Priority 2**	**P&P* Rating: B**	**Performance Rating: 2**
	Finding – The Licensee has established processes for the capture and analysis of failures and the amendment to operational and maintenance plans where required. A root cause analysis and improvement cycle to failures was evident where defects, inspection results were fed into AMP Condition Assessment which was to assist in identifying site risks and any subsequent additional maintenance activities. This process was aligned with LCM and budget approval and facilitated the adjustment of operational and maintenance plans. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5,6.1,6.2, 7.1-7.9 **Observations:** • Majority of major failures came from lightning strikes. Planned responses to these events have reduced the outage times to a minimum. Critical spares and tooling to react to these events has been purchased and stored onsite. Additional resources to react to the line strikes was available and the vendor can mobilise immediately to react to emergency situations. • PI software was not utilised to the full extent and opportunities to further improve analysis of failures were not maximised.			
	Recommendation: None		**Action: Nil**	
6.5	**OBLIGATION: Risk management is applied to prioritise maintenance tasks**	**Review Priority**	**P&P* Rating:**	**Performance Rating:**

		2	**A**	**1**
	Finding – The Licensee has applied risk management to maintenance tasks, and it was evident that priority was given to maintenance of critical equipment. Major works were raised, assessed through Risk Assessment process. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5,6.1,6.2, 7.1-7.9 **Observations:** • Critical equipment was identified in the AMP and critical maintenance was given a shorter timeframe for date deviations • The assets were continually monitored and inspected with a comprehensive maintenance programme via CMMS called Maintainly. The findings from these inspections were saved to the closure of the WO • Routine day to day maintenance tasks were programmed and monitored via Maintainly. A rolling months WO's to be carried out was available to the technicians through Maintainly. Technicians select the PM to carry out each day during morning meetings, decisions to carry out these is based on availability of equipment. Maintainly did not have a priority ranking assigned to the maintenance plans. • From the Closed WO report supplied it can be seen that all unplanned reactive maintenance is actioned and closed the same day (except 2 incidents that were closed within the 2 weeks of being raised) • Maintenance activities were primarily based on the OEM's recommendations. Additional monitoring or replacement tasks were proposed in the Risk Register and assessed if effective and worth implementation. For example, the Main Transformer Failure – Surge Arrestors instead on being checked were replaced to ensure in optimal condition to reduce the risk of Main TFMR failure. AMP showed asset condition review, risk analysis and replacement strategy to mitigate risk and the LCM tracked the history.			
	Recommendation: None		**Action: Nil**	
6.6	**OBLIGATION: Maintenance costs are measured and monitored**	**Review Priority** **4**	**P&P* Rating:** **B**	**Performance Rating:** **2**
	Finding – Maintenance hours were recorded in Maintainly. Maintenance Costs were monitored in the LCM's which was updated annually. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5,6.1,6.2, 7.1-7.9 **Observations:** • It was difficult to determine from reports if the hours are actual hours or the PM planned hours • Materials were not contained in Maintainly and were accounted for separately.			
	Recommendation: None		**Action: Nil**	

7. ASSET MANAGEMENT INFORMATION SYSTEM	OVERALL EFFECTIVENESS RATING	
□ Assess the adequacy of policies and procedures covering the general control and security of the computer systems used to provide management information on compliance with service standards / licence obligations □ Confirm management reports on service standards / licence obligations are reviewed and substantial exceptions to service standards / licence obligations are promptly followed up and implemented **Key Process** – *An asset management information system is a combination of processes, data and software supporting the asset management functions.* **Outcome** – *The asset management information system provides authorised, complete and accurate information for the day-to-day running of the asset management system. The focus of the review is the accuracy of performance information used by the licensee to monitor and report on service standards.*	**PROCESS & POLICY RATING***	**PERFORMANCE RATING**
	A	**1**

No.	2022 REVIEW REPORT EVIDENCE/ /VERIFICATION/FINDING/ACTION			
7.1	**OBLIGATION: Adequate system documentation for users and IT operators**	**Review Priority** **5**	**P&P* Rating:** **B**	**Performance Rating:** **2**
	Finding – The Licensee used Maintainly as its computerised maintenance management system (CMMS). Asset live performance is monitored through the SCADA and interpreted through the PI System. The OH personnel were responsible for operating the Maintainly in line with NFDA and Pacific Hydro's corporate standards. I **Documents/Evidence** – Maintainly, MEX, 1, 2, 3.1-3.4, 5,5.1-5.5,6.1,6.2, 7.1-7.9, 15.1-15.9, 19.1 **Observations:** • There was system documentation for the use of Maintainly however the staff reported issues with the search functions of the CMMS and maintained MEX which an obsolete system in conjunction with Maintainly as they were more familiar with its operation. • Pacific Hydro had established corporate IT Policies			
	Recommendation: None		**Action: Nil**	
7.2	**OBLIGATION: Input controls include suitable verification and validation of data entered into the system**	**Review Priority** **4**	**P&P* Rating:** **B**	**Performance Rating:** **2**

	Finding – The Licensee has established robust verification and data validations processes, for example with respect to the metering data. However, during the site visit it was noted that the Maintenance Plans input into Maintainly were input without the data being validated by the Site Managers. The description used in the maintenance plan title included the asset tag which did not always clearly align to the asset tag onsite or in the asset register. On site staff stated that it was often difficult to determine what equipment the WO was actually intended for without drilling into the WO due the limited search functions of Maintainly. It was noted there was limited risk associated with this as the plant was not complex and the operators were very familiar with the plant and equipment. **Documents/Evidence** – Maintainly, MEX, 1, 2, 3.1-3.4, 5,5.1-5.5,6.1,6.2, 7.1-7.9, 15.1-15.9, 19.1 **Observations:** • Performance readings were manually taken monthly by Site Manager and included in monthly reports. • It was noted site personnel have requested that Maintainly be updated as directed by the site personnel that work with the system daily to display the correct tags the Maintenance Plan has been created for. • IT Policies and procedures were established for PHs equipment, systems and document network.			
	Recommendation: None		**Action: Nil**	
7.3	**OBLIGATION: Security access controls appear adequate, such as passwords**	**Review Priority** **2**	**P&P* Rating:** **A**	**Performance Rating:** **1**
	Finding – The Licensee confirmed for duration of the review period, Computer access was protected by multiple authentications, the SCADA system was not internet based, there were firewalls and virus protection are in place and cyber threat training was provided and test phishing emails were used to check compliance. **Documents/Evidence** – Maintainly, MEX, 1, 2, 3.1-3.4, 5,5.1-5.5,6.1,6.2, 7.1-7.9, 15.1-15.9, 19.1 **Observations:** • The Licensee has increased its Cyber security during the review in line with the increased risk to mining and energy companies in particular. • Cyber Security model and policies were place detailing the components and responsibilities to maintain and Secure It System in today's usage parameters ie remote access, cloud infrastructure and applications.			
	Recommendation: None		**Action: Nil**	
7.4	**OBLIGATION: Physical security access controls appear adequate**	**Review Priority** **5**	**P&P* Rating:** **A**	**Performance Rating:** **1**

	Finding – During the site visit it was confirmed access to Ord Hydro's Kununurra office was restricted through security over entrance points and monitored through an alarm system and a continuous CCTV system. Restricted access to the power station was ensured through perimeter fencing, signage and gates with password access controls. The KNX Switchyard in town also had perimeter fencing and CCTV installed. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5,6.1,6.2, 7.1-7.9, 15.1-15.9, 19.1 **Observations:** • The servers were located in Melbourne head office and contingency measures were established.			
	Recommendation: None		**Action: Nil**	
7.5	**OBLIGATION: Data backup procedures appear adequate, and backups are tested**	**Review Priority** **4**	**P&P* Rating:** **A**	**Performance Rating:** **1**
	Finding – The Production Manager confirmed that backup procedures were tested on an annual basis. Cyber security and IT controls were managed by head office this included the primary server and cloud infrastructure. It was understood third party IT providers have Disaster Recovery Systems in place. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5,6.1,6.2, 7.1-7.9, 15.1-15.9, 19.1 **Observations:** • Records of the testing of the backup procedures were not reviewed during the audit. • It was noted Disaster Recovery Activation Processes were detailed and Disaster Recovery Testing was scheduled. • Awareness to the Australian Energy Sector Cyber Security Framework (AESCSF) was also noted.			
	Recommendation: None		**Action: Nil**	
7.6	**OBLIGATION: Computations for licensee performance reporting are accurate**	**Review Priority** **5**	**P&P* Rating:** **A**	**Performance Rating:** **1**
	Finding – The Licensee confirmed for the duration of the review period, Ord Hydro was not required to publish or submit licence performance reporting data. Data utilized in the compilation of the reports was obtained from the CMMS, designated spreadsheet (i.e. Energy.xls) and SCADA systems, for example verification of check metering data,			

	Documents/Evidence – 1, 2, 3.1-3.4, 5,5.1-5.5,6.1,6.2, 7.1-7.9, 15.1-15.9, 19.1 **Observations:** • The Licensee utilised spreadsheets for annual reconciliations reported in accordance with Ord Hydro's PPAs.			
	Recommendation: None		**Action: Nil**	
7.7	**OBLIGATION: Management reports appear adequate for the licensee to monitor licence obligations**	**Review Priority** **5**	**P&P* Rating:** **A**	**Performance Rating:** **1**
	Finding – The Licensee provided the operations section of the management report for review, and they appeared adequate for the licensee to monitor licence obligations. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5,6.1,6.2, 7.1-7.9, 15.1-15.9, 19.1 **Observations:** • Monitoring of contractual obligations was managed by Melbourne office.			
	Recommendation: None		**Action: Nil**	
7.8	**OBLIGATION: Adequate measures to protect asset management data from unauthorised access or theft by persons outside the organisation**	**Review Priority** **2**	**P&P* Rating:** **A**	**Performance Rating:** **1**
	Finding – The Licensee has established policies, systems and procedures relating to access to Ord Hydro data systems to ensure it was limited, restricted using authentication processes. Additionally, the SCADA was not accessible via internet so eliminates the risk of the SCADA being cyber attacked. **Documents/Evidence** – 1, 2, 3.1-3.4, 5,5.1-5.5,6.1,6.2, 7.1-7.9, 15.1-15.9, 19.1 **Observations:** • The licensee was aware of Australian Energy Sector Cyber Security Framework (AESCSF) and actively implemented measures to improve cyber security during the review period.			
	Recommendation: None		**Action: Nil**	

8. RISK MANAGEMENT □ Assess whether the risks that most affect the management and performance of the assets have been identified □ Assess the adequacy of policies and procedures covering risk management □ Assess whether the risk management policies and procedures have been applied in practice □ Assess the adequacy of staff understanding and training on risk management **Key Process** – *Risk management involves the identification of risks and their management within an acceptable level of risk.* **Outcome** – *The risk management framework effectively manages the risk that the licensee does not maintain effective service standards*			OVERALL EFFECTIVENESS RATING	
			PROCESS & POLICY RATING*	PERFORMANCE RATING
			B	**1**

No.	2022 REVIEW REPORT EVIDENCE/ /VERIFICATION/FINDING/ACTION			
8.1	**OBLIGATION: Risk management policies and procedures exist and are applied to minimise internal and external risks**	**Review Priority** **2**	**P&P* Rating:** **B**	**Performance Rating:** **2**

	Finding – Risks management policies were in place and were being applied as evidenced during the site visit to minimise the consequence or likelihood of any identified risks. Major risks to the operation of the Power Station were all captured and clearly shown in the AMP. However, the process becomes unclear in determining what mitigation strategies at a corporate level were in place and what are being proposed to further reduce the risks if required.
	
	Documents/Evidence – 1, 2, 3.1-3.5, 4, 5.1-5.5, 6-6.2, 7.7, 7.8.1, 9.1, 10, 17-17.4
	
	Observations:
	• The process did not appear to be fully understood by staff.
	  ○ Current Risks were assessed based on the mitigations currently in place mitigations
	  ○ The Residual Risk was determined the reduction of proposed but not yet implemented strategies.
	• The Risk Register listed both the current and proposed mitigation strategies in the same list making it difficult to interpret as to what is in place and what is to be implemented.			

	Recommendation: Nil		**Action:** Nil	
8.2	**OBLIGATION: Risks are documented in a risk register and treatment plans are implemented and monitored**	**Review Priority** **4**	**P&P* Rating:** **B**	**Performance Rating:** **2**

	Finding – Risks were identified, documented and the risk assessment process was documented. Treatment plans (mitigation strategies) were in place and were being monitored. **Documents/Evidence** – 1, 2, 3.1-3.5, 4, 5.1-5.5, 6-6.2, 7.7, 7.8.1, 9.1, 10, 17.1 -17.4 **Observations:** • Identified Risks were assessed, likelihood of occurrence agreed for each quantitative and qualitative consequences to calculate inherent risk. All mitigations (in place and proposed) were then listed with a resultant residual risk, the highest residual risks were further reviewed for capex improvements. • Management of HSE process detailed in HSE Management Plan • Environmental Risks Management in place to control Environmental Risks.			
	Recommendation: None		**Action: Nil**	
8.3	**OBLIGATION: Probability and consequences of asset failure are regularly assessed**	**Review Priority** **2**	**P&P* Rating:** **A**	**Performance Rating:** **1**
	Finding – LCM containing Risk Register was reviewed every year during the annual business planning cycle. The probability and consequences were reviewed in addition to the current condition of the assets. Site personnel continually monitored and assessed the power stations operation and the reliability. The Station Manager proactively identified and presented perceived deficiencies in the Ord Hydro assets, both in terms additional equipment required and obsolete. **Documents/Evidence** – 1, 2, 3.1-3.5, 4, 5.1-5.5, 6-6.2, 7.7, 7.8.1, 9.1, 10, 17.1 -17.4 **Observations:** • PLP (Power Plant Plus) performed a fly by inspection of the transmission lines and completed a report with recommendations to which spares, and special tools should be held in case there were any transmission line failures; lightning strikes was a continual risk. • An additional backup generator was purchased and installed during the audit period. This generator was added to back up the batteries which provide emergency power for the comms systems. • The Transformers were proactively installed with online Dissolved Gas Analysis (DGA) in 2019 due to Main Transformer failure on another PHA site.			
	Recommendation: None		**Action: Nil**	

9. CONTINGENCY PLANNING	OVERALL EFFECTIVENESS RATING	
□ Determine whether contingency plans have been developed and are current □ Determine whether contingency plans have been tested. If so, review the results to confirm any improvements identified have been implemented. **Key Process** – *Contingency plans document the steps to deal with the unexpected failure of an asset.* **Outcome** – *Contingency plans have been developed and tested to minimise any major disruptions to service standards.*	**PROCESS & POLICY RATING***	**PERFORMANCE RATING**
	B	**3**

No.	2022 REVIEW REPORT EVIDENCE/ /VERIFICATION/FINDING/ACTION			
9.1	**OBLIGATION: Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks**	**Review Priority** **1**	**P&P* Rating:** **B**	**Performance Rating:** **3**

Finding – The Production Manager confirmed and evidenced was sighted during the site tour that the OHPS has full redundancy of critical assets (except Transmission Lines) which allowed maintenance to be conducted without major interruption. It was noted that a desktop simulation and quotations for power line service provider to support with overhead line schedule and/or unscheduled maintenance requirements was undertaken by the Production Manager to ensure capabilities were accessible should the need arise. Evidence of communication was sighted during the Kununurra office visit. Formal documentation of this process was not evident (i.e. update to the Power Line Contingency Plan) although the risk was noted in the LCM (refer LCM 4B_Risk #RAORD181010).

Contingency Plans were developed for Ord Hydro Power line Access, Power transformer and Substations and switchyards. Testing of the contingency plans and records of the outcomes was not formally undertaken during the review period.

Training records were provided for the Substation and Main Transformer Contingency Plans; however, these were not for Ord Hydro site managers, asset engineers or production managers as specified in the contingency plans.

Additionally, the Licensee has developed a Business Continuity Plan that was developed at a corporate level which encompassed:

- Crisis & Emergency Management
- Business Recovery
- IT Disaster Recovery
- People Recovery

It was understood IT Disaster Recovery drills were regularly undertaken by corporate, however, records were not provided for review. The Emergency Response drills were not as per the requirement for Contingency Plans (i.e. stretcher drills) to address the asset management system deficiency. The contingency plans were intended to ensure continuity of business operations and/or financial stability, for example if a power line were to be irreparably damaged.

Documents/Evidence – 19.1-19.4, 23.1-23.4, 30, 34.1

	Observations: • Contingency Planning was the asset management component that was rated deficient (B3) in the 2018 Asset Management Review by the previous auditor. This component was also rated deficient in the 2014 review. The ERA informed Ord Hydro that it was to complete actions that addressed this deficiency by the due date, December 2019. The agreed actions were not completed for reasons relating to COVID and travel restrictions. • In 4Q,2019 two safety related emergency drills were completed: first aid drill and a stretcher drill. • The Licensee confirmed IT Disaster recovery Plan and Cyber Security Incident Response Plan were fully tested and/or simulated annually.	
	Recommendation: 12/2022 - Schedule and carry-out testing and training of each contingency plan. Update the Powerline Access Contingency Plan to reflect emergency repair processes, for example LCM risk #RAORD181010. Ensure all personnel listed in the Contingency Plans are trained as per requirements and records reflected in the Training register. Reference to Contingency Plans should be made within the AMPs and LCMs.	**Action:** Refer PRIP 2022

10. FINANCIAL PLANNING			OVERALL EFFECTIVENESS RATING	
			PROCESS & POLICY RATING*	PERFORMANCE RATING
□ Obtain a copy of the financial planning, budgeting and reporting process and assess its effectiveness □ Obtain a copy of the current financial plan (including budget/actual) and assess whether the process is followed **Key Process** – *Financial brings together the financial elements of the service delivery to ensure its financial viability over the long term.* **Outcome** – *The financial plan is reliable and provides for the long-term financial viability of the services.*			**A**	**1**
No.	**2022 REVIEW REPORT EVIDENCE/ /VERIFICATION/FINDING/ACTION**			
10.1	**OBLIGATION: The financial plan states the financial objectives and identifies strategies and actions to achieve those**	**Review Priority** **4**	**P&P* Rating:** **A**	**Performance Rating:** **1**
	Finding – The Licensees financial plan was included in the Business plans, the annual budgets, the LCMs and the AMPs which reflected the business objectives outlined in its business plans. **Documents/Evidence** – 3.1-3.5, 4, 5.1-5.5, 36.1-36.5 **Observations:** • The business planning process was robust and included the contractual obligations of the PPAs. • The full Business Plans were not provided for review. However, they were understood to contain an overview of the commercial objectives (revenue, cost of sales and asset contribution), strategies and actions of the business.			
	Recommendation: None		**Action: Nil**	
10.2	**OBLIGATION: The financial plan identifies the source of funds for capital expenditure and recurrent costs**	**Review Priority** **5**	**P&P* Rating:** **A**	**Performance Rating:** **1**
	Finding – The Licensee confirmed that for the duration of the review period, all funds were sourced internally (through the Ord Hydro and Pacific Hydro group structure), with some provision for negotiated customer contributions. Additionally, Ord Hydro's annual budget and financial statements outlined the source of funds for its capital and operational expenditure requirements **Documents/Evidence** – 3.1-3.5, 4, 5.1-5.5, 36.1-36.5			

	Observations: • The Group consolidated financial statements for the year ending 31 December 2018-2021 were provided for review. • Financial plans and financial reports detail funding sources were Commercial in confidence.			
	Recommendation: None		**Action: Nil**	
10.3	**OBLIGATION: The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets)**	**Review Priority** **5**	**P&P* Rating:** **A**	**Performance Rating:** **1**
	Finding – Projections of statements of Profit and Loss and Balance sheets were reported annually and budget forecast for life of asset. The LCM detailed financial modelling undertaken by the licensee. **Documents/Evidence** – 3.1-3.5, 4, 5.1-5.5, 36.1-36.5 **Observations:** • Annual Financial Reports audited and prepared by independent third party. • Pacific Hydro's financial statements and signed annual audit reports were provided for review for the years ending 31 December 2018, 2019, 2020 and 2021 • Financial plans and financial reports detail funding sources were Commercial in confidence.			
	Recommendation: None		**Action: Nil**	
10.4	**OBLIGATION: The financial plan provides firm predictions on income for the next five years and reasonable predictions beyond this period**	**Review Priority** **5**	**P&P* Rating:** **A**	**Performance Rating:** **1**
	Finding – The Lifecycle Cost Model demonstrated generation for the power station revised annually and budget forecast for life cycle of assets. Detailed financial modelling was undertaken by the licensee to 2036. **Documents/Evidence** – 3.1-3.5, 4, 5.1-5.5, 36.1-36.5 **Observations:** • The Licensee was actively look at future revenue sources following the closure of ADM.			
	Recommendation: None		**Action: Nil**	

10.5	**OBLIGATION: The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services**	**Review Priority** **4**	**P&P* Rating:** **A**	**Performance Rating:** **1**
	Finding – Detailed Lifecycle Cost Modelling has been undertaken by the licensee, including all costs associated with operating, maintaining the assets, administration, and CAPEX to 2036. **Documents/Evidence** – 3.1-3.5, 4, 5.1-5.5, 36.1-36.5 **Observations:** • The annual business planning process included the annual review and update of the LCMs and AMPs. • Delegation of authority was in place, adjustments made and approved by the Board.			
	Recommendation: None		**Action: Nil**	
10.6	**OBLIGATION: Large variances in actual/budget income and expenses are identified and corrective action taken where necessary**	**Review Priority** **4**	**P&P* Rating:** **A**	**Performance Rating:** **1**
	Finding – The Licensee confirmed during the review period, financials identified variances and comparisons were made against budget where required. Historical justifications were evident in the AMPs and the LCMs. **Documents/Evidence** – 3.1-3.5, 4, 5.1-5.5, 36.1-36.5 **Observations:** • Comprehensive financial reporting via MER reports to the Board on a monthly basis			
	Recommendation: None		**Action: Nil**	

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

No.	2022 REVIEW REPORT EVIDENCE/ /VERIFICATION/FINDING/ACTION			
11.1	**OBLIGATION: There is a capital expenditure plan covering works to be undertaken, actions proposed, responsibilities and dates**	**Review Priority 4**	**P&P* Rating: A**	**Performance Rating: 1**
	Finding – The Licensee confirmed there was no specific capital expenditure plan. Capital Expenditure was assessed in the LCMs and carried into the AMPs. The Capex costs were forecast and budgeted into the Life Cycle Model and included in the AMPs. **Documents/Evidence** – 3.1-3.5, 4, 5.1-5.5, 36.1-36.5 **Observations:** • The NFDA detailed information on roles and responsibilities. • There was not a specific capital expenditure plan developed as the requirements were covered in the business plans, LCMs and annual budgets.			
	Recommendation: None		**Action: Nil**	
11.2	**OBLIGATION: The capital expenditure plan provides reasons for capital expenditure and timing of expenditure**	**Review Priority 5**	**P&P* Rating: A**	**Performance Rating: 1**
	Findings – Capital Expenditure was identified from Risk Assessments. Risks were noted be from deterioration of equipment condition, obsolescence of equipment or improvements to provide redundancy or backup systems. Additionally, the annual AMPs outlined capital expenditure requirements and the LCMs further detailed justifications.			

	Documents/Evidence – 3.1-3.5, 4, 5.1-5.5, 36.1-36.5 **Observations:** • The financial statements for the years 2018-2021 were provided for review.			
	Recommendation: None		**Action: Nil**	
11.3	**OBLIGATION: The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan**	**Review Priority** **4**	**P&P* Rating:** **A**	**Performance Rating:** **1**
	Finding – Capital Expenditure was included in the Life Cycle Models and included in the forecast budgets for the preceding years. **Documents/Evidence** – 3.1-3.5, 4, 5.1-5.5, 36.1-36.5 **Observations:** • Ord Hydro's annual AMP and supporting asset lifecycle model provide an overview and analysis on all forecast capital expenditure requirements up until FY36.			
	Recommendation: None		**Action: Nil**	
11.4	**OBLIGATION: There is an adequate process to ensure the capital expenditure plan is regularly updated and implemented**	**Review Priority** **5**	**P&P* Rating:** **A**	**Performance Rating:** **1**
	Finding – Capital expenditure projects were included in AMP's update Annually **Documents/Evidence** – 3.1-3.5, 4, 5.1-5.5, 36.1-36.5 **Observations:** • Annual updates of the LCMs were undertaken in conjunction with the business planning cycle.			
	Recommendation: None		**Action: Nil**	

12. REVIEW OF AMS	OVERALL EFFECTIVENESS RATING	
□ Determine when the asset management plan was last updated and assess whether any substantial changes have occurred □ Determine whether any independent reviews have been performed. If so, review the results and action taken □ Consider the need to update the asset management plan based on the results of this review □ Determine when the asset management system was last reviewed. **Key Process** – *The asset management system is regularly reviewed and updated.* **Outcome** – *The asset management system is regularly reviewed and updated.*	**PROCESS & POLICY RATING***	**PERFORMANCE RATING**
	A	**2**

No.	2022 REVIEW REPORT EVIDENCE/ /VERIFICATION/FINDING/ACTION			
12.1	**OBLIGATION: A review process is in place to ensure the asset management plan and the asset management system described in it remain current**	**Review Priority** **5**	**P&P* Rating:** **B**	**Performance Rating:** **2**
	Finding – A corporate Asset Management Plan Update Procedure was established to detail the processes used to develop and update Asset Management Plans (AMPs) on a yearly basis. The AMS documentation reviewed and generated annually were: ➢ *AMP*: provided a consolidated summary of Asset Objectives, key risks, opportunities, and associated key performance indicators (KPI's), Lifecycle Cost Model outcomes, as well as key asset data required for effective management of the asset ➢ *Lifecycle Cost Model (LCM*): contained the data and modelling which underpinned the AMP ➢ *Lifecycle Generation Model (LGM)*: Provided an assessment of expected generation based on historical data, site conditions and expected resource forecast. (Contained in the LCM) **Documents/Evidence** – 3.1-3.5, 4, 5.1-5.5 **Observations:** • The AMP is updated during Q3 each year and then used as a key input into budget preparation for the following year. • It was observed some of the AMPs provided for review have not been updated in all consistently, approved and signed indicating the document management process set out was not always being followed. However, the LCM was maintained, and updates were largely administrative oversight or duplication of process.			
	Recommendation: None		**Action: Nil**	
12.2	**OBLIGATION: Independent reviews (e.g., internal audit) are performed of the asset management system**	**Review Priority** **5**	**P&P* Rating:** **A**	**Performance Rating:** **2**

	Finding – The Pacific Hydro maintained third party certification to ISO 55001 by BSI which confirmed they operated an AMS which complied with the requirements of ISO 5501:2014 for the following scope: ***Ownership, operation, administration and contractor management of renewable energy power generation facilities for the production of electricity.*** There have been no internal audits undertaken by the Licensee for the AMS. **Documents/Evidence** – 28.1-28.8, 29.4 **Observations:** • Asset Management System - ISO 55001:2014 certification provided in documents. • The Licensee's site was not visited by a BSI Auditor during the audit period, largely due to COVID travel restrictions. • Noted scheduled for the site be visited in 2022.	
	Recommendation: None	**Action: Nil**

APPENDIX 3 – AUDIT & REVIEW DOCUMENT LISTING

Documents Reviewed

TABLE 20 Documents Reviewed and Assessment of Effectiveness

Number	**Ord Hydro** Electricity Generation Licence – EIRL4	ASSET PLANNING	ASSET CREATION & AQUISITION	ASSET DISPOSAL	ENVIRONENTAL ANALYSIS	ASSET OPERATIONS	ASSET MAINTENANCE	A M INFORMATION SYSTEM	RISK MANAGEMENT	CONTINGENCY PLLANNING	FINANCIAL PLANNING	CAPITAL EXPENDITURE PLANNING	REVIEW OF AMS	PERFORMANCE AUDIT
1	PHA Strategic Asset Management Plan	✓												✓
2	PHA Asset Management Policy	✓												✓
3.1	PHA ORD Asset Management Plan 2018 FINAL Rev2	✓												✓
3.2	PHA ORD Asset Management Plan 2019 Rev2	✓												✓
3.3	PHA ORD Asset Management Plan 2020 Rev2	✓												✓
3.4	PHA ORD Asset Management Plan 2021	✓												✓
3.5	PHA ORD Asset Management Plan 2022	✓												✓
4	Asset Management Plan Update Procedure 3.0	✓												✓
5.1	LCM_2018_PHA_H_Ord FINAL Rev2	✓												✓
5.2	LCM_2019_PHA_H_ORD Rev2	✓												✓
5.3	LCM_2020_PHA_H_ORD Rev2	✓												✓
5.4	LCM_2021_PHA_H_ORD	✓												✓
5.5	LCM_2022_PHA_H_ORD	✓												✓
6	Pacific Hydro Organisation Chart	✓												✓
6.1	PHA.OPS.07.005 Non-Financial Delegation of Authority					✓	✓							✓
6.2	Copy of PHA.OPS.07.005 Non-Financial Delegation of Authority (Annex 1)					✓	✓							
7.1	PHA.OPS.09.002 Defect Reporting Procedure					✓	✓							
7.2	PHA.OPS.09.003 High Voltage Safety Procedures					✓	✓							
7.3	PHA.OPS.09.003.9 Permit to Work					✓	✓							
7.4	PHA.OPS.09.005 Maintenance Management Procedure					✓	✓							
7.5	PHA.OPS.09.015 Low Voltage Safety Procedures					✓	✓							
7.6	PHA.OPS.09.100 Lock Out Tag Out of Service and Information Tag Process					✓	✓							
7.7	PHA.OPS.12.001 Change Management Procedure					✓	✓							
7.7.1	Example of Change Management at Ord					✓	✓							
7.8	PHA.OPS.09.099 Workflows in CMMS					✓	✓							
7.8.1	Class1Listing					✓	✓							✓
7.9	PHA.OPS.10.004 CMMS - Fixd User Guide					✓	✓							✓
8.1	Monthly Reports July 2018 – June 2022	✓				✓	✓							✓
8.2	Ord Hydro Generation trends	✓				✓	✓							✓
9.1	assets-70rvvj2k – Asset Register					✓	✓							✓
9.2	Lake-Argyle-Power-Station---Asset_Record-JULY-2022					✓	✓							✓

Number	**Ord Hydro** Electricity Generation Licence – EIRL4	ASSET PLANNING	ASSET CREATION & AQUISITION	ASSET DISPOSAL	ENVIRONENTAL ANALYSIS	ASSET OPERATIONS	ASSET MAINTENANCE	A M INFORMATION SYSTEM	RISK MANAGEMENT	CONTINGENCY PLLANNING	FINANCIAL PLANNING	CAPITAL EXPENDITURE PLANNING	REVIEW OF AMS	PERFORMANCE AUDIT
10	Scheduled Work from 01-01-2022 until 31-12-2022 - Ord Hydro					✓	✓							✓
11.1	19.5MVA 11kV Unit A (G1) July 2022 Online PD Tests - Rev A					✓	✓							
11.2	19.5MVA 11kV Unit B (G2) July 2022 Online PD Tests - Rev A					✓	✓							
11.3	B1-Turbine-inspection-May-2022					✓	✓							
11.4	Fire-Pump-yearly-service-sheet-June-2022					✓	✓							
11.5	Quarterly-Housekeeping-Inspection-OSY-June-2022					✓	✓							
11.6	Quarterly-Vehicle-Inspection-July-2022					✓	✓							
11.7	Turbine-Inspection-A1-May-2022					✓	✓							
11.8	Unit-A-Hydraulic-Tank-May-2022					✓	✓							
11.9	Unit-A-May-2022					✓	✓							
11.10	Unit-A-May-2022-works-Completed					✓	✓							
11.11	Unit-B-May-2022					✓	✓							
11.12	Unit-B-May-2022-Works-Completed					✓	✓							
12	Work Undertaken from 01-01-2022 until 04-08-2022 - Ord Hydro					✓	✓							✓
13	1.03 – Ord Hydro Project – Operators Instruction Manual (Western Power)					✓	✓							
14	inventory-2022-08-05-125512-564x3gw6					✓	✓							✓
15.1	PHA_Australian_Procurement_Procedure					✓	✓							
15.2	PHA.OPS.05.001 TOP Commissioning Procedure					✓	✓							
15.3	PHA IT Disaster Recovery Plan							✓	✓					✓
15.4	PHA ORD IT Infrastructure map							✓	✓					✓
15.5	PHA Information and Records Management Policy							✓	✓					✓
15.6	PHA Internet and Email Policy							✓	✓					✓
15.7	PHA IT Acceptable Use Policy							✓	✓					✓
15.8	PHA Cyber Security Framework							✓	✓					✓
15.9	PHA Information Security Vendor Assessment							✓	✓					✓
16.1	Ord Hydro Emergency Response Plan							✓	✓					✓
16.2	PHA.HSE.04.003 The Ord HSE Management Plan							✓	✓					✓
16.3	PHA_Incident_Management_Procedure								✓					✓
16.4	The Ord Hydro Power Plant - Environmental Management Plan - 2021								✓					✓
16.5	Ministerial Statement 373								✓					✓
17.1	PHA Risk Management Framework - Process								✓					✓
17.2	PHA Risk Management Framework								✓					✓

Number	**Ord Hydro** Electricity Generation Licence – EIRL4	ASSET PLANNING	ASSET CREATION & AQUISITION	ASSET DISPOSAL	ENVIRONENTAL ANALYSIS	ASSET OPERATIONS	ASSET MAINTENANCE	A M INFORMATION SYSTEM	RISK MANAGEMENT	CONTINGENCY PLLANNING	FINANCIAL PLANNING	CAPITAL EXPENDITURE PLANNING	REVIEW OF AMS	PERFORMANCE AUDIT
17.3	Risk Management Framework - New Template (3)													✓
17.4	Risk Management Framework - Compliance (Pillar4)													✓
18	Incidents _ EHS Incident Management _ Intelex 6.5													✓
19.1	Business Continuity Plan - Controlled	✓								✓				✓
19.2	Contingency Plan - Ord Hydro Powerline Access (1)	✓								✓				✓
19.3	Contingency Plan - Power Transformer	✓								✓				✓
19.4	Contingency Plan Substations and Switchyards	✓								✓				✓
20.1	01 Monthly Operations Report – PHA January 2022													✓
20.2	06 Monthly Operations Report – PHA June 2022													✓
21.1	15.1 D244063 Reminder letter - Commencement of audit and review - 2022 audit and review - EIRL004 - Ord Hydro													✓
21.2	15.2 D248338 Letter - Approval of auditor - 2022 audit and review - EIRL004 - Ord Hydro													✓
22.1	2012 Metering Code 2 – Obligations Applicable to Ord													✓
22.2	2014 Ord Audit Recommendations (Metering Code)													✓
22.3	Electricity Industry Act – Obligations Applicable to Ord													✓
22.4	Electricity Industry Code 2005 (Network Quality) – Obligations Applicable to Ord													✓
23.1	Ord - Performance Audit and AMS Update 01042020	✓												✓
23.2	Ord - Performance Audit and AMS Update 28052021	✓												✓
23.3	Ord - Performance Audit and AMS Update 15022022	✓												✓
23.4	Ord - Performance Audit and AMS Update 13092019	✓												✓
23.4	Ord Hydro 2018 EIRL4 Performance audit report - response to ERA comments	✓												✓
23.5	Ord Hydro Pty Ltd - 2018 EIRL4 Performance audit and AMS Review - finalisation of reports	✓												✓
24.1	Ord Hydro Annual Compliance Report to ERA 2018	✓												✓
24.2	Ord Hydro Annual Compliance Report to ERA 2019	✓												✓
24.3	Annual Compliance Report CY 2020	✓												✓
24.4	Ord Hydro Annual Compliance Report to ERA 2021 - Final	✓												✓
24.5	Annual Compliance report - The Ord (2019)				✓									✓
24.6	Annual Compliance report for the ORD - Query				✓									✓
24.7	RE_ Reminder - 2019 Annual Compliance Report - EIRL4 - Ord Hydro				✓									✓
24.8	RE_ Request for revised 2019 Annual Compliance report - EIRL4 - Ord Hydro				✓									✓
24.9	RE_ The Ord - Annual Compliance Report 2020				✓									✓
24.10	The Ord - Annual Compliance Report 2021				✓									✓

Number	**Ord Hydro** Electricity Generation Licence – EIRL4	ASSET PLANNING	ASSET CREATION & AQUISITION	ASSET DISPOSAL	ENVIRONENTAL ANALYSIS	ASSET OPERATIONS	ASSET MAINTENANCE	A M INFORMATION SYSTEM	RISK MANAGEMENT	CONTINGENCY PLLANNING	FINANCIAL PLANNING	CAPITAL EXPENDITURE PLANNING	REVIEW OF AMS	PERFORMANCE AUDIT
24.11	The Ord - Annual Compliance Report (2018)				✓									✓
25.1	Ord Hydro Breach Register - as of 26.07.22	✓			✓									✓
26.1	Obligation Register - The Ord Jul 21 to Jun 22 (1)	✓												✓
27.1	9.02.02.08 Ord Hydro Power Project System Single Line Diagram					✓	✓							✓
27.2	SLD System Diagram rev 10 - showing metering locations					✓	✓							✓
27.3	02-E_003 SLD Transformer 1					✓	✓							
27.4	02-E-004 SLD Transformer 2					✓	✓							
27.5	04-E-003 ADM Switchyard Transformer					✓	✓							
27.6	05-E-001 Kununurra Switchyard					✓	✓							
27.7	9.02.02.06 Kununurra Switchyard					✓	✓							
27.8	ENERGY.xlxs(Meter Error/Data Input)													✓
27.9	Meter Serial Nos													✓
27.10	Electrical Meters Summary													✓
27.11	The Ord - Energy Data Verification Form Procedure													✓
27.12	PHA.OPS.09.096.01 The Ord – Energy Data Verification Form													✓
28.1	1812_AMS_QMS_Pacific_Hydro_Assessment_Report_V1	✓												
28.2	2012_Pacific_Hydro_RES_QSEA_Management_System_Report_v1	✓												
28.3	2111 Pacific Hydro QSEA CAV Management System Assessment Report (3)	✓												
28.4	2111_Pacific_Hydro_QSEA_CAV_Management_System_Assessment_Report_V1	✓												✓
28.5	AMS_External_Audit_ISO55001_certification_PHB-PHC_2018	✓												✓
28.6	BSI_Stage_2_ISO55001_Certifcation_Assessment_Report_Dec2017	✓												✓
28.7	Pacific_Hydro_Management_System_Audit_Report_2019_-_BSI_Group	✓												✓
28.8	Management System Audit Schedule 2022	✓												✓
29.1	ISO 9001 Certificate	✓												
29.2	ISO 14001 Certificate	✓												
29.3	ISO 45001 Certificate	✓												
29.4	ISO 55001 Certificate	✓												✓
30.1	Training Report 05082022	✓												✓
30.2	7-Jun-2022-Julian-King Environment, Quality, Asset Management Audit Template – The Ord					✓								✓
31.1	Pacific Hydro PPA (Fully Executed dated 15.10.20)Redacted	✓												✓
31.2	SECWA-Horizon Power - Power Purchase Agreement 1994	✓												✓
31.3	ADM - Power Purchase Agreement	✓												✓

Number	**Ord Hydro** Electricity Generation Licence – EIRL4	ASSET PLANNING	ASSET CREATION & AQUISITION	ASSET DISPOSAL	ENVIRONENTAL ANALYSIS	ASSET OPERATIONS	ASSET MAINTENANCE	A M INFORMATION SYSTEM	RISK MANAGEMENT	CONTINGENCY PLLANNING	FINANCIAL PLANNING	CAPITAL EXPENDITURE PLANNING	REVIEW OF AMS	PERFORMANCE AUDIT
32	Communications Protocol – PHA & Horizon Power (April 2021)	✓												
33	Pacific Hydro - The Ord Feasibility Study - March 2021	✓	✓	✓										✓
34.1	Notice - Ord Hydro - Audit and Review 2018 - EIRL004													✓
35.1	Horizon Power Metrology Procedure 2017													✓
36.1	2018 PHPL (PH0000A) Group Stat Accounts					✓					✓	✓		✓
36.2	2019 PHPL (PH0000A) Group Stat Accounts					✓					✓	✓		✓
36.3	2020 PHPL (PH0000A) Group Stat Accounts					✓					✓	✓		✓
36.4	PHPL_Group_Statutory_Accounts_31_December_2021					✓					✓	✓		✓
36.5	Ord Fixed Asset Register 311022					✓					✓	✓		✓