

**ELECTRICITY INDUSTRY PARTICIPATION CODE  
DISTRIBUTOR AUDIT REPORT**



For

**HORIZON ENERGY DISTRIBUTION LIMITED**

**NZBN: 9429041051832**



Prepared by: Steve Woods

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Audit report due date: 16-Oct-23

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## EXECUTIVE SUMMARY

This distributor audit was performed at the request of **Horizon Networks (Horizon)** to encompass the Electricity Industry Participation Code requirement for an audit, in accordance with clause 11.10 of part 11. The audit was carried out at Horizon's premises in Whakatane on 24 August 2023.

The audit was conducted in accordance with the Guideline for Distributor Audits V7.2, which was produced by the Electricity Authority.

This audit found three non-compliances and makes five recommendations. There have been further improvements to controls since the last audit, and this has led to a reduction in non-compliances from eight to three.

I've made five recommendations for improvement, mostly related to additional monitoring to assist with registry population timeliness.

One of the recommendations is regarding the connection of new streetlights, where Horizon's expected process doesn't seem to be followed. I recommend this process is improved to ensure all relevant parties are aware that lights are connected.

I have repeated a recommendation made several years ago that the Authority changes the Code to ensure distributed generation installations are not installed without metering and without all parties being aware of the installation. The additional benefit of this change will be a reduction in the risk of electrocution due to potentially unsafe installations which may not be inspected, and which could be hazardous.

The next audit frequency table indicates that the next audit be due in 24 months. I have considered this result in conjunction Horizon's responses, and I recommend that the next audit be in 36 months to reflect the high level of compliance and to recognise the willingness to address the issues raised.

The matters raised are shown in the table below:

## AUDIT SUMMARY

### NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Population of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	Seven late initial electrical connection date updates.	Strong	Low	1	Identified
Changes to registry information	4.1	8 Schedule 11.1	Updates to registry backdated greater than three business days of the event.	Strong	Low	1	Identified
ICP addresses	4.4	2 of Schedule 11.1	Two "active" ICPs with duplicate addresses.	Strong	Low	1	Cleared
<b>Future Risk Rating</b>						<b>3</b>	
<b>Indicative Audit Frequency</b>						<b>24 months</b>	

Future risk rating	0-1	2-5	6-8	9-20	21-29	30+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

### RECOMMENDATIONS

Subject	Section	Recommendation
Generic email inbox	3.5	Establish a generic inbox for all new connection correspondence, to ensure visibility of all issued during periods of leave.
Connection and electrical connection of streetlight circuits	3.7	Strengthen the process for new streetlight connections to ensure they are not connected or electrically connected without the process being followed and without all relevant parties being aware.
Price code changes	4.1	Add fields of agreement date and registry update date to the master price code change spreadsheet.
Monitoring ready for decommissioning status	4.1	Monitor a registry list file to identify ICPs changed to "ready for decommissioning".
Checking ICPs at ready for decommissioning	4.11	Run a weekly list file of all ICPs at "ready for decommissioning" to ensure they are decommissioned as soon as practicable.

## ISSUES

Subject	Section	Recommendation	Description
Distributed generation	4.6	There are a large number of unauthorised distributed generation installations being connected.	<p>I recommend the Code is changed as follows:</p> <p>The distributor approval should only be provided once the following criteria have been met:</p> <ul style="list-style-type: none"> <li>• the proposed installation is of an approved type,</li> <li>• a trader has agreed to the installation of distributed generation, and</li> <li>• import/export metering is installed, or the trader has provided evidence the ICP is on the gifting register.</li> </ul> <p>Once approval has been provided to install the generation installation, it cannot be electrically connected without permission from the trader and the distributor, and this permission cannot be more than three business days old.</p> <p>The gifting register needs to be published and available to all participants.</p>

## 1. ADMINISTRATIVE

### 1.1. Exemptions from Obligations to Comply with Code (Section 11)

#### Code reference

*Section 11 of Electricity Industry Act 2010.*

#### Code related audit information

*Section 11 of the Electricity Industry Act provides for the Electricity Authority to exempt any participant from compliance with all or any of the clauses.*

#### Audit observation

I checked the Authority's website to identify any exemptions in place.

#### Audit commentary

Horizon has no exemptions in place that are relevant to the scope of this audit.

### 1.2. Structure of Organisation

Horizon provided an organisation chart.

### 1.3. Persons involved in this audit

Auditor:

**Steve Woods**

**Veritek Limited**

**Electricity Authority Approved Auditor**

Horizon personnel assisting in this audit were:

Name	Title
Jonathon Staite	Regulatory Manager
Shane Piaray	Operations Manager
Hannah Wipaki	New Connections and ICP Registry Administrator
Jessie Coulter	New Connections Administrator
Monique Cory	Support Services Manager
Sanaullah Farooq	Regulatory and Pricing Analyst
Luqman Sahimi	Network Planning Engineer

#### 1.4. Use of contractors (Clause 11.2A)

##### Code reference

Clause 11.2A

##### Code related audit information

*A participant who uses a contractor*

- *remains responsible for the contractor's fulfilment of the participants Code obligations*
- *cannot assert that it is not responsible or liable for the obligation due to the action of a contractor,*
- *must ensure that the contractor has at least the specified level of skill, expertise, experience, or qualification that the participant would be required to have if it were performing the obligation itself.*

##### Audit observation

Horizon subcontracts contractors to conduct connection and energisation activities on their network. This matter was discussed during the audit to ensure Horizon understands their responsibilities under this clause.

##### Audit commentary

Horizon has maintained responsibility for all of their obligations during the audit period. Compliance is confirmed.

#### 1.5. Supplier list

The list of contractors is shown below:

- Horizon Services Limited, and
- Watt Electrical.

#### 1.6. Hardware and Software

Horizon provided the following information detailing hardware and software used in the processes to be audited.

The management of ICPs is maintained in a system called "NMS Billing", which is an MS Access application linked to an SQL Server database. The validation between the registry and the "NMS Billing" platform is unchanged and is discussed in **section 2.1**.

The GIS was replaced by ArcGIS in March 2023. This system is not considered to be within the scope of this audit, therefore a material change audit is not required.

All software resides on an IBM X3650 M3 server with redundant PSU, redundant CPUs, and large raid array for maximum hardware redundancy/failover.

Horizon's backup arrangements are in accordance with normal industry protocols.

#### 1.7. Breaches or Breach Allegations

Horizon confirmed they have no breach allegations recorded by the Electricity Authority, which are relevant to this audit.



## 1.8. ICP and NSP Data

The table below lists the relevant NSPs and their associated balancing areas:

Distributor	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	No of active ICPs
HEDL	ANIO331	ANIWHENUA	EDG0331	HEDL	BALANC1HEDLG	I	01-05-08	0
HEDL	EDG0331	EDGEKUMBE			BALANC1HEDLG	G	01-05-08	6,660
HEDL	KAW0111	KAWERAU			BALANC1HEDLG	G	01-05-08	3,082
HEDL	WAI0111	WAIOTAHI			BALANC1HEDLG	G	01-05-08	4,401
HEDL	WAI0501	WAIOTAHI			WAI0501HEDL	G	02/07/18	1,109

Horizon has no embedded networks connected and one interconnection point. The certification of this interconnection point is discussed in **section 6.8**.

Horizon provided a list of all ICPs as of June 2023 by way of a registry “list file”. A summary of this data by “ICP status” is as follows:

Status	Number of ICPs (2023)	Number of ICPs (2022)	Number of ICPs (2020)
New (999,0)	2	1	0
Ready (0,0)	5	8	2
Active (2,0)	25,252	25,079	24,826
Distributor (888,0)	0	0	0
Inactive – new connection in progress (1,12)	25	15	16
Inactive – electrically disconnected vacant property (1,4)	394	351	348
Inactive – electrically disconnected remotely by AMI meter (1,7)	77	78	60
Inactive – electrically disconnected at pole fuse (1,8)	44	43	55
Inactive – electrically disconnected due to meter disconnected (1,9)	23	29	29
Inactive – electrically disconnected at meter box fuse (1,10)	20	22	38
Inactive – electrically disconnected at meter box switch (1,11)	7	7	12
Inactive – electrically disconnected ready for decommissioning (1,6)	46	38	18
Inactive – reconciled elsewhere (1,5)	1	1	1
Decommissioned (3)	2,621	2,585	2,498

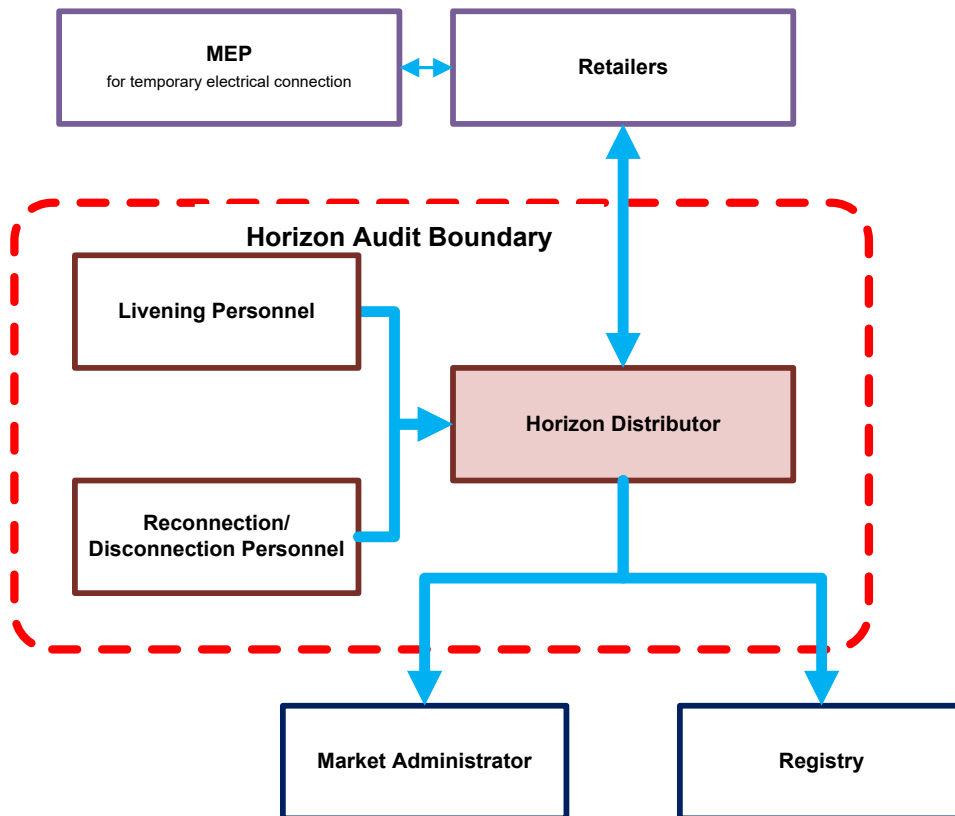
### 1.9. Authorisation Received

An email of authorisation was provided to Veritek, permitting the collection of data from other parties for matters directly related to the audit.

### 1.10. Scope of Audit

This distributor audit was performed at the request of Horizon to encompass the Electricity Industry Participation Code requirement for an audit, in accordance with clause 11.10 of part 11. The audit was carried out at Horizon’s premises in Whakatane on 24 August 2023.

The scope of the audit is shown in the diagram below, with the Horizon audit boundary shown for clarity.



The audit was conducted in accordance with the Guideline for Distributor Audits V7.2, which was produced by the Electricity Authority.

### 1.11. Summary of previous audit

Horizon provided a copy of their previous audit, conducted in March 2022 by Steve Woods of Veritek Ltd. The current statuses of the last audit's findings are detailed in the tables below:

#### Table of Non-Compliance

Subject	Section	Clause	Non-compliance	Status
Complete and accurate information	2.1	11.2(1)	Registry information not complete and accurate in all instances.	Cleared
Participants may request distributors to create ICPs	3.2	11.5(3)	23 of 78 ICPs since July 2021 not created within three business days.	Cleared
Provision of information to the registry	3.3	11.7	One initial electrical connection date missing.	Cleared
Timeliness of Provision of ICP Information to the registry	3.4	7(2) of Schedule 11.1	Two ICPs made "Ready" after electrical connection.	Cleared
Population of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	60 (18.6%) late initial electrical connection date updates.	Still existing for a smaller number
Changes to registry information	4.1	8 Schedule 11.1	Updates to registry backdated greater than three business days of the event.	Still existing for a smaller number
ICP addresses	4.4	2 of Schedule 11.1	Two "active" ICPs with addresses that are not readily locatable.	Resolved for the two identified, non-compliance identified for two duplicates.
Distributors to Provide ICP Information to the Registry manager	4.6	7(1)(p) of Schedule 11.1	One initial electrical connection date missing. Three incorrect initial electrical connection dates.	Cleared

## Table of Recommendations

Subject	Section	Recommendation for improvement	Status
Connection and electrical connection of streetlight circuits	3.7	Strengthen the process for new streetlight connections to ensure they are not connected or electrically connected without the process being followed and without all relevant parties being aware.	In progress
Monitoring ready for decommissioning status	4.1	Monitor the registry notification files to identify ICPs changed to "ready for decommissioning".	In progress

## Table of Issues

Subject	Section	Recommendation	Description	
Distributed generation	4.6	There are a large number of unauthorised distributed generation installations being connected.	<p>I recommend the Code is changed as follows:</p> <p>The distributor approval should only be provided once the following criteria have been met:</p> <ul style="list-style-type: none"> <li>the proposed installation is of an approved type,</li> <li>a trader has agreed to the installation of distributed generation, and</li> <li>import/export metering is installed, or the trader has provided evidence the ICP is on the gifting register.</li> </ul> <p>Once approval has been provided to install the generation installation, it cannot be electrically connected without permission from the trader and the distributor, and this permission cannot be more than three business days old.</p> <p>The gifting register needs to be published and available to all participants.</p>	No action by the Authority

## 2. OPERATIONAL INFRASTRUCTURE

### 2.1. Requirement to provide complete and accurate information (Clause 11.2(1))

#### Code reference

Clause 11.2(1)

#### Code related audit information

*A participant must take all practicable steps to ensure that information that the participant is required to provide to any person under Part 11 is:*

- a) complete and accurate*
- b) not misleading or deceptive*
- c) not likely to mislead or deceive.*

#### Audit observation

Horizon's data management processes were examined. The list file as of 6 June 2023 and audit compliance report for the audit period of 1 March 2022 to 6 June 2023 were examined to confirm compliance.

#### Audit commentary

A discrepancy report is run weekly comparing the registry with Horizon's database and any discrepancies identified are investigated. The audit compliance reporting is also used to identify potential discrepancies. EIEP1 files are checked to identify distributed generation connections not notified and the high-risk database is used to confirm new connection and distributed generation dates.

The controls are considered strong, and I did not identify any examples of non-compliance with this clause.

#### Audit outcome

Compliant

### 2.2. Requirement to correct errors (Clause 11.2(2))

#### Code reference

Clause 11.2(2)

#### Code related audit information

*If the participant becomes aware that in providing information under this Part, the participant has not complied with that obligation, the participant must, as soon as practicable, provide such further information as is necessary to ensure that the participant does comply.*

#### Audit observation

Horizon's data management processes were examined. The list file as of 6 June 2023 and audit compliance report for the audit period of 1 March 2022 to 6 June 2023 were examined to confirm compliance.

#### Audit commentary

Any incorrect data is corrected upon discovery. I did not identify any examples where errors were not corrected as soon as practicable.

#### Audit outcome

Compliant

## 2.3. Removal or breakage of seals (Clause 48(1A) and 48(1B) of Schedule 10.7)

### Code reference

Clause 48(1A) and 48(1B) of Schedule 10.7

### Code related audit information

*If the distributor provides a load control signal to a load control switch in the metering installation, the distributor can remove or break a seal without authorisation from the MEP to bridge or un-bridge the load control device or load control switch – as long as the load control switch does not control a time block meter channel.*

*If the distributor removes or breaks a seal in this way, it must:*

- *ensure personnel are qualified to remove the seal and perform the permitted work and they replace the seal in accordance with the Code,*
- *replace the seal with its own seal,*
- *have a process for tracing the new seal to the personnel,*
- *notify the metering equipment provider and trader.*

### Audit observation

Processes for removal or breakage of seals were reviewed.

### Audit commentary

When fault work is required, the customer contacts their trader and the trader's contractors conduct the necessary work, which may involve bridging of load control switches. Horizon Services Limited is one of the contractors and may be requested to conduct this work, but it is not conducted as a distributor.

### Audit outcome

Compliant

## 2.4. Provision of information on dispute resolution scheme (Clause 11.30A)

### Code reference

Clause 11.30A

### Code related audit information

*A distributor must provide clear and prominent information about Utilities Disputes:*

- *on their website*
- *when responding to queries from consumers*
- *in directed outbound communications to consumers about electricity services and bills.*

*If there are a series of related communications between the distributor and consumer, the distributor needs to provide this information in at least one communication in that series.*

### Audit observation

I checked all relevant communication methods to ensure compliance is achieved.

### Audit commentary

The website contains a page with the Utilities Disputes contact details. This page is accessed from a link on the home page.

Outbound communications to consumers contain appropriate details. I checked three different types of communication to confirm this.

The IVR message was provided, and this contains appropriate information.

**Audit outcome**

Compliant

### 3. CREATION OF ICPS

#### 3.1. Distributors must create ICPs (Clause 11.4)

##### Code reference

*Clause 11.4*

##### Code related audit information

*The distributor must create an ICP identifier in accordance with Clause 1 of Schedule 11.1 for each ICP on the distributor's network. This includes an ICP identifier for the point of connection at which an embedded network connects to the distributor's network.*

##### Audit observation

The new connection process was examined in detail and is described in **section 3.2** below.

257 ICPs were created during the audit period. I checked the compliance of all ICPs created during 2023 by reviewing the NC1 spreadsheet, which is used to track all new connections.

There are no embedded networks on the Horizon network therefore there are not any LE ICPs.

##### Audit commentary

The process in place is robust and has good controls. The sample checked in **section 3.2** below confirms this.

##### Audit outcome

Compliant

#### 3.2. Participants may request distributors to create ICPs (Clause 11.5(3))

##### Code reference

*Clause 11.5(3)*

##### Code related audit information

*The distributor, within three business days of receiving a request for the creation of an ICP identifier for an ICP, must either create a new ICP identifier or advise the participant of the reasons it is unable to comply with the request.*

##### Audit observation

The new connection process was examined in detail. I checked the fields in the NC1 spreadsheet for all 100 ICPs created during 2023.

##### Audit commentary

The new connection process has not changed during the audit period. An “application for service” (NC1) is received from the electrician or the customer. No applications are received directly from traders. These are reviewed and if the network requires work to be done the ICP is not created until this is complete. The “new” status is not normally used. The “application for service” is sent to the trader to accept the nomination. Once Horizon has this approval, plus confirmation that payment has been made by the customer (if required) and notification has been received that the installation is ready to connect, the ICP is created. Once the ICP is electrically connected, a copy of the livening notification is provided to Horizon and the retailer.



Seven ICPs were not created within three business days, however this clause only applies to applications from participants and in all cases, applications for ICPs come from the customer or the customer's agent, therefore this clause does not apply.

**Audit outcome**

Compliant

**3.3. Provision of ICP Information to the registry (Clause 11.7)**

**Code reference**

*Clause 11.7*

**Code related audit information**

*The distributor must provide information about ICPs on its network in accordance with Schedule 11.1.*

**Audit observation**

The new connection process for populating all required registry fields was examined. The list file for all ICPs created and the audit compliance reporting for 1 March 2022 to 6 June 2023 were examined.

**Audit commentary**

The registry is updated directly for all ICPs. There were 232 electrically connected new connections. The audit compliance report found that all ICPs had initial electrical connection dates populated.

The audit compliance report is monitored weekly to identify missing initial electrical connection dates.

The accuracy of the information provided is detailed in **section 4.6**.

**Audit outcome**

Compliant

**3.4. Timeliness of Provision of ICP Information to the registry (Clause 7(2) of Schedule 11.1)**

**Code reference**

*Clause 7(2) of Schedule 11.1*

**Code related audit information**

*The distributor must provide information specified in Clauses 7(1)(a) to 7(1)(o) of Schedule 11.1 as soon as practicable and prior to electricity being traded at the ICP.*

**Audit observation**

The new connection process was examined. The registry list for 6 June 2023 and the registry compliance audit report for 1 March 2022 to 6 June 2023 were examined to determine the timeliness of the provision of ICP information for new connections.

**Audit commentary**

The audit compliance report did not identify any ICPs made "ready" after electrical connection.

**Audit outcome**

Compliant

### 3.5. Timeliness of Provision of Initial Electrical Connection Date (Clause 7(2A) of Schedule 11.1)

#### Code reference

Clause 7(2A) of Schedule 11.1

#### Code related audit information

*The distributor must provide the information specified in sub-clause (1)(p) to the registry no later than 10 business days after the date on which the ICP is initially energised.*

#### Audit observation

The registry list for 6 June 2023 and the audit compliance report for 1 March 2022 to 6 June 2023 were examined to determine the timeliness of the provision of ICP information for new connections.

#### Audit commentary

The approved livening agents are expected to provide Horizon with a copy of the livening notification post livening.

There were 232 initial electrical connection date updates in the event detail report. The audit compliance report identified nine (3.6%) late updates. I checked all nine and found:

- two were corrections to IECDs, where the original IECD was populated on time,
- three were the population of missing IECDs identified in the last audit, and
- four were late updates during this audit period; one due to annual leave, one due to an incorrect ICP in a livening sheet, one due to a late notification and one was a processing error.

Individual email addresses are used by administrators, which can cause issues during periods of leave. I recommend a generic email address is used by administrators.

Description	Recommendation	Audited party comment	Remedial action
Generic email inbox	Establish a generic inbox for all new connection correspondence, to ensure visibility of all issued during periods of leave.	A generic inbox has been established for new connection correspondence.  Some e-mails are still addressed to and responded by individuals. To manage this risk, shared access to individual inboxes has also been enabled to ensure visibility during periods of leave.	Cleared

The accuracy of these dates is detailed in **section 4.6**.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.5 With: Clause 7(2A) of Schedule 11.1  From: 01-Mar-22 To: 30-Jun-23	Seven late initial electrical connection date updates.  Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are rated as strong because the audit compliance report is checked weekly to identify missing IECDs. There are only two approved contractors, and the notification processes are robust.  There is no impact on settlement. The only potential impact is where a trader may wish to compare their active date to the IECD, so the impact is considered minor, leading to an audit risk rating of low.		
Actions taken to resolve the issue		Completion date	Remedial action status
The level of non-compliance is relatively low and reflects the strong controls that are in place to monitor and manage the timeliness and accuracy of initial electrical connection dates.  Since February 2023 a second staff member has been trained to manage registry information. Responsibility has been shared and coordinated via a centralised inbox and shared e-mails since May 2023.  Where issues are outside of our control, such as errors with paperwork received, we will continue to actively monitor and ensure information is corrected as soon as possible.		May 2023	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We will continue to monitor IECD on a weekly basis to ensure there is an ongoing high level of compliance.		Ongoing	

### 3.6. Connection of ICP that is not an NSP (Clause 11.17)

#### Code reference

Clause 11.17

#### Code related audit information

*A distributor must, when connecting an ICP that is not also an NSP, follow the electrical connection process set out in Clause 10.31.*

*The distributor must not connect an ICP (except for an ICP across which unmetered load is shared) unless a trader is recorded in the registry as accepting responsibility for the ICP.*

*In respect of ICPs across which unmetered load is shared, the distributor must not connect an ICP unless a trader is recorded in the registry as accepting responsibility for the shared unmetered load, and all traders that are responsible for an ICP on the shared unmetered load have been advised.*

#### **Audit observation**

The new connection process was examined in **section 3.2**.

The registry list for 6 June 2023 and audit compliance report for the audit period of 1 March 2022 to 6 June 2023 were examined to determine the timeliness of the provision of ICP information for new connections.

#### **Audit commentary**

Examination of the new connections process confirmed that the process includes a “trader responsibility” step.

The trader has accepted responsibility before the ICPs have been electrically connected.

#### **Audit outcome**

Compliant

### **3.7. Connection of ICP that is not an NSP (Clause 10.31)**

#### **Code reference**

*Clause 10.31*

#### **Code related audit information**

*A distributor must not connect an ICP that is not an NSP unless requested to do so by the trader trading at the ICP, or if there is only shared unmetered load at the ICP and each trader has been advised.*

#### **Audit observation**

The new connection process was examined in **section 3.2**.

I checked the NC1 records for all 68 ICPs electrically connected during 2023 to determine if the ICPs were connected at the request of the trader.

The registry list as of 6 June 2023 was reviewed to confirm that all “active” ICPs had a trader recorded.

#### **Audit commentary**

Horizon’s processes are robust in relation to this clause as an ICP will not be electrically connected without the agreement from the trader, who in turn has agreement with an MEP for the ICP. The list file confirmed that all ICPs at the “ready” status had a trader nominated. There are no ICPs without a proposed trader recorded in the registry.

The connection of streetlight circuits was discussed. All new streetlight circuits are expected to have an application and the ICP to which the lights will be connected should be recorded. Approval for the connection is sought from the council. Liveness dates of these circuits should be provided by the contractor to both Horizon and the council.

This process is not being followed. Streetlights are connected into the nearest pillar box with a separate fuse, and it appears that connection is occurring by Horizon without the permission of the reconciliation participant. This clause refers to connection of ICPs, and a streetlight point of connection is not considered an ICP, therefore compliance is achieved, but a recommendation is made that Horizon

strengthens this process in conjunction with the retailers and the councils. This recommendation was also made in the last audit, and progress has been made but the process is not fully in place yet, so the recommendation is repeated to ensure visibility.

Recommendation	Description	Audited party comment	Remedial action
Connection and electrical connection of streetlight circuits	Strengthen the process for new streetlight connections to ensure they are not connected or electrically connected without the process being followed and without all relevant parties being aware.	Horizon Networks is developing a separate process for new streetlight connection applications to ensure an ICP is allocated before the streetlights are connected or electrically connected.	Identified

#### Audit outcome

Compliant

### 3.8. Temporary electrical connection of ICP that is not an NSP (Clause 10.31A)

#### Code reference

Clause 10.31A

#### Code related audit information

*A distributor may only temporarily electrically connect an ICP that is not an NSP if requested by an MEP for a purpose set out in clause 10.31A(2), and the MEP:*

- *has been authorised to make the request by the trader responsible for the ICP; and*
- *the MEP has an arrangement with that trader to provide metering services.*

*If the ICP is only shared unmetered load, the distributor must advise the traders of the intention to temporarily connect the ICP unless:*

- *advising all traders would impose a material cost on the distributor, and*
- *in the distributor's reasonable opinion, the advice would not result in any material benefit to any of the traders.*

#### Audit observation

The new connection process was examined in **section 3.2**. The registry list for 6 June 2023 and the registry compliance audit report for 1 March 2022 to 6 June 2023 were examined to determine.

#### Audit commentary

Horizon has not identified any examples of temporary electrical connection, and none were identified in the list file or the audit compliance report.

#### Audit outcome

Compliant

### 3.9. Connection of NSP that is not point of connection to grid (Clause 10.30)

#### Code reference

Clause 10.30

#### Code related audit information

*A distributor must not connect an NSP on its network that is not a point of connection to the grid unless requested to do so by the reconciliation participant responsible for ensuring there is a metering installation for the point of connection.*

*The distributor must, within five business days of connecting the NSP that is not a point of connection to the grid, advise the reconciliation manager of the following in the prescribed form:*

- *the NSP that has been connected,*
- *the date of the connection,*
- *the participant identifier of the MEP for each metering installation for the NSP,*
- *the certification expiry date of each metering installation for the NSP.*

#### Audit observation

I checked whether Horizon had connected any NSPs during the audit period.

#### Audit commentary

Horizon has not connected any NSPs during the audit period.

#### Audit outcome

Compliant

### 3.10. Electrical connection of NSP that is not point of connection to grid (Clause 10.30A and 10.30B)

#### Code reference

Clause 10.30A and 10.30B

#### Code related audit information

*A distributor may only temporarily electrically connect an NSP that is not a point of connection to the grid if requested by an MEP for a purpose set out in clause 10.30A(3), and the MEP:*

- *has been authorised to make the request by the reconciliation participant responsible for the NSP; and*
- *the MEP has an arrangement with that reconciliation participant to provide metering services.*

*A distributor may only electrically connect an NSP if:*

- *each distributor connected to the NSP agrees,*
- *the trader responsible for delivery of submission information has requested the electrical connection,*
- *the metering installations for the NSP are certified and operational metering.*

#### Audit observation

Horizon has not created any new NSPs during the audit period.

#### Audit commentary

Horizon has not created any new NSPs during the audit period.

#### Audit outcome

Compliant

### 3.11. Definition of ICP identifier (Clause 1(1) Schedule 11.1)

#### Code reference

*Clause 1(1) Schedule 11.1*

#### Code related audit information

*Each ICP created by the distributor in accordance with Clause 11.4 must have a unique identifier, called the "ICP identifier", determined in accordance with the following format:*

*xxxxxxxxxxxccc where:*

- *xxxxxxxxxx is a numerical sequence provided by the distributor,*
- *xx is a code that ensures the ICP is unique (assigned by the Authority to the issuing distributor)*
- *ccc is a checksum generated according to the algorithm provided by the market administrator.*

#### Audit observation

The process for the creation of ICPs was examined.

#### Audit commentary

All ICPs are created in the appropriate format. The sample checked confirmed compliance.

#### Audit outcome

Compliant

### 3.12. Loss category (Clause 6 Schedule 11.1)

#### Code reference

*Clause 6 Schedule 11.1*

#### Code related audit information

*Each ICP must have a single loss category that is referenced to identify the associated loss factors.*

#### Audit observation

The list file was examined to confirm all "active" ICPs have a single loss category code.

#### Audit commentary

Each ICP only has a single loss category, which clearly identifies the relevant loss factor.

#### Audit outcome

Compliant

### 3.13. Management of "new" status (Clause 13 Schedule 11.1)

#### Code reference

*Clause 13 Schedule 11.1*

#### Code related audit information

*The ICP status of "New" must be managed by the distributor to indicate:*

- *the associated electrical installations are in the construction phase (Clause 13(a) of Schedule 11.1)*
- *the ICP is not ready for activation (Clause 13(b) of Schedule 11.1).*

#### **Audit observation**

The ICP creation process was reviewed. The registry list file as of 6 June 2023 was examined to determine compliance.

#### **Audit commentary**

Horizon does not normally use the “new” status for new connections. There are two “new” ICPs. Both were created at “ready” then changed to “new” when the new connections were cancelled.

#### **Audit outcome**

Compliant

### 3.14. Monitoring of “new” & “ready” statuses (Clause 15 Schedule 11.1)

#### **Code reference**

*Clause 15 Schedule 11.1*

#### **Code related audit information**

*If an ICP has had the status of “new” or has had the status of “ready” for 24 calendar months or more:*

- *the distributor must ask the trader who intends to trade at the ICP whether the ICP should continue to have that status (Clause 15(2)(a) of Schedule 11.1)*
- *the distributor must decommission the ICP if the trader advises that the ICP should not continue to have that status (Clause 15(2)(b) of Schedule 11.1).*

#### **Audit observation**

The process to monitor ICPs at “new” and “ready” status was reviewed. The registry list as of 6 June 2023 and audit compliance report for the audit period of 1 March 2022 to 6 June 2023 were examined to determine compliance.

#### **Audit commentary**

As mentioned in **section 3.13**, there are two ICPs at “new” and both were created more than 24 months ago. Horizon has corresponded with the traders for both ICPs, and they are awaiting requests to decommission. Horizon’s processes for monitoring ICPs at “new” or “ready” for more than 24 months are compliant.

#### **Audit outcome**

Compliant

### 3.15. Embedded generation loss category (Clause 7(6) Schedule 11.1)

#### **Code reference**

*Clause 7(6) Schedule 11.1*

#### **Code related audit information**

*If the ICP connects the distributor's network to an embedded generating station that has a capacity of 10 MW or more (clause 7(1)(f) of Schedule 11.1):*

- *The loss category code must be unique; and*



- *The distributor must provide the following to the reconciliation manager:*
  - o *the unique loss category code assigned to the ICP,*
  - o *the ICP identifier of the ICP,*
  - o *the NSP identifier of the NSP to which the ICP is connected,*
  - o *the plant name of the embedded generating station.*

#### **Audit observation**

The list file was examined to identify any embedded generators with a capacity greater than 10MW.

#### **Audit commentary**

There is one embedded generator with greater than 10MW on the Horizon network. This has a unique loss factor applied as required by the code.

#### **Audit outcome**

Compliant

### 3.16. Electrical connection of a point of connection (Clause 10.33A)

#### **Code reference**

*Clause 10.33A(4)*

#### **Code related audit information**

*No participant may electrically connect a point of connection or authorise the electrical connection of a point of connection, other than a reconciliation participant.*

#### **Audit observation**

Sub clause (4) states that no participant may electrically connect a point of connection without the permission of the reconciliation participant. The electrical connection of streetlight circuits, which are a point of connection, was examined.

#### **Audit commentary**

The connection of streetlight circuits was discussed. All new streetlight circuits are expected to have an application and the ICP to which the lights will be connected should be recorded. Approval for the connection is sought from the council. Liveness dates of these circuits should be provided by the contractor to both Horizon and the council.

This process is not being followed. Streetlights are connected into the nearest pillar box with a separate fuse, and it appears that approved contractors are electrically connecting without the permission of the reconciliation participant. Horizon is not conducting the electrical connection, but they are conducting the connection, as recorded in **section 3.7**.

#### **Audit outcome**

Compliant

### 3.17. Electrical disconnection of a point of connection (Clause 10.30C and 10.31C)

#### **Code reference**

*Clause 10.30C and 10.31C*

#### **Code related audit information**

*A distributor can only disconnect, or electrically disconnect an ICP on its network:*

- *if empowered to do so by legislation (including the Code)*
- *under its contract with the trader for that ICP or NSP*
- *under its contract with the consumer for that ICP*

#### **Audit observation**

The disconnection process was examined.

#### **Audit commentary**

Horizon will only undertake an electrical disconnection when a request is received from a trader, or for safety. In both instances Horizon will liaise with the relevant trader.

#### **Audit outcome**

Compliant

### 3.18. Meter bridging (Clause 10.33C)

#### **Code reference**

*Clause 10.33C*

#### **Code related audit information**

*A distributor may only electrically connect an ICP in a way that bypasses a meter that is in place (“bridging”) if the distributor has been authorised by the responsible trader.*

*The distributor can then only proceed with bridging the meter if, despite best endeavours:*

- *the MEP is unable to remotely electrically connect the ICP,*
- *the MEP cannot repair a fault with the meter due to safety concerns,*
- *the consumer will likely be without electricity for a period which would cause significant disadvantage to the consumer.*

*If the distributor bridges a meter, the distributor must notify the responsible trader within one business day and include the date of bridging in its advice.*

#### **Audit observation**

Processes for meter bridging were discussed.

#### **Audit commentary**

Horizon is not involved in the meter bridging process. This is conducted by MEPs or contractors to traders.

#### **Audit outcome**

Compliant

## 4. MAINTENANCE OF REGISTRY INFORMATION

### 4.1. Changes to registry information (Clause 8 Schedule 11.1)

#### Code reference

Clause 8 Schedule 11.1

#### Code related audit information

*If information held by the registry that relates to an ICP for which the distributor is responsible for changes, the distributor must provide notice to the registry of that change.*

*Notification must be given by the distributor within three business days after the change takes effect, unless the change is to the NSP identifier of the NSP to which the ICP is usually connected (other than a change that is the result of the commissioning or decommissioning of an NSP).*

*In those cases, notification must be given no later than eight business days after the change takes effect.*

*If the change to the NSP identifier is for more than 10 business days, the notification must be provided no later than the 13<sup>th</sup> business day and be backdated to the date the change took effect.*

*In the case of decommissioning an ICP, notification must be given by the later of three business days after the registry manager has advised the distributor that the ICP is ready to be decommissioned, or three business days after the distributor has decommissioned the ICP.*

#### Audit observation

The registry list file, audit compliance reporting and the audit compliance report for 1 March 2022 to 6 June 2023 were reviewed to determine compliance. A diverse sample of a minimum of 20 (or all if there were less than 20 examples) backdated events by event type were reviewed to determine the reasons for the late updates.

The management of NSP changes was examined.

#### Audit commentary

Horizon updates the registry directly. Their IT platform does not interface to the registry. The audit compliance report was analysed to identify backdated event updates, and found:

Update	Date	Late	% Compliant	Average days
Address	2020	180	52.25%	32.51
	2022	21	95.95%	25.24
	<b>Mar 22 to Feb 23</b>	<b>9</b>	<b>92.97</b>	<b>31.52</b>
	<b>Mar 23 to June 23</b>	<b>4</b>	<b>85.19</b>	<b>58.37</b>
Status	2020	23	34.29%	15.63
	2022	16	65.22%	7.02
	<b>Mar 22 to Feb 23</b>	<b>10</b>	<b>69.7</b>	<b>9.09</b>

Update	Date	Late	% Compliant	Average days
	<b>Mar 23 to June 23</b>	<b>3</b>	<b>0.00</b>	<b>9.33</b>
Network (excl. new connection & Distributed Generation)	2020	22	N/A	N/A
	2022	9	N/A	N/A
	<b>2023</b>	<b>0</b>	<b>N/A</b>	<b>N/A</b>
Distributed Generation	2020	50	19.35%	90.19
	2022	50	7.41%	99.44
	<b>Mar 22 to Feb 23</b>	<b>84</b>	<b>19.23</b>	<b>106.66</b>
	<b>Mar 23 to June 23</b>	<b>38</b>	<b>24</b>	<b>98.8</b>
NSP changes	2020	1	N/A	N/A
	2022	0	N/A	N/A
	<b>2023</b>	<b>1</b>	<b>N/A</b>	<b>N/A</b>

### Address events

The sample checked of these found that in most cases event date was not changed, causing the events to be appear backdated.

### Pricing Changes

The Code now allows price codes to be backdated as long as the trader and the distributor agree.

Horizon has a master spreadsheet for price category code changes, which was reviewed during the audit. Horizon's policy is to backdate to the beginning of the most recent month that has not been billed. There are some exceptions to this policy to allow changes in exceptional circumstances, such as a major upgrade or downgrade.

I checked a sample of 13 and confirmed compliance in all cases.

I recommend the master spreadsheet has two additional columns added to assist with future analysis. The fields are:

1. Date of agreement with the trader.
2. Registry update date.

Description	Recommendation	Audited party comment	Remedial action
Price code changes	Add fields of agreement date and registry update date to the master price code change spreadsheet.	Agree. This has been implemented. ]	Cleared

### Status Events

The decommissioning process is discussed in **section 4.11**. I checked all 13 examples where the trader had changed the status to “ready for decommissioning”, but the status was not changed to “decommissioned” within the allowable timeframe.

During the previous audit, I recommended monitoring the registry notification files to identify changes to “ready for decommissioning”, then investigating these as soon as practicable in order to keep the timeframe as short as possible. I’ve repeated this recommendation with two changes. A registry list file of all ICPs at “ready for decommissioning” could be run each week, and I also recommend in **section 4.11** that all 46 ICPs at “ready for decommissioning” are investigated to see if they can be decommissioned.

Recommendation	Description	Audited party comment	Remedial action
Monitoring ready for decommissioning status	Monitor a registry list file to identify ICPs changed to “ready for decommissioning”.	Agree. We are developing a process to integrate this recommendation into our weekly reporting.	Identified

The findings from my check of all 13 late updates are as follows:

- nine were due to late notification from the field,
- three were due to waiting for the trader to update the ICP to “ready for decommissioning” but when they were finally updated Horizon did not pick this up within three business days of the trader’s update, making these non-compliant; the process to check for these updates is manual hence more than three business days can elapse before these are identified, and
- one had a complicated sequence of events, where a new ICP was created for the permanent supply and the builder’s temporary supply was then decommissioned.

### Network events

The network events evaluated excluded those relating to the population of the initial electrical connection dates (discussed in **section 3.5**), NSP changes (discussed below) and the initial network events relating to the creation of ICPs.

The audit compliance report included a great many distributed generation updates which are measured separately below. With these excluded, there were no “other” late network events recorded.

### Distributed Generation

The distributed generation process is described in **section 4.6**. The sample checked found that there was no notification received from the electrician of these being electrically connected. Horizon monitor the EIEP1 file for distributed generation connections where they have none recorded, they also monitor the audit compliance report for examples of a profile change to PV1 by the trader. They then contact the applicant to request the COC. These delays cause Horizon to update the registry late.

### NSP Changes

The audit compliance report identified one late NSP change, which was a correction following a new connection.

**Audit outcome**

Non-compliant

Non-compliance	Description		
Audit Ref: 4.1 With: Clause 8 Schedule 11.1  From: 01-Mar-22 To: 30-Jun-23	Updates to registry backdated greater than three business days of the event.  Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The audit controls are rated as strong, because Horizon monitors the audit compliance report weekly to identify potential discrepancies. Many of the late updates are caused by parties Horizon has no control over.  The audit risk rating is low as there is only a minor impact on participants with late updates.		
Actions taken to resolve the issue		Completion date	Remedial action status

<p>There are strong controls in place to monitor and manage the timeliness and accuracy of information populated on the registry.</p> <p>In terms of the individual updates reviewed:</p> <p><b>Address updates:</b> The audit has identified a processing issue where address updates were being incorrectly backdated. We have updated our processes and expect the number of backdated address events to significantly reduce.</p> <p>Action was taken on <b>24 August 2023</b>.</p> <p><b>Status Events:</b> This is where the status is being updated to 'decommissioned'. As the ICPs are already 'inactive' there is no impact on the accuracy of market settlement.</p> <p>Differing retailer processes have made this obligation challenging to comply with, as sometimes the status is set to 'ready for decommissioning' prior to receiving the request to physically decommissioning and at other times it is received after physical decommissioning has occurred.</p> <p>We have implemented a twice weekly report to identify ICPs where the status has been set to ready for decommissioning, so we can follow-up on ICPs that have not yet been physically decommissioning, and those that were waiting for the status change in order to make the update.</p> <p>The report was implemented on <b>11 September 2023</b>.</p> <p>Once the report has been bedded in, we will review the timeliness and effectiveness of this report to determine if further improvements can be made.</p> <p><b>Distributed Generation:</b> Horizon Networks expect an ongoing level of non-compliance due to the prevalence of unnotified distributed generation, and lack of incentive for generators to provide timely information to the EDB.</p> <p>Until generator obligations are enforced, there is likely to be an ongoing level of non-compliance that is outside of our control.</p> <p>Horizon Networks supports the auditors in formally raising this as an "issue" within the audit report and looks forward to the Electricity Authority responding to this issue.</p> <p><b>NSP changes</b> – the cause of the non-compliance was human error. Our controls were effective in detecting the error so it could be corrected promptly.</p>	<p>23 August 2023</p>	<p>Identified</p>
<p><b>Preventative actions taken to ensure no further issues will occur</b></p>	<p><b>Completion date</b></p>	

<p><b>Address updates:</b> Processes have been updated from 24 August 2023.</p> <p><b>Status Events:</b> New report to improve management of ICPs at status of “ready for decommissioning” implemented from 11 September 2023.</p>	<p>24 August 2023</p>	
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#### 4.2. Notice of NSP for each ICP (Clauses 7(1),(4) and (5) Schedule 11.1)

##### Code reference

*Clauses 7(1),(4) and (5) Schedule 11.1*

##### Code related audit information

*The distributor must notify the registry of the NSP identifier of the NSP to which the ICP is usually connected under Clause 7(1)(b) of Schedule 11.1.*

*If the distributor cannot identify the NSP that an ICP is connected to, the distributor must nominate the NSP that the distributor thinks is most likely to be connected to the ICP, taking into account the flow of electricity within its network, and the ICP is deemed to be connected to the nominated NSP.*

##### Audit observation

The process to determine NSP assignment was discussed. The audit compliance reporting did not identify any ICPs with a potential NSP discrepancy.

##### Audit commentary

The NSP for each ICP is notified to the registry as part of the new connections process. Part of the engineering approval process is to ensure the correct transformer, and therefore NSP is identified for any particular ICP.

##### Audit outcome

Compliant

#### 4.3. Customer queries about ICP (Clause 11.31)

##### Code reference

*Clause 11.31*

##### Code related audit information

*The distributor must advise a customer (or any person authorised by the customer) or embedded generator of the customer or embedded generator's ICP identifier within three business days after receiving a request for that information.*

##### Audit observation

The management of customer queries was discussed to confirm policy.

##### Audit commentary

Horizon confirms that they have not had any direct requests for ICPs however should this occur and there is no confusion regarding the installation address, then the ICP would be provided immediately. In some situations, these requests would be referred to the relevant retailer.

##### Audit outcome



Compliant

#### 4.4. ICP location address (Clause 2 Schedule 11.1)

##### Code reference

Clause 2 Schedule 11.1

##### Code related audit information

Each ICP identifier must have a location address that allows the ICP to be readily located.

##### Audit observation

The process to manage address accuracy was examined and the audit compliance report was examined. I checked the audit compliance report as of 6 June 2023 to confirm compliance.

##### Audit commentary

All addresses are expected to have GPS coordinates to enable them to be readily located. I found 1,733 “active” ICPs do not have GPS co-ordinates, however there was sufficient other information to enable them to be readily located. The audit compliance report identified two ICPs with duplicate addresses. ICPs 1000006786BPA38 and 1000006787BP67D both had 123 Ford St as the address. ICP 1000006787BP67D has now been changed to 123A Ford St. Both ICPs had the same GPS coordinates and were therefore not able to be “readily located”.

The previous audit found two ICPs with addresses that were not readily locatable. These are both now resolved with information in the property name field.

##### Audit outcome

Non-compliant

Non-compliance	Description	
Audit Ref: 4.4 With: Clause 2 of Schedule 11.1  From: 15-Dec-22 To: 24-Aug-23	Two “active” ICPs with duplicate addresses.  Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1	
Audit risk rating	Rationale for audit risk rating	
<b>Low</b>	The controls are rated as strong as the reporting in place provides good visibility of this, so these are addressed.  The audit risk rating is low as this has a minor impact on traders because addresses are relied on for meter reading and disconnection purposes.	
Actions taken to resolve the issue	Completion date	Remedial action status

Horizon Networks has good controls in place and duplicate addresses are monitored in our weekly reports. The two addresses identified were corrected on 24 August 2023.	24 August 2023	Cleared
<b>Preventative actions taken to ensure no further issues will occur</b>	<b>Completion date</b>	
We monitor duplicate address information on a weekly basis.  Most address updates are triggered by a retailer request. We have implemented an additional step in this process to check if an address update would create a duplicate address in the registry. This will help reduce the chance of a duplicate address being entered in the registry.	24 August 2023	

#### 4.5. Electrically disconnecting an ICP (Clause 3 Schedule 11.1)

##### Code reference

Clause 3 Schedule 11.1

##### Code related audit information

*Each ICP created after 7 October 2002 must be able to be electrically disconnected without electrically disconnecting another ICP, except for ICPs that are the point of connection between a network and an embedded network, or ICPs that represent the consumption calculated by the difference between the total consumption for the embedded network and all other ICPs on the embedded network.*

##### Audit observation

I checked Horizon's policy and documentation in relation to this clause.

##### Audit commentary

The AFS and the livening notification both contain details of the network isolation point, which confirms compliance with this clause. Shared service mains are allowed, but individual isolation points are still required.

##### Audit outcome

Compliant

#### 4.6. Distributors to Provide ICP Information to the Registry (Clause 7(1) Schedule 11.1)

##### Code reference

Clause 7(1) Schedule 11.1

##### Code related audit information

*For each ICP on the distributor's network, the distributor must provide the following information to the registry manager:*

- *the location address of the ICP identifier (Clause 7(1)(a) of Schedule 11.1)*
- *the NSP identifier of the NSP to which the ICP is usually connected (Clause 7(1)(b) of Schedule 11.1)*

- *the installation type code assigned to the ICP (Clause 7(1)(c) of Schedule 11.1)*
- *the reconciliation type code assigned to the ICP (Clause 7(1)(d) of Schedule 11.1)*
- *the loss category code and loss factors for each loss category code assigned to the ICP (Clause 7(1)(e) of Schedule 11.1)*
- *if the ICP connects the distributor's network to an embedded generating station that has a capacity of 10MW or more (Clause 7(1)(f) of Schedule 11.1):*
  - a) *the unique loss category code assigned to the ICP,*
  - b) *the ICP identifier of the ICP,*
  - c) *the NSP identifier of the NSP to which the ICP is connected,*
  - d) *the plant name of the embedded generating station,*
- *the price category code assigned to the ICP, which may be a placeholder price category code only if the distributor is unable to assign the actual price category code because the capacity or volume information required to assign the actual price category code cannot be determined before electricity is traded at the ICP (Clause 7(1)(g) of Schedule 11.1)*
- *if the price category code requires a value for the capacity of the ICP, the chargeable capacity of the ICP as follows (Clause 7(1)(h) of Schedule 11.1):*
  - a) *a placeholder chargeable capacity if the distributor is unable to determine the actual chargeable capacity,*
  - b) *a blank chargeable capacity if the capacity value can be determined for a billing period from metering information collected for that billing period,*
  - c) *if there is more than one capacity value at the ICP, and at least one, but not all, of those capacity values can be determined for a billing period from the metering information collected for that billing period-*
    - (i) no capacity value recorded in the registry field for the chargeable capacity; and*
    - (ii) either the term "POA" or all other capacity values, recorded in the registry field in which the distributor installation details are also recorded,*
  - d) *if there is more than one capacity value at the ICP, and none of those capacity values can be determined for a billing period from the metering information collected for that billing period-*
    - (i) the annual capacity value recorded in the registry field for the chargeable capacity; and*
    - (ii) either the term "POA" or all other capacity values, recorded in the registry field in which the distributor installation details are also recorded,*
  - e) *the actual chargeable capacity of the ICP in any other case,*
- *the distributor installation details for the ICP determined by the price category code assigned to the ICP (if any), which may be placeholder distributor installation details only if the distributor is unable to assign the actual distributor installation details because the capacity or volume information required to assign the actual distributor installation details cannot be determined before electricity is traded at the ICP (Clause 7(1)(i) of Schedule 11.1),*
- *the participant identifier of the first trader who has entered into an arrangement to sell or purchase electricity at the ICP (only if the information is provided by the first trader) (Clause 7(1)(j) of Schedule 11.1),*
- *the status of the ICP (Clause 7(1)(k) of Schedule 11.1),*
- *designation of the ICP as "Dedicated" if the ICP is located in a balancing area that has more than one NSP located within it, and the ICP will be supplied only from the NSP advised under Clause 7(1)(b) of Schedule 11.1, or the ICP is a point of connection between a network and an embedded network (Clause 7(1)(l) of Schedule 11.1),*

- if unmetered load, other than distributed unmetered load, is associated with the ICP, the type and capacity in kW of unmetered load (Clause 7(1)(m) of Schedule 11.1),
- if shared unmetered load is associated with the ICP, a list of the ICP identifiers of the ICPs that are associated with the unmetered load (Clause 7(1)(n) of Schedule 11.1),
- if the ICP is capable of generating into the distributors network (Clause 7(1)(o) of Schedule 11.1):
  - the nameplate capacity of the generator, and
  - the fuel type,
- the initial electrical connection date of the ICP (Clause 7(1)(p) of Schedule 11.1).

### Audit observation

The management of registry information was reviewed. The registry list as of 6 June 2023 and audit compliance report for the audit period of 1 March 2022 to 6 June 2023 were reviewed to determine compliance. A typical sample of data discrepancies were checked.

### Audit commentary

Registry data validation processes are discussed in **section 2.1**. Horizon updates the registry manually. All ICP information was checked and confirmed compliant unless discussed below.

### Initial Electrical Connection Date

232 ICPs have had the initial electrical connection date updated between 1 March 2022 to 6 June 2023. The audit compliance reporting identified three ICPs with date inconsistencies between the initial electrical connection date, the active date and the meter certification date. The table below shows the three ICPs, and in all cases, Horizon's date is confirmed by notification from the field.

ICP	Meter certification date	Initial Electrical Connection date	First Active date	Comments
1000028492BP391	10 October 2022	7 October 2022	10 October 2022	The high-risk database states 10 October 2022 but the living notification has 7 October 2022, and Horizon is entitled to rely on the living notification.
1000028520BP8A2	31 August 2022	26 August 2022	29 August 2022	It appears the metering was installed on 26 August 2022 and the installation was lived on that date, meaning the trader may have the incorrect active date.
1000028642BP4D4	10 May 2023	15 May 2023	15 May 2023	The high-risk database states 10 May 2023 but the living notification has 15 May 2023, and Horizon is entitled to rely on the living notification.

The timeliness of provision of information on initial electrical connection date is discussed in **section 3.5**.

### Distributed Generation

Horizon requires an application for all distributed generation. All applications have to be approved before allowing distributed generation to be connected to their network, but Horizon is reliant on customers following the process. Once advised by the applicant that distributed generation is installed these are updated on the registry.

Horizon monitors the EIEP1 files to identify distributed generation where none is expected, and they monitor the audit compliance reports weekly to identify ICPs where the trader has added the PV1 profile. They then contact the applicant to request the COC. Once these details have been received distributed generation will be recorded on the registry.

Examination of the list file found 557 “active” ICPs with generation capacity recorded by Horizon. All had the correct installation type, generation capacity and fuel type populated. The timeliness of these updates is discussed in **section 4.1**.

A check of the list file found 51 ICPs where distributed generation is installed but the trader has not updated the profile from RPS to PV1. 37 of these relate to Mercury Energy who is known to have an issue with recording the correct profile in the registry. The 14 remaining ICPs were examined, and it was confirmed that Horizon has been advised that the distributed generation is installed. Four of the 14 do not have appropriate metering with an injection channel. These issues are all non-compliance for the relevant traders.

The audit compliance report identified 14 ICPs where the profile indicates distributed generation is present, but Horizon has none recorded. These were examined and found:

- four now have DG recorded,
- ICP 1000027498BP860 was identified by Horizon as having injection in the EIEP1 file; it was not livened by an approved contractor and Horizon has therefore disconnected the solar installation,
- two were identified by Horizon as having injection in the EIEP1 file and information has been requested from the installer, and
- no application had been received in seven instances; it is likely that these ICPs do not have generation installed.

I checked the distributed generation information populated on the registry against the paperwork provided for a sample of ten ICPs and confirmed that all had the correct generation capacity, fuel type and effective event date recorded.

The number of unauthorised and unknown distributed generation connections is growing. I have repeated a recommendation made several years ago to the Electricity Authority that they change the Code to ensure distributed generation installations are not installed without metering and without all parties being aware of the installation. The additional benefit of this change will be a reduction in the risk of electrocution due to potentially unsafe installations which may not be inspected.

Issue	Description	Remedial action
Distributed generation	There are a large number of unauthorised distributed generation installations being connected.	<p>I recommend the Code is changed as follows:</p> <p>The distributor approval should only be provided once the following criteria have been met:</p> <ul style="list-style-type: none"> <li>• the proposed installation is of an approved type,</li> <li>• a trader has agreed to the installation of distributed generation, and</li> <li>• import/export metering is installed, or the trader has provided evidence the ICP is on the gifting register.</li> </ul> <p>Once approval has been provided to install the generation installation, it cannot be electrically connected without permission from the trader and the distributor, and this permission cannot be more than three business days old.</p> <p>The gifting register needs to be published and available to all participants.</p>

### Unmetered Load

Horizon does not allow any new unmetered load connections on its network.

Horizon uses the recommended format for updating the registry. I compared the daily kWh figures to the traders' daily unmetered kWh figures and found that all matched.

### Audit outcome

Compliant

## 4.7. Provision of information to registry after the trading of electricity at the ICP commences (Clause 7(3) Schedule 11.1)

### Code reference

*Clause 7(3) Schedule 11.1*

### Code related audit information

*The distributor must provide the following information to the registry no later than 10 business days after the trading of electricity at the ICP commences:*

- *the actual price category code assigned to the ICP (Clause 7(3)(a) of Schedule 11.1)*
- *the actual chargeable capacity of the ICP determined by the price category code assigned to the ICP (if any) (Clause 7(3)(b) of Schedule 11.1)*
- *the actual distributor installation details of the ICP determined by the price category code assigned to the ICP (if any) (Clause 7(3)(c) of Schedule 11.1).*

### Audit observation

The new connection process was examined in detail. The registry list and audit compliance report for 1 March 2022 to 6 June 2023 were reviewed to determine compliance.

### Audit commentary

The price and loss category are determined by the application details prior to electrical connection. Placeholder values are not used. No ICPs were identified in the audit compliance report with potential price changes relating to post electrical connection.

### Audit outcome

Compliant

## 4.8. GPS coordinates (Clause 7(8) and (9) Schedule 11.1)

### Code reference

*Clause 7(8) and (9) Schedule 11.1*

### Code related audit information

*If a distributor populates the GPS coordinates (optional), it must meet the NZTM2000 standard in a format specified by the Authority.*

### Audit observation

I checked the list file for ICPs with GPS coordinates recorded.

### Audit commentary

Most ICPs have GPS co-ordinates. This is provided by the MEP. The coordinates are in NZTM format. I confirmed this by checking a typical example of 15 ICPs using Mobile Roads.

### Audit outcome

Compliant

## 4.9. Management of “ready” status (Clause 14 Schedule 11.1)

### Code reference

*Clause 14 Schedule 11.1*

### Code related audit information

*The ICP status of “ready” must be managed by the distributor and indicates that:*

- *the associated electrical installations are ready for connecting to the electricity supply (Clause 14(1)(a) of Schedule 11.1); or*
- *the ICP is ready for activation by a trader (Clause 14(1)(b) of Schedule 11.1)*

*Before an ICP is given the “ready” status in accordance with Clause 14(1) of Schedule 11.1, the distributor must:*

- *identify the trader that has taken responsibility for the ICP (Clause 14(2)(a) of Schedule 11.1)*
- *ensure the ICP has a single price category (Clause 14(2)(b) of Schedule 11.1).*

### Audit observation

Horizon’s current process is to create the majority of ICPs at the “ready” status.

The registry list showed five ICPs currently at “ready” status, none have been at “ready” status for more than two years. This is discussed further in **section 3.14**.

All ICPs at “ready” status had a single price category assigned and proposed trader identified.

### Audit commentary

The status of “ready” is used once the ICP is ready for connection. The new connection process has a step to confirm the trader has taken responsibility. All ICPs only have one price category code.

### Audit outcome

Compliant

#### 4.10. Management of “distributor” status (Clause 16 Schedule 11.1)

##### Code reference

*Clause 16 Schedule 11.1*

##### Code related audit information

*The ICP status of “distributor” must be managed by the distributor and indicates that the ICP record represents a shared unmetered load installation or the point of connection between an embedded network and its parent network.*

##### Audit observation

I checked the list file to confirm compliance.

##### Audit commentary

There are no ICPs with the distributor only status. Previously I noted that there were reported to be some potential private lights identified by Whakatane District Council. Horizon have received no information from the council, and I have been unable to locate any records to confirm that any exist.

##### Audit outcome

Compliant

#### 4.11. Management of “decommissioned” status (Clause 20 Schedule 11.1)

##### Code reference

*Clause 20 Schedule 11.1*

##### Code related audit information

*The ICP status of “decommissioned” must be managed by the distributor and indicates that the ICP is permanently removed from future switching and reconciliation processes (Clause 20(1) of Schedule 11.1).*

*Decommissioning only occurs when:*

- *electrical installations associated with the ICP are physically removed (Clause 20(2)(a) of Schedule 11.1); or*
- *there is a change in the allocation of electrical loads between ICPs with the effect of making the ICP obsolete (Clause 20(2)(b) of Schedule 11.1); or*
- *in the case of a distributor only ICP for an embedded network, the embedded network no longer exists (Clause 20(2)(c) of Schedule 11.1).*

##### Audit observation

The registry list as of 6 June 2023 was reviewed to identify ICPs at the “decommissioned” or “ready for decommissioning” status.

A diverse sample of five “decommissioned” ICPs was examined. I also examined 20 ICPs at “ready for decommissioning” status.

##### Audit commentary

The decommissioning process is managed by Horizon and includes a physical verification that service main, cables and meters are actually removed. The sample checked confirmed that the ICPs were at the correct status of decommissioned.



The list file found 46 ICPs are at “ready for decommissioning”. I checked 20 examples and found that no request has been received for 18 ICPs, and two are now decommissioned. I recommend Horizon regularly monitors a list file of ICPs at “ready for decommissioning” and if they have no correspondence from a trader, they should investigate with a view to having the ICPs decommissioned as soon as practicable.

Description	Recommendation	Audited party comment	Remedial action
Checking ICPs at ready for decommissioning	Run a weekly list file of all ICPs at “ready for decommissioning” to ensure they are decommissioned as soon as practicable.	Agree. We are developing a process to integrate this recommendation into our weekly processes.	Identified

**Audit outcome**

Compliant

**4.12. Maintenance of price category codes (Clause 23 Schedule 11.1)**

**Code reference**

*Clause 23 Schedule 11.1*

**Code related audit information**

*The distributor must keep up to date the table in the registry of the price category codes that may be assigned to ICPs on each distributor's network by entering in the table any new price category codes.*

*Each entry must specify the date on which each price category code takes effect, which must not be earlier than two months after the date the code is entered in the table.*

*A price category code takes effect on the specified date.*

**Audit observation**

I checked the price category code table for any new or changed codes during the audit period.

**Audit commentary**

There were four new price category codes which were effective from 1 April 2022 and the update to the table was conducted on 6 January 2022, which achieves compliance.

**Audit outcome**

Compliant

## 5. CREATION AND MAINTENANCE OF LOSS FACTORS

### 5.1. Updating table of loss category codes (Clause 21 Schedule 11.1)

#### Code reference

*Clause 21 Schedule 11.1*

#### Code related audit information

*The distributor must keep the registry up to date with the loss category codes that may be assigned to ICPs on the distributor's network.*

*The distributor must specify the date on which each loss category code takes effect.*

*A loss category code takes effect on the specified date.*

#### Audit observation

I checked the loss category code table for any new codes during the audit period.

#### Audit commentary

No new loss factors were created during the audit period.

#### Audit outcome

Compliant

### 5.2. Updating loss factors (Clause 22 Schedule 11.1)

#### Code reference

*Clause 22 Schedule 11.1*

#### Code related audit information

*Each loss category code must have a maximum of two loss factors per calendar month. Each loss factor must cover a range of trading periods within that month so that all trading periods have a single applicable loss factor.*

*If the distributor wishes to replace an existing loss factor on the table on the registry, the distributor must enter the replaced loss factor on the table in the registry.*

#### Audit observation

I checked the loss category code table for any changed factors during the audit period.

#### Audit commentary

Each ICP only has a single loss category, which clearly identifies the relevant loss factor.

Loss factors were changed with an effective date of 1 April 2023. The notification was made two months prior.

#### Audit outcome

Compliant

## 6. CREATION AND MAINTENANCE OF NSPS (INCLUDING DECOMMISSIONING OF NSPS AND TRANSFER OF ICPS)

### 6.1. Creation and decommissioning of NSPs (Clause 11.8 and Clause 25 Schedule 11.1)

#### Code reference

*Clause 11.8 and Clause 25 Schedule 11.1*

#### Code related audit information

*If the distributor is creating or decommissioning an NSP that is an interconnection point between 2 local networks, the distributor must give written notice to the reconciliation manager of the creation or decommissioning.*

*If the embedded network owner is creating or decommissioning an NSP that is an interconnection point between 2 embedded networks, the embedded network owner must give written notice to the reconciliation manager of the creation or decommissioning.*

*If the distributor is creating or decommissioning an NSP that is a point of connection between an embedded network and another network, the distributor must give written notice to the reconciliation manager of the creation or decommissioning.*

*The notice provided to the reconciliation manager must be provided no later than 30 days prior to the intended date of creation or decommissioning.*

*If the intended date of creation or decommissioning changes the distributor must provide an updated notice as soon as possible.*

*If the distributor wishes to change the record in the registry of an ICP that is not recorded as being usually connected to an NSP in the distributor's network, so that the ICP is recorded as being usually connected to an NSP in the distributor's network (a "transfer"), the distributor must:*

- *give written notice to the reconciliation manager,*
- *give written notice to the Authority,*
- *give written notice to each affected reconciliation participant,*
- *comply with Schedule 11.2.*

#### Audit observation

The NSP table on the registry was examined. No NSPs were created or decommissioned by Horizon during the audit period.

#### Audit commentary

The NSP table on the registry was examined. No NSPs were created or decommissioned by Horizon during the audit period.

#### Audit outcome

Compliant

## 6.2. Provision of NSP information (Clause 26(1) and (2) Schedule 11.1)

### Code reference

Clause 26(1) and (2) Schedule 11.1

### Code related audit information

*If the distributor wishes to create an NSP or transfer an ICP as described above, the distributor must request that the reconciliation manager create a unique NSP identifier for the relevant NSP.*

*The request must be made at least 10 business days before the NSP is electrically connected, in respect of an NSP, that is an interconnection point between two local networks. In all other cases, the request must be made at least one calendar month before the NSP is electrically connected or the ICP is transferred.*

### Audit observation

The NSP table on the registry was examined. No NSPs were created or decommissioned by Horizon during the audit period.

### Audit commentary

The NSP table on the registry was examined. No NSPs were created or decommissioned by Horizon during the audit period.

### Audit outcome

Compliant

## 6.3. Notice of balancing areas (Clause 24(1) and Clause 26(3) Schedule 11.1)

### Code reference

Clause 24(1) and Clause 26(3) Schedule 11.1

### Code related audit information

*If a participant has notified the creation of an NSP on the distributor's network, the distributor must notify the reconciliation manager of the following:*

- *if the NSP is to be located in a new balancing area, all relevant details necessary for the new balancing area to be created and notification that the NSP to be created is to be assigned to the new balancing area,*
- *in all other cases, notification of the balancing area in which the NSP is located.*

### Audit observation

The NSP table on the registry was examined. No NSPs were created or decommissioned by Horizon during the audit period.

### Audit commentary

The NSP table on the registry was examined. No NSPs were created or decommissioned by Horizon during the audit period.

### Audit outcome

Compliant

#### 6.4. Notice of supporting embedded network NSP information (Clause 26(4) Schedule 11.1)

##### Code reference

Clause 26(4) Schedule 11.1

##### Code related audit information

*If a participant notifies the creation of an NSP, or the transfer of an ICP to an NSP that is a point of connection between a network and an embedded network owned by the distributor, the distributor must notify the reconciliation manager at least one calendar month before the creation or transfer of:*

- *the network on which the NSP will be located after the creation or transfer (Clause 26(4)(a))*
- *the ICP identifier for the ICP that connects the network and the embedded network (Clause 26(4)(b))*
- *the date on which the creation or transfer will take effect (Clause 26(4)(c)).*

##### Audit observation

Horizon has not created any embedded networks.

##### Audit commentary

Horizon has not created any embedded networks.

##### Audit outcome

Compliant

#### 6.5. Maintenance of balancing area information (Clause 24(2) and (3) Schedule 11.1)

##### Code reference

Clause 24(2) and (3) Schedule 11.1

##### Code related audit information

*The distributor must notify the reconciliation manager of any change to balancing areas associated with an NSP supplying the distributor's network. The notification must specify the date and trading period from which the change takes effect and be given no later than three business days after the change takes effect.*

##### Audit observation

The NSP table on the registry was examined. No balancing areas were changed during the audit period.

##### Audit commentary

The NSP table on the registry was examined. No balancing areas were changed during the audit period.

##### Audit outcome

Compliant

## 6.6. Notice when an ICP becomes an NSP (Clause 27 Schedule 11.1)

### Code reference

Clause 27 Schedule 11.1

### Code related audit information

*If a transfer of an ICP results in an ICP becoming an NSP at which an embedded network connects to a network, or in an ICP becoming an NSP that is an interconnection point, in respect of the distributor's network, the distributor must notify any trader trading at the ICP of the transfer at least one calendar month before the transfer.*

### Audit observation

The NSP table was reviewed.

### Audit commentary

No existing ICPs became NSPs during the audit period.

### Audit outcome

Compliant

## 6.7. Notification of transfer of ICPs (Clause 1 to 4 Schedule 11.2)

### Code reference

Clause 1 to 4 Schedule 11.2

### Code related audit information

*If the distributor wishes to transfer an ICP, the distributor must notify the market administrator in the prescribed form, no later than three business days before the transfer takes effect.*

### Audit observation

The NSP table was reviewed.

### Audit commentary

Horizon has not initiated the transfer of any ICPs during the audit period.

### Audit outcome

Compliant

## 6.8. Responsibility for metering information for NSP that is not a POC to the grid (Clause 10.25(1) and 10.25(3))

### Code reference

Clause 10.25(1) and 10.25(3)

### Code related audit information

*A network owner must, for each NSP that is not a point of connection to the grid for which it is responsible, ensure that:*

- *there is one or more metering installations (Clause 10.25(1)(a)); and*
- *the electricity is conveyed and quantified in accordance with the Code (Clause 10.25(1)(b))*

*For each NSP covered in 10.25(1) the network owner must, no later than 20 business days after a metering installation at the NSP is recertified advise the reconciliation manager of:*

- *the reconciliation participant for the NSP*
- *the participant identifier of the metering equipment provider for the metering installation*
- *the certification expiry date of the metering installation*

#### **Audit observation**

The NSP supply point table was examined, and evidence of all updates made to the Reconciliation Manager via the portal.

#### **Audit commentary**

Horizon is not responsible for any metering installations in accordance with this clause.

#### **Audit outcome**

Compliant

6.9. Responsibility for metering information when creating an NSP that is not a POC to the grid (Clause 10.25(2))

#### **Code reference**

*Clause 10.25(2)*

#### **Code related audit information**

*If the network owner proposes the creation of a new NSP which is not a point of connection to the grid it must:*

- *assume responsibility for being the metering equipment provider (Clause 10.25(2)(a)(i)); or*
- *contract with a metering equipment provider to be the MEP (Clause 10.25(2)(a)(ii)); and*
- *no later than 20 business days after identifying the MEP advise the reconciliation manager in the prescribed form of:*
  - a) *the reconciliation participant for the NSP (Clause 10.25(2)(b)(i)); and*
  - b) *the MEP for the NSP (Clause 10.25(2)(b)(ii)); and*
  - c) *no later than 20 business days after the data of certification of each metering installation, advise the reconciliation participant for the NSP of the certification expiry date (Clause 10.25(2)(c)).*

#### **Audit observation**

The NSP supply point table was reviewed.

#### **Audit commentary**

Horizon have not connected any new NSPs during the audit period.

#### **Audit outcome**

Compliant

## 6.10. Obligations concerning change in network owner (Clause 29 Schedule 11.1)

### Code reference

*Clause 29 Schedule 11.1*

### Code related audit information

*If a network owner acquires all or part of a network, the network owner must notify:*

- *the previous network owner (Clause 29(1)(a) of Schedule 11.1)*
- *the reconciliation manager (Clause 29(1)(b) of Schedule 11.1)*
- *the market administrator (Clause 29(1)(c) of Schedule 11.1)*
- *every reconciliation participant who trades at an ICP connected to the acquired network or part of the network acquired (Clause 29(1)(d) of Schedule 11.1)*

*at least one calendar month notification is required before the acquisition (Clause 29(2) of Schedule 11.1).*

*The notification must specify the ICPs to be amended to reflect the acquisition and the effective date of the acquisition (Clause 29(3) of Schedule 11.1).*

### Audit observation

The NSP supply point table was reviewed.

### Audit commentary

Horizon have not connected any new NSPs during the audit period.

### Audit outcome

Compliant

## 6.11. Change of MEP for embedded network gate meter (Clause 10.22(1)(b))

### Code reference

*Clause 10.22(1)(b)*

### Code related audit information

*If the MEP for an ICP which is also an NSP changes the participant responsible for the provision of the metering installation under Clause 10.25, the participant must notify the reconciliation manager and the gaining MEP.*

### Audit observation

The NSP supply point table was reviewed.

### Audit commentary

Horizon has not initiated the transfer of any ICPs during the audit period.

### Audit outcome

Compliant



## 6.12. Confirmation of consent for transfer of ICPs (Clauses 5 and 8 Schedule 11.2)

### Code reference

*Clauses 5 and 8 Schedule 11.2*

### Code related audit information

*The distributor must give the market administrator confirmation that it has received written consent to the proposed transfer from:*

- *the distributor whose network is associated with the NSP to which the ICP is recorded as being connected immediately before the notification (unless the notification relates to the creation of an embedded network) (Clause 5(a) of Schedule 11.2)*
- *every trader trading at an ICP being supplied from the NSP to which the notification relates (Clause 5(b) of Schedule 11.2).*

*The notification must include any information requested by the Authority (Clause 8 of Schedule 11.2).*

### Audit observation

The NSP supply point table was reviewed.

### Audit commentary

Horizon has not initiated the transfer of any ICPs during the audit period.

### Audit outcome

Compliant

## 6.13. Transfer of ICPs for embedded network (Clause 6 Schedule 11.2)

### Code reference

*Clause 6 Schedule 11.2*

### Code related audit information

*If the notification relates to an embedded network, it must relate to every ICP on the embedded network.*

### Audit observation

The NSP supply point table was reviewed.

### Audit commentary

Horizon has not initiated the transfer of any ICPs during the audit period.

### Audit outcome

Compliant

## 7. MAINTENANCE OF SHARED UNMETERED LOAD

### 7.1. Notification of shared unmetered load ICP list (Clause 11.14(2) and (4))

#### Code reference

*Clause 11.14(2) and (4)*

#### Code related audit information

*The distributor must notify the registry and each trader responsible for the ICPs across which the unmetered load is shared of the ICP identifiers of those ICPs.*

*A distributor who receives notification from a trader relating to a change under Clause 11.14(3) must notify the registry and each trader responsible for any of the ICPs across which the unmetered load is shared of the addition or omission of the ICP.*

#### Audit observation

Horizon does not have any known shared unmetered load. The streetlight audits in the Horizon network were reviewed.

#### Audit commentary

Horizon does not have any known shared unmetered load.

#### Audit outcome

Compliant

### 7.2. Changes to shared unmetered load (Clause 11.14(5))

#### Code reference

*Clause 11.14(5)*

#### Code related audit information

*If the distributor becomes aware of a change to the capacity of a shared unmetered load ICP or if a shared unmetered load ICP is decommissioned, it must notify all traders affected by that change or decommissioning as soon as practicable after the change or decommissioning.*

#### Audit observation

The registry list file was reviewed to identify any ICPs with shared unmetered load connected.

#### Audit commentary

Horizon does not have any shared unmetered load.

#### Audit outcome

Compliant

## 8. CALCULATION OF LOSS FACTORS

### 8.1. Creation of loss factors (Clause 11.2)

#### Code reference

Clause 11.2

#### Code related audit information

A participant must take all practicable steps to ensure that information that the participant is required to provide to any person under Part 11 is:

- a) complete and accurate
- b) not misleading or deceptive
- c) not likely to mislead or deceive.

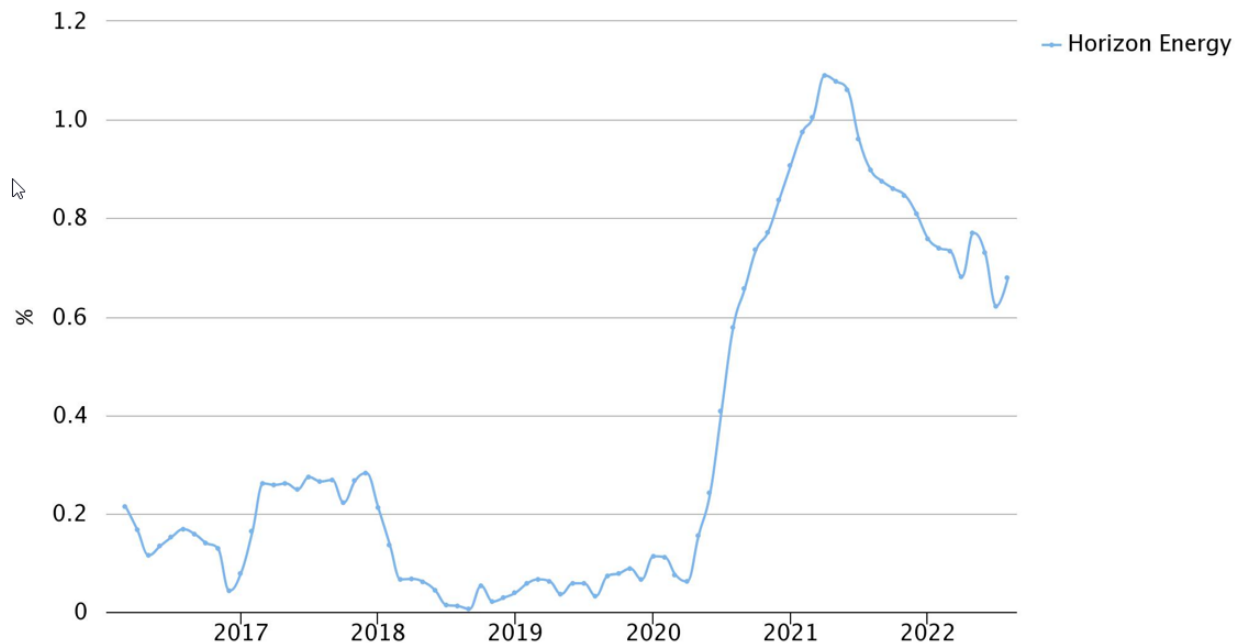
#### Audit observation

I have assessed Horizon's process and compliance against the guideline's recommended thresholds.

I reviewed the documentation relating to the loss factor review methodology.

#### Audit commentary

The UFE graph below was downloaded from the Electricity Authority's EMI website. It indicates that losses for Horizon are running within the +/- 1% threshold:



Horizon's loss factors are based on reconciliation losses, and they regularly monitor the differences between their loss factors and reconciliation losses. Horizon is in the process of resolving an incorrect loss category code and therefore loss factor used by a participant for the Aniwhenua interconnection point. This has affected the reported volumes injected into the Horizon network and therefore the loss calculations and explains the peak starting in 2020. Despite this, Horizon's process is compliant.

#### Audit outcome

Compliant

## CONCLUSION

This audit found three non-compliances and makes five recommendations. There have been further improvements to controls since the last audit, and this has led to a reduction in non-compliances from eight to three.

I've made five recommendations for improvement, mostly related to additional monitoring to assist with registry population timeliness.

One of the recommendations is regarding the connection of new streetlights, where Horizon's expected process doesn't seem to be followed. I recommend this process is improved to ensure all relevant parties are aware that lights are connected.

I have repeated a recommendation made several years ago that the Authority changes the Code to ensure distributed generation installations are not installed without metering and without all parties being aware of the installation. The additional benefit of this change will be a reduction in the risk of electrocution due to potentially unsafe installations which may not be inspected, and which could be hazardous.

The next audit frequency table indicates that the next audit be due in 24 months. I have considered this result in conjunction Horizon's responses, and I recommend that the next audit be in 36 months to reflect the high level of compliance and to recognise the willingness to address the issues raised.

## PARTICIPANT RESPONSE

Horizon Networks thanks Veritek for the completion of this audit, and the clear and efficient way Steve Woods explained the areas of non-compliance, recommendations, and issue to raise with the Electricity Authority. The audit was a beneficial and positive experience.

Horizon Networks is a small, trust owned EDB. The number of transactions handled on an annual basis does not justify development of specialist systems and processes.

We have effective preventative and detective controls in place that ensures that the Electricity registry has correct and timely records, so that switching, and reconciliation processes are accurate.

Based on the ongoing effectiveness of controls and continued improvement Horizon Networks requests an audit period of at least 24 months, and consideration of a longer period if the next audit demonstrates that the controls in place remain effective and the Electricity registry continues to have correct and timely records, so that switching, and reconciliation processes remain accurate.