

**ELECTRICITY INDUSTRY PARTICIPATION CODE  
DISTRIBUTOR AUDIT REPORT**

For

**ALPINE ENERGY LIMITED**

Prepared by: Tara Gannon

Date audit commenced: 30 October 2019

Date audit report completed: 25 November 2019

Audit report due date: 4 December 2019

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## TABLE OF CONTENTS

Executive summary .....	4
Audit summary .....	5
Non-compliances .....	5
Recommendations .....	6
Issues .....	6
1. Administrative.....	7
1.1. Exemptions from Obligations to Comply with Code (Section 11) .....	7
1.2. Structure of Organisation .....	7
1.3. Persons involved in this audit.....	8
1.4. Use of contractors (Clause 11.2A) .....	8
1.5. Supplier list .....	9
1.6. Hardware and Software .....	9
1.7. Breaches or Breach Allegations.....	9
1.8. ICP and NSP Data .....	9
1.9. Authorisation Received .....	10
1.10. Scope of Audit .....	10
1.11. Summary of previous audit .....	11
2. Operational Infrastructure .....	13
2.1. Requirement to provide complete and accurate information (Clause 11.2(1) and 10.6(1)) ..	13
2.2. Requirement to correct errors (Clause 11.2(2) and 10.6(2)) .....	16
3. Creation of ICPs .....	18
3.1. Distributors must create ICPs (Clause 11.4) .....	18
3.2. Participants may request distributors to create ICPs (Clause 11.5(3)) .....	18
3.3. Provision of ICP Information to the registry manager (Clause 11.7) .....	19
3.4. Timeliness of Provision of ICP Information to the registry manager (Clause 7(2) of Schedule 11.1) .....	19
3.5. Timeliness of Provision of Initial Electrical Connection Date (Clause 7(2A) of Schedule 11.1) .....	20
3.6. Connection of ICP that is not an NSP (Clause 11.17).....	21
3.7. Connection of ICP that is not an NSP (Clause 10.31).....	22
3.8. Temporary electrical connection of ICP that is not an NSP (Clause 10.31A) .....	22
3.9. Connection of NSP that is not point of connection to grid (Clause 10.30) .....	24
3.10. Temporary electrical connection of NSP that is not point of connection to grid (Clause 10.30(A)) .....	25
3.11. Definition of ICP identifier (Clause 1(1) Schedule 11.1) .....	25
3.12. Loss category (Clause 6 Schedule 11.1).....	26
3.13. Management of “new” status (Clause 13 Schedule 11.1).....	26
3.14. Monitoring of “new” & “ready” statuses (Clause 15 Schedule 11.1).....	27
3.15. Embedded generation loss category (Clause 7(6) Schedule 11.1).....	28
3.16. Electrical connection of a point of connection (Clause 10.33A) .....	28
4. Maintenance of registry information.....	29
4.1. Changes to registry information (Clause 8 Schedule 11.1) .....	29
4.2. Notice of NSP for each ICP (Clauses 7(1),(4) and (5) Schedule 11.1) .....	31
4.3. Customer queries about ICP (Clause 11.31).....	33

4.4.	ICP location address (Clause 2 Schedule 11.1).....	34
4.5.	Electrically disconnecting an ICP (Clause 3 Schedule 11.1).....	34
4.6.	Distributors to Provide ICP Information to the Registry manager (Clause 7(1) Schedule 11.1) .....	34
4.7.	Provision of information to registry after the trading of electricity at the ICP commences (Clause 7(3) Schedule 11.1).....	40
4.8.	GPS coordinates (Clause 7(8) and (9) Schedule 11.1).....	41
4.9.	Management of “ready” status (Clause 14 Schedule 11.1).....	42
4.10.	Management of “distributor” status (Clause 16 Schedule 11.1).....	42
4.11.	Management of “decommissioned” status (Clause 20 Schedule 11.1).....	43
4.12.	Maintenance of price category codes (Clause 23 Schedule 11.1).....	45
5.	Creation and maintenance of loss factors .....	46
5.1.	Updating table of loss category codes (Clause 21 Schedule 11.1).....	46
5.2.	Updating loss factors (Clause 22 Schedule 11.1) .....	46
6.	Creation and maintenance of NSPs (including decommissioning of NSPs and transfer of ICPs).....	47
6.1.	Creation and decommissioning of NSPs (Clause 11.8 and Clause 25 Schedule 11.1).....	47
6.2.	Provision of NSP information (Clause 26(1) and (2) Schedule 11.1).....	47
6.3.	Notice of balancing areas (Clause 24(1) and Clause 26(3) Schedule 11.1) .....	48
6.4.	Notice of supporting embedded network NSP information (Clause 26(4) Schedule 11.1) ....	48
6.5.	Maintenance of balancing area information (Clause 24(2) and (3) Schedule 11.1) .....	49
6.6.	Notice when an ICP becomes an NSP (Clause 27 Schedule 11.1) .....	49
6.7.	Notification of transfer of ICPs (Clause 1 to 4 Schedule 11.2) .....	49
6.8.	Responsibility for metering information for NSP that is not a POC to the grid (Clause 10.25(1) and 10.25(3)) .....	50
6.9.	Responsibility for metering information when creating an NSP that is not a POC to the grid (Clause 10.25(2)) .....	50
6.10.	Obligations concerning change in network owner (Clause 29 Schedule 11.1) .....	51
6.11.	Change of MEP for embedded network gate meter (Clause 10.22(1)(b)) .....	51
6.12.	Confirmation of consent for transfer of ICPs (Clauses 5 and 8 Schedule 11.2) .....	52
6.13.	Transfer of ICPs for embedded network (Clause 6 Schedule 11.2).....	52
7.	Maintenance of shared unmetered load .....	53
7.1.	Notification of shared unmetered load ICP list (Clause 11.14(2) and (4)) .....	53
7.2.	Changes to shared unmetered load (Clause 11.14(5)).....	53
8.	Calculation of loss factors .....	54
8.1.	Creation of loss factors (Clause 11.2).....	54
	Conclusion .....	57
	Participant response .....	58

## EXECUTIVE SUMMARY

This Distributor audit was conducted at the request of **Alpine Energy Ltd (Alpine Energy)** to encompass the Electricity Industry Participation Code requirement for an audit, in accordance with clause 11.10 of part 11.

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

Alpine Energy has good validation processes in place. Field services jobs are monitored closely to ensure that paperwork is returned, and the returned paperwork is carefully checked to ensure that work has been completed as expected and the ICP database and registry are updated accurately.

The key issues requiring resolution are expected to be resolved by early 2020.

- Loss factors are currently under review, and Alpine Energy intends to provide revised loss factors effective from 1 April 2020.
- Alpine Energy continues to have difficulty confirming some initial electrical connection dates in Timaru, because separate contractors must be used for the network and metering connections and the work is not always able to be completed on the same day. This can cause temporary network connections for reasons other than meter testing, and late initial electrical connection dates. Smartco will change their contractor to a provider who is qualified to complete network and metering connections from 01/01/20, which will resolve this issue by allowing network and metering connections to consistently be completed at the same time.
- Planned GIS enhancements will make it easier to review NSP assignment and dedicated NSP status for historic ICPs.

The audit found nine non-compliances and makes four recommendations. The audit risk rating is 15, indicating that the next audit should be completed in 12 months. Taking into account that:

- Most data accuracy issues identified during the audit were cleared immediately
- The only issue with a risk rating above two (loss factor review) is expected to be resolved in the next three months; and
- that Alpine Energy intends to resolve the issues identified

I recommend that the next audit should be completed in 16 months, on 4 April 2021.

The matters raised are set out in the table below.

## AUDIT SUMMARY

### NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Requirement to provide complete and accurate information	2.1	11.2(1) and 10.6(1)	Some information was not accurate.	Moderate	Low	2	Investigating
Timeliness of Provision of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	16 ICPs which became active during the audit period had late initial electrical connection date updates.	Strong	Low	1	Identified
Temporary electrical connection of ICP that is not an NSP	3.8	10.31A	Temporary electrical connection conducted by Alpine Energy for a purpose other than testing metering.	Strong	Low	1	Identified
Changes to registry information	4.1	8 Schedule 11.1	13 late address updates. 53 late network updates. 27 late pricing updates. Three late status updates.	Moderate	Low	2	Investigating
Notice of NSP for each ICP	4.2	7(1),(4) and (5) Schedule 11.1	Two ICPs temporarily had an incorrect NSP recorded.	Moderate	Low	2	Cleared
Distributors to Provide ICP Information to the Registry manager	4.6	7(1)(o)&(p) Schedule 11.1	Some information was not accurate.	Moderate	Low	2	Identified
Management of "decommissioned" status	4.11	20 Schedule 11.1	ICP 0001890253AL261 has a status reason code of 2 (Installation Dismantled) applied but should have had	Strong	Low	1	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			1 (Setup in error) applied.  ICP 0002252075ALB2E has been decommissioned, but has a status of ready for decommissioning recorded on the registry.				
Creation of loss factors	8.1	11.2	Loss factors are not accurate in relation to reconciliation losses.	Moderate	Medium	4	Identified
Future Risk Rating						15	

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	Description
Requirement to provide complete and accurate information	2.1	Registry validation	Identify and check instances where trader or MEP information is inconsistent with distributor information.
Monitoring of “new” & “ready” statuses	3.14	Monitoring of “new” & “ready” statuses	Keep records to confirm that traders have been contacted about ICPs at “new” or “ready” status for over 24 months.
Notice of NSP for each ICP	4.2	NSP mapping	Check of NSP mapping to be carried out periodically.
Distributors to Provide ICP Information to the Registry manager	4.6	Distributor unmetered load details	Update the unmetered load details to include the wattage, on hours and description where this is known and not included in the existing description.

## ISSUES

Subject	Section	Issue	Description
		Nil	

## 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

The Electricity Authority website was checked to determine whether Alpine Energy has any Code exemptions in place.

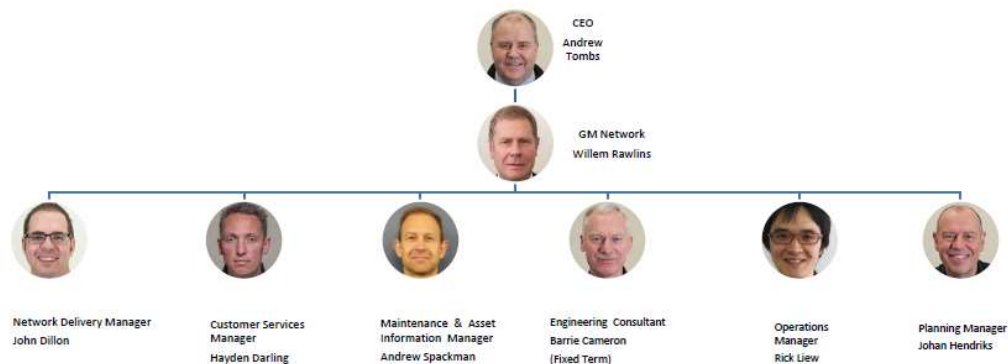
#### Audit commentary

Review of exemptions on the Electricity Authority website confirmed that there are no exemptions in place for Alpine Energy.

### 1.2. Structure of Organisation

## Network: Leadership Team

	Current Position
	Vacant Position (currently approved)
	Parental Leave Cover
	Secondment
	Fixed-Term / Contractors / Casual



### 1.3. Persons involved in this audit

Auditor:

**Tara Gannon**

**Veritek Limited**

**Electricity Authority Approved Auditor**

Personnel assisting in this audit were:

Name	Title
Hayden Darling	Customer Services Manager
Peter Bennett	Metering Officer
Tarryn Butcher	Commercial and Regulatory Analyst
Tony Heron	Infrastructure and Operations Team Leader

### 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 contractors fulfillment 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

Alpine Energy provided the list below of sub-contractors authorised to perform electrical connection activities on their network.

#### Audit commentary

- John Hardie - independent contractor
- Net Con Ltd

Alpine Energy ceased using Al Hurst as a contractor on 10/06/19.



### 1.5. Supplier list

Alpine Energy has provided the list of sub-contractors authorised to perform livening activities on their network in **section 1.4**.

### 1.6. Hardware and Software

Alpine Energy uses the following systems:

- Microsoft Access database and VB application for the ICP database, which is used to maintain registry information;
- Microsoft SQL Server and VB.Net application for the G.E.M.A. GIS; and
- AXOS for billing.

Access to the databases is restricted through network access permissions, and access to the network is restricted using logins and passwords.

The ICP database and GIS are fully backed up every night, with incremental backups every 15 minutes. The GIS is backed up as part of Alpine Energy's virtual systems and the ICP database is backed up to a physical server in a separate location.

### 1.7. Breaches or Breach Allegations

Alpine Energy has not had any breach allegations recorded by the Electricity Authority during the audit period.

### 1.8. ICP and NSP Data

Alpine Energy has responsibility for the NSPs in the table below. There have been no changes to the NSPs during the audit period.

Distrib	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	No of ICPs
ALPE	ABY0111	ALBURY			CENTRALALPEG	G	1/01/2012	1622
ALPE	BPD1101	Bells Pond			CENTRALALPEG	G	1/01/2012	619
ALPE	STU0111	STUDHOLME			CENTRALALPEG	G	1/01/2012	3226
ALPE	TIM0111	TIMARU			CENTRALALPEG	G	1/01/2012	17969
ALPE	TKA0331	TEKAPO A			TKA0331ALPEG	G	1/05/2008	936
ALPE	TMK0331	TEMUKA			CENTRALALPEG	G	1/01/2012	6796
ALPE	TWZ0331	TWIZEL			TWZ0331ALPEG	G	1/05/2008	1574

There are also two embedded networks connected to Alpine Energy's network. There have been no changes to the NSPs during the audit period.

Distrib	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date
MOPO	MMP0111	MACKENZIE PARK	TWZ0331	ALPE	MMP0111MOPOE	E	1/05/2008
MOPO	MMT0111	MANUKA TERRACE	TWZ0331	ALPE	MMT0111MOPOE	E	1/05/2008

A summary of Alpine Energy's ICPs by status is shown in the table below:

Status	Number of ICPs (2019)	Number of ICPs (2018)	Number of ICPs (2017)	Number of ICPs (2016)
New (999,0)	0	0	3	4
Ready (0,0)	38	36	61	75
Active (2,0)	32,742	32,576	32,299	32,101
Distributor (888,0)	2	2	2	2
Inactive – new connection in progress (1,12)	19	26	21	30
Inactive – electrically disconnected vacant property (1,4)	502	499	524	581
Inactive – electrically disconnected remotely by AMI meter (1,7)	79	55	39	1
Inactive – electrically disconnected at pole fuse (1,8)	12	9	6	2
Inactive – electrically disconnected due to meter disconnected (1,9)	0	0	1	0
Inactive – electrically disconnected at meter box fuse (1,10)	1	0	0	0
Inactive – electrically disconnected at meter box switch (1,11)	1	0	0	0
Inactive – electrically disconnected ready for decommissioning (1,6)	2	14	53	54
Inactive – reconciled elsewhere (1,5)	0	0	0	0
Decommissioned (3)	2,528	2,441	2,226	2,221

## 1.9. Authorisation Received

A letter of authorisation was provided.

## 1.10. Scope of Audit

This Distributor audit was performed at the request of **Alpine Energy Ltd (Alpine Energy)**, to encompass the Electricity Industry Participation Code requirement for an audit, in accordance with clause 11.10 of part 11.

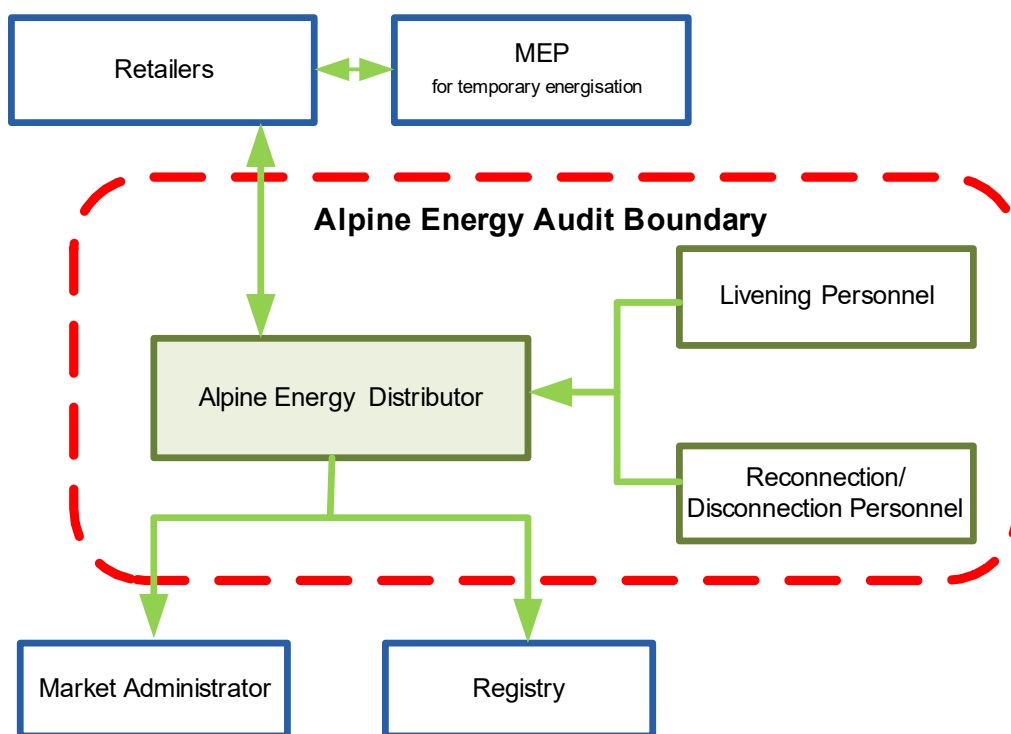
The audit was conducted in accordance with the Guideline for Distributor Audits V7.2, which was produced by the Electricity Authority.

The audit was carried out at Alpine Energy's premises in Timaru, on 30 October 2019.

The table below shows the tasks under clause 11.10(4) of Part 11, which Alpine Energy is responsible for. There are no other agents who assist with these tasks:

Functions Requiring Audit Under Clause 11.10(4) of Part 11	Contractors Involved in Performance of Tasks
The creation of ICP identifiers for ICPs.	Nil
The provision of ICP information to the registry and the maintenance of that information.	
The creation and maintenance of loss factors.	

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



#### 1.11. Summary of previous audit

Alpine Energy provided a copy of their previous audit conducted in December 2018 by Steve Woods of Veritek Limited. The audit recorded seven non-compliances and made two recommendations. The current status of the non-compliances and recommendations is listed below.

Subject	Section	Clause	Non-compliance	Status
Provide complete and accurate information	2.1	11.2(1) and 10.6(1)	Information on the registry not complete and accurate.	Still existing

Subject	Section	Clause	Non-compliance	Status
Timeliness of Provision of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	Late updating of the initial electrical connection date for two ICPs.	Still existing
Temporary electrical connection	3.8	10.31A	Temporary electrical connection conducted by Alpine Energy for a purpose other than testing metering.	Still existing
Changes to registry information	4.1	8 Schedule 11.1	Registry event updates backdated greater than three days.	Still existing
Notice of NSP for each ICP	4.2	7(1),(4) and (5) Schedule 11.1	Incorrect NSP for two ICPs. One ICP incorrectly recorded as non-dedicated.	Still existing, cleared during the audit
Provide ICP Information to the Registry manager	4.6	7(1)(o)&(p) Schedule 11.1	Two ICPs with distributed generation details missing.	Still existing
Loss factors	8.1	11.2	Loss factors are not accurate in relation to reconciliation losses.	Still existing, but a loss factor review is well underway

Subject	Section	Recommendation	Description	Status
Changes to registry information	4.1	Regarding Clause 8 Schedule 11.1	Change registry file to ensure default event dates are not used. This is mainly relevant for solar generation details.	Cleared, a date can be selected for distributed generation events within the ICP database.
Notice of NSP for each ICP	4.2	Regarding Clause 7(1),(4) and (5) Schedule 11.1	Check for of NSP mapping be carried out periodically.	To be implemented once GIS enhancements are complete

## 2. OPERATIONAL INFRASTRUCTURE

### 2.1. Requirement to provide complete and accurate information (Clause 11.2(1) and 10.6(1))

#### Code reference

*Clause 11.2(1) and 10.6(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 Parts 10 or 11 is:*

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

#### Audit observation

I walked through the process to ensure that registry information is complete, accurate and not misleading or deceptive, including viewing reports used to resolve discrepancies.

The registry list file as at 30/08/19 was examined to confirm compliance.

#### Audit commentary

##### Registry synchronisation

ICP information is maintained in the ICP database. When data maintained by the distributor on the registry is updated in the ICP database, the update is automatically sent to the registry.

Acknowledgement files are imported into the database, and reports are run to identify any failed updates each morning and at 3pm. Issues are investigated and corrected.

Notification files are reviewed daily to identify status changes such as a retailer moving a new connection to “active” status, or an existing ICP to “ready for decommissioning” status. These changes are provided to the metering officer, who follows up paperwork for new connections, and checks and follows up applications for decommissioning. The ICP database and registry are updated as necessary.

Updates to metering details for new connections are reviewed twice weekly.

##### Registry and data validation

The ICP notifications database is used to check the data held in Alpine Energy’s systems against the registry information daily. Discrepancies are identified and resolved.

All open contractor jobs are checked monthly, to confirm whether they have been completed. Paperwork is followed up if necessary so that the ICP database and registry can be updated.

There are no regular checks to identify trader or MEP information which is inconsistent with distributor information. Inconsistencies could indicate that distributor information requires review or update, such as:

- addition of trader unmetered load details, where no distributor unmetered load is recorded;
- addition of a trader profile which is used for distributed generation (e.g. PV1 or EG1), where no distributor generation is recorded; and
- addition of meters with flow direction I, where no distributor generation is recorded.

I recommend that Alpine Energy consider adding these checks, and follow up any discrepancies identified.

Recommendation	Description	Audited party comment	Remedial action
Registry validation	Identify and check instances where trader or MEP information is inconsistent with distributor information.	With the staff changes to the registry co-ordinator role we will have some ground to make up including adding additional checks and balances going forward from all parties.	Investigating

There were some examples recorded where “not all practicable steps” were taken to ensure information accuracy:

- ICP 0004610016AL6ED had a backdated update to remove unmetered load details of “Weighbridge - lights only”, but should have been updated to reflect that standard unmetered load was connected for a light and power outlet, which are very rarely used (**section 4.6**);
- three ICPs have incorrect initial electrical connection dates populated (**section 4.6**):

ICP	Earliest active date	Meter certification date	Initial electrical connection date	Correct initial electrical connection date
0004282423ALD60	04/03/19	04/03/19	13/02/19	04/03/19
0009800107ALA72	1/04/1999	1/04/1999	4/10/2002	1/04/1999 or blank
0004610016AL6ED	1/04/1999	1/04/1999	4/10/2002	1/04/1999 or blank

- ICP 0001890253AL261 had a status reason code of 2 (Installation Dismantled) applied but should have had 1 (Setup in error) applied (**section 4.11**); and
- ICP 0002252075ALB2E has been decommissioned but has a status of “ready for decommissioning” recorded on the registry (**section 4.11**).

## Event dates

Event dates should reflect the date from which the attribute values for the event apply.

Event dates are set within the ICP database, and transferred to the registry with the updated value for the affected fields:

Event type	Event date setting processes
Address events	Addresses are held within the site details in the ICP database, and updates are sent effective from the connection date.
Network events	Unmetered load details are held within the site details in the ICP database, and updates are sent effective from the connection date.  Other network information is held within the network details in the ICP database, and an effective date can be entered for each change to GXP details, initial electrical connection date, dedicated NSP, installation type and/or generation information.
Pricing events	An effective date is recorded against each load group change, and this is applied as the effective date for any pricing changes.

Event type	Event date setting processes
Status events	Status events have a job date, which is applied as the effective date for the update.

Review of the event detail report for 01/12/18 to 30/08/19 found six of the 184 network events populating the initial electrical connection date for new connections did not have an effective date which matched the initial electrical connection date. I found that the incorrect event dates were caused by the initial electrical connection date update replacing the previous network event, because the effective date had been entered as the date the customer signed the application in error.

Two NSP corrections also did not have correct event dates applied. The update date was applied instead of the date the correction should have applied from:

ICP	Old NSP	New NSP	Effective date of change	Correct effective date of change
0006664556AL006	STU0111	BPD1101	07/10/19	17/06/16
0007243868AL3C6	TKA0331	ABY0111	10/10/19	03/08/18

### Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 2.1</p> <p>With: Clauses 11.2(1) and 10.6(1)</p> <p>From: 06-Feb-19</p> <p>To: 10-Oct-19</p>	<p>ICP 0004610016AL6ED had a backdated update to remove unmetered load details of "Weighbridge - lights only", but should have been updated to reflect that standard unmetered load was connected for a light and power outlet, which are very rarely used.</p> <p>ICPs 0004282423ALD60, 0009800107ALA72, and 0004610016AL6ED have incorrect initial electrical connection dates populated.</p> <p>ICP 0001890253AL261 has a status reason code of 2 (Installation Dismantled) applied but should have had 1 (Setup in error) applied.</p> <p>ICP 0002252075ALB2E has been decommissioned, but has a status of ready for decommissioning recorded on the registry.</p> <p>Eight network updates had incorrect event dates recorded.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Twice</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>

Audit risk rating	Rationale for audit risk rating		
Low	The controls are rated as moderate. A small number of incorrect event dates were recorded due to data processing errors, and unmetered load was incorrectly removed for one ICP.		
	The audit risk rating is low.		
	<ul style="list-style-type: none"><li>The unmetered load associated with 0004610016AL6ED is expected to be very low.</li></ul>		
	<ul style="list-style-type: none"><li>The correct status code was applied for 0001890253AL261, only the status reason was incorrect. ICP 0002252075ALB2E was inactive and had physically been decommissioned.</li></ul>		
	<ul style="list-style-type: none"><li>The incorrect initial electrical connection dates and event dates have no direct impact on reconciliation.</li></ul>		
	<ul style="list-style-type: none"><li>The incorrect event date for 0006664556AL006’s NSP change has no impact on reconciliation because the NSPs are within the same balancing area.</li></ul>		
	<ul style="list-style-type: none"><li>The incorrect event date for 0007243868AL3C6 has a minor impact on reconciliation because the NSPs were not within the same balancing area, but the load for the ICP (a public toilet) is expected to be low.</li></ul>		
Actions taken to resolve the issue		Completion date	Remedial action status
I have requested that our GIS team create a ICP mapping line trace to compare to the ICP database info and compare any discrepancies		WIP	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
It’s hard to remove all errors when the data entry is a manual entry, however a higher awareness to possible errors as well as periodic testing will ensure a vast improvement.		1/6/20	

## 2.2. Requirement to correct errors (Clause 11.2(2) and 10.6(2))

### Code reference

Clause 11.2(2) and 10.6(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

Alpine Energy's data management processes were examined. The registry list file as at 30/08/19 was examined to confirm compliance.



#### **Audit commentary**

Alpine Energy have processes in place to identify and resolve registry discrepancies as described in **section 2.1**. I saw evidence of incorrect information being corrected during the audit and most corrections were conducted as soon as practicable.

#### **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.

15 new connection applications of the 225 ICPs created since 01/12/18 were checked from the point of application through to when the ICP was created to confirm the process and controls.

##### Audit commentary

Alpine Energy creates ICPs as required by clause 1 of schedule 11.1. All relevant points of connection have an ICP.

The distributor is responsible for creating the ICP for the point of connection for an embedded network to its parent network. There have been no new embedded networks created during the audit period.

##### 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. 20 new connection applications of the 225 ICPs created since 01/12/18 were checked to determine compliance.

ICP requests are usually made by the customer's agent. If the request is not made by a trader this rule does not apply.

##### Audit commentary

Alpine Energy receives new connection requests from customers' agents, normally electricians, who provide a completed Network Application form on which a retailer is nominated.

Network engineers evaluate each application to ensure network capacity is available at the requested location. The application is then returned to the new connections personnel where an ICP identifier is created in the ICP database, and moved to "ready" status once approval from the trader is received. The registry is automatically updated from the ICP database, and Outlook tasks are used to manage and monitor new connections in progress.

The new connections checked were requested by the customer or customer's agent, not the trader. All the ICPs were created within three business days of the date the request was received.

#### **Audit outcome**

Compliant

### **3.3. Provision of ICP Information to the registry manager (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**

A diverse characteristics sample of 20 new connection applications of the 225 ICPs created since 01/12/18 were checked from the point of application through to when the ICPs were created, to confirm the process and controls worked in practice.

Data populated on the registry was checked for all new connections during the audit period, to confirm that required fields were populated.

#### **Audit commentary**

Alpine Energy has a fully automated registry update process to ensure all information listed in this clause is provided to the registry. Information was provided as required by this clause for all ICPs created during the audit period.

#### **Audit outcome**

Compliant

### **3.4. Timeliness of Provision of ICP Information to the registry manager (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 registry list for 30/08/19 and event detail report for 01/12/18 to 30/08/19 were examined to determine the timeliness of the provision of ICP information for new connections.

#### **Audit commentary**

The distributor must provide to the registry the information listed in clause 7(1) of schedule 11.1 as soon as practicable, and before electricity is traded at the ICP. The date being used as the "ready" event date is the date the customer signed and dated the Network Application form.

187 of the 225 ICPs created between 01/12/18 and 30/08/19 were electrically connected. I reviewed these completed new connections on the event detail report, and found all the ICPs had "ready" status, pricing information, address information, and a proposed trader populated prior to becoming electrically connected.

The timeliness of provision of initial electrical connection dates is discussed separately in **section 3.5**.

#### **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 subclause (1)(p) to the registry manager no later than 10 business days after the date on which the ICP is initially electrically connected.*

#### **Audit observation**

The process for populating initial electrical connection dates was examined.

The event detail report for 01/12/18 to 30/08/19 was examined to determine the timeliness of initial electrical connection dates for the 187 completed new connections.

A sample of 16 late updates were checked to determine why they were delayed.

#### **Audit commentary**

In Twizel and Tekapo, network and meter connection is normally completed on the same day by the same contractor. In Timaru, most new connections have Smartco meters which are installed by Smartco's approved contractor Wells. Wells are not authorised to complete new connections on Alpine Energy's network, and two different contractors complete the metering and network connection. Alpine Energy tries to arrange for the network and metering connection to be completed on the same day, but this is not always possible.

Smartco will change their contractor to a provider who is qualified to complete network and metering connections from 01/01/20, which will resolve this issue by allowing network and metering connections to consistently be completed at the same time.

Alpine Energy has asked its network contractors to confirm whether the metering contractor was on site on their new connection paperwork:

- where the metering and network connection occurred on the same day, Alpine Energy updates the initial electrical connection date to match the date work was completed; and
- where metering and network connection did not occur on the same day, Alpine Energy waits for the MEP's registry update to confirm the meter certification date then the meter certification date is entered as the initial electrical connection date.

As part of this process any information which has changed from the initial application (e.g. clarification of address or pricing information) is updated.

As described in **section 2.1**, notification files are reviewed to identify status changes to "active" where ICPs do not have an initial electrical connection date recorded. These changes are provided to the metering officer, who follows up the paperwork and updates the ICP database and registry as necessary.

All 187 new ICPs which were electrically connected during the audit period were checked to determine whether the initial electrical connection date was provided on time.

- 171 updates (91.4%) were on time.
- 16 updates (8.6%) were between one and 76 business days late. 13 were delayed because the network connection was prior to metering being installed, and Alpine Energy waited for the metering

record to be updated on the registry. Two were delayed because the contractor who completed the network and metering connection provided the paperwork late, and one was processed late by Alpine Energy.

### Audit outcome

Non-compliant

Non-compliance	Description	
Audit Ref: 3.5 With: Clause 7(2A) of Schedule 11.1  From: 27-May-19 To: 18-Jun-19	16 ICPs which became active during the audit period had 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 recorded as strong, in most cases the dates were delayed while Alpine Energy was waiting for confirmation of the correct date. Most initial electrical connection dates were populated on time. The impact on participants is minor because this field is used to validate other fields against.	
Actions taken to resolve the issue		Completion date
Currently the system is very paper based and we are always aware that once a FSP takes paperwork away that its then up to them to complete the task, paperwork and return the information. We have scoped an electronic process scoped which has just had its budget approved to proceed		hopefully early to mid 2020
Preventative actions taken to ensure no further issues will occur		Completion date
Implement electronic application system		hopefully early to mid 2020
		Investigating

### 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 an NSP, follow the 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 **sections 3.1 and 3.2**.

The registry list for 30/08/19 and event detail report for 01/12/18 to 30/08/19 were examined to determine compliance.

#### **Audit commentary**

ICPs will not be electrically connected without the agreement from the trader. Trader acceptance is confirmed during the application process, and a blanket approval is in place with Contact Energy.

All ICPs at "Ready" have a proposed trader populated in the registry. Review of the registry list and event detail report confirmed that no new shared unmetered load was created during the period.

#### **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 registry list for 30/08/19 and event detail reports for 01/12/18 to 30/08/19 were examined to determine compliance.

#### **Audit commentary**

ICPs will not be electrically connected without the agreement from the trader, who in turn has agreement with an MEP for the ICP. Trader acceptance is confirmed during the application process.

A sample of ten new connections were checked, and trader responsibility was consistently accepted prior to electrical connection.

Review of the registry list and event detail report confirmed that all ICPs which were initially electrically connected during the period reviewed had a proposed trader recorded on the initial electrical connection date.

#### **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 **sections 3.1 and 3.2**.

The registry list for 30/08/19 and event detail report for 01/12/18 to 30/08/19 were examined to determine compliance.

### Audit commentary

In Twizel and Tekapo, network and meter connection is normally completed on the same day by the same contractor and temporary electrical connection is not required.

In Timaru, most new connections have Smartco meters which are installed by Smartco's approved contractor Wells. Wells are not authorised to complete new connections on Alpine Energy's network. Alpine Energy's network contractors try to coordinate with Wells so that the metering and network connection can be completed on the same day. However, because there is only one Wells contractor working in the area, this is not always possible. The network connection is sometimes temporarily electrically connected to allow safety testing before the metering is installed. Once testing is complete the fuse is removed, and Wells reconnects once their metering is installed.

Whilst this practice ensures the best outcome for customers, because they are not delayed by scheduling issues, and it achieves the best outcome from a safety perspective, the Code only allows temporary electrical connection to occur if requested by the MEP for testing metering. When Alpine Energy connects for testing the metering is not installed, and this practice is non-compliant.

Smartco will change their contractor to a provider who is qualified to complete network and metering connections from 01/01/20, which will resolve this issue by allowing network and metering connections to consistently be completed at the same time.

I identified three new connections where the meter certification date was prior to the initial electrical connection date, indicating that they may have been temporarily electrically connected for meter certification. For all three ICPs a proposed trader was recorded on the registry prior to the meter certification date.

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.8 With: Clause 10.31A  From: 01-Dec-18 To: 30-Oct-19	Temporary electrical connection conducted by Alpine Energy for a purpose other than testing metering. Potential impact: None Actual impact: None Audit history: Once Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are recorded as strong, because the intention of this process is to ensure safety and customer experience outcomes are met. There is only a positive impact on other parties; therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Alpine considers the current method legal under the Electricity Act 1992 section 82 (4) which the Act is high ranking than the code, however this method is still not Alpine's preferred choice of livening we would prefer one person complete the whole inspect meter install and liven task			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
The contract for the field service work completed by Wells finishes in January and Delta take over. They plan to use NETcon staff for this work, which will allow it to be all completed by the one person inspect, meter install and liven		January 2020 (maybe 1/2/20)	

### 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 5 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**

The NSP table was reviewed.

#### **Audit commentary**

No new NSPs were created by Alpine Energy during the audit period.

#### **Audit outcome**

Compliant

### **3.10. Temporary electrical connection of NSP that is not point of connection to grid (Clause 10.30(A))**

#### **Code reference**

*Clause 10.30(A)*

#### **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.*

#### **Audit observation**

The NSP table was reviewed.

#### **Audit commentary**

No new NSPs were created by Alpine Energy 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 Authority.*

#### **Audit observation**

The process for the creation of ICPs was examined and observed.

#### **Audit commentary**

ICP numbers are created within the ICP database.

The user creates a new number taking into account the house or lot number, and the sequence of nearby addresses. The database automatically applies the leading zeros, distributor code, and checksum to create a compliant ICP number.

If the new ICP number is not unique, a warning is displayed on screen stating that the ICP number already exists, and the database will automatically replace the first leading zero with a one to make the number unique. At this point the user would enter a unique set of digits to allow the ICP number to be unique without the leading one.

#### **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 process of allocation of the loss category was examined. The list file as at 30/08/19 was examined to confirm all active ICPs have a single loss category code.

#### **Audit commentary**

This is known and assigned at the time of the ICP creation. Each active ICP only has a single loss category, which clearly identifies the relevant loss factor. Loss factors are linked to the load group, which is independently checked as part of the new connections process.

#### **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 for 30/08/19 and event detail report for 01/12/18 to 30/08/19 were examined to determine compliance.

#### **Audit commentary**

ICPs on Alpine Energy’s network normally do not require construction and are created when they are ready for activation. ICPs are created at “ready”, and the “new” status is only present if another event is reversed.

One ICP had “new” status applied during the period, because a “ready” record was reversed prior to an ICP being decommissioned.

#### 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 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 management of ICPs at the “new” and “ready” status was examined. The registry list as at 30/08/19 was examined to determine compliance.

#### Audit commentary

Alpine Energy follows up ICPs which are at “new” or “ready” status for more than 18 months every six months, to confirm whether they have been connected and if the ICP is still required.

Because applications are received from the customer or their agent, rather than the trader, Alpine Energy normally follows up with the customer and/or the electrician as well as the trader.

The list file contained no ICPs at “new” status and 38 at “ready” status. Four ICPs have been at “ready” status for more than 24 months, and Alpine Energy had checked with the customer or their agent to confirm that the status was correct and the ICP was still required.

Alpine Energy stated that the registry coordinator (who has since left) had also contacted the trader to confirm the ICPs were required, but I could not obtain evidence to confirm this. I recommend that Alpine Energy adds a note to their database to confirm when traders have been contacted about ICPs at “new” or “ready” status.

Recommendation	Description	Audited party comment	Remedial action
Monitoring of “new” & “ready” statuses	Keep records to confirm that traders have been contacted about ICPs at “new” or “ready” status for over 24 months.	We have made an active approach in the last few years to routinely going through the new and ready ICP’s we will add any emails or correspondence to Traders to the ICP database	Identified

#### 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 EMI wholesale data set as at 06/09/19 and registry list as at 30/08/19 were reviewed to identify any generation stations with capacity of 10 MW or more, and determine compliance.

#### Audit commentary

There are no embedded generators with a capacity greater than 10MW that require specific loss category codes.

#### 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 street light circuits which are a point of connection was examined.

#### Audit commentary

Alpine Energy are aware of their obligation to ensure that the trader has provided approval before streetlights are connected.

Even if a new ICP is not required, a new connection form is mandatory and trader approval is gained as part of the connection process.

The only unmetered new connections during the audit period were for standard unmetered load, and blanket approval was in place with the trader.

#### 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 changes, the distributor must give written notice to the registry manager 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 management of registry updates was reviewed.

The registry list and event detail report for 01/12/18 to 30/08/19 were reviewed to determine compliance. A diverse sample of 43 backdated events were reviewed to determine the reasons for the late updates, including address, network, pricing and status events.

The management of NSP changes was examined.

#### Audit commentary

When information that is held by the registry changes, the distributor responsible for that ICP must provide notice to the registry of that change within three business days of that change taking effect.

#### Address updates

There were 15,795 address updates that did not relate to the initial population of address data (which is discussed separately in **section 3.4**).

15,782 (99.9%) of the updates were within three business days of the event, and 13 (0.1%) were between one and 160 business days late. All nine late updates over ten business days after the event date were checked and confirmed to be corrections, following updates to Council addresses or confirmation of the correct address from the customer or contractor completing the new connection.

#### Network events

There were 126 network events that did not relate to the initial population of network and initial electrical connection date data (which is discussed separately in **section 3.5**).

73 (57.9%) of the updates were within three business days of the event, and 53 (42.1%) were between one and 5,117 business days late. All 22 late updates over 15 business days after the event date were checked:

- 20 late updates were corrections to generation details, installation types, unmetered load, proposed trader or distributor billed status; and
- two late updates added generation details and were delayed by waiting for solar inspection paperwork and metering details, Alpine Energy used to wait for injection metering to be installed prior to updating generation details on the registry, but now updates the registry once inspection is complete and also now applies the inspection date, instead of the approval date of the generation application as the event date.

The updates were made from the correct date, and the content was correct except for one ICP 0004610016AL6ED. This ICP had a backdated update to remove unmetered load details of “Weighbridge - lights only”. Alpine Energy confirmed that standard unmetered load was connected for a light and power outlet, which are very rarely used. The distributor unmetered load details should have been updated to reflect this, rather than being removed. The incorrect information is recorded as non-compliance in **sections 2.1 and 4.6**.

### **NSP changes**

Review of the event detail report and registry list confirmed that no NSP changes occurred during the audit period. NSP changes are advised by the GIS team.

Two corrections to NSPs were processed after the event detail report was run, and are discussed in **section 4.2**.

### **Pricing events**

There were 3,111 pricing updates that did not relate to the initial population of pricing data (which is discussed separately in **section 3.4**).

3,084 (99.1%) of the updates were within three business days of the event, and 27 (0.9%) were between one and 39 business days late. All nine late updates over ten business days after the event date were corrections following receipt of paperwork confirming a price change was required, or at the request of the trader. The updates were made from the correct date, and the content was correct.

### **Status events**

65 updates to decommissioned status were identified; all the updates had status reason “installation dismantled”.

62 (95.4%) of the updates were within three business days of the event date, and three updates (4.6%) were made more than three business days after the event date or trader’s update to “ready for decommissioning” status. The updates were delayed while Alpine Energy waited for confirmation that the ICP was to be decommissioned.

The updates were made from the correct date, and the content was correct except for one ICP 0001890253AL261 which has an incorrect status reason code applied. This is recorded as non-compliance in **sections 2.1 and 4.11**.

### **Audit outcome**

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 4.1</p> <p>With: Clause 8 Schedule 11.1</p> <p>From: 07-Dec-18</p> <p>To: 22-Aug-19</p>	<p>13 late address updates.</p> <p>53 late network updates.</p> <p>27 late pricing updates.</p> <p>Three late status updates.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Multiple</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	<p>The controls are rated as moderate. Most of the late updates were corrections, or were delayed while Alpine Energy confirmed that the updates were required.</p> <p>There may be a minor impact on other participants. Processing corrections improves compliance with the completeness and accuracy requirements.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>I feel being perfect in this area is complicated we are dealing with a lot of historical data and paperwork that's out of our control. We do plan to go to a mobile platform that will assist with data accuracy and timeliness of information following completion of projects. No doubt this will also add to other issues for us to sort as well</p>		2020	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>We can really only do our best and to always consider compliance as an area for why we need to do things timely and correct</p>		WIP	

#### 4.2. Notice of NSP for each ICP (Clauses 7(1),(4) and (5) Schedule 11.1)

##### Code reference

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

##### Code related audit information

*Under Clause 7(1)(b) of Schedule 11.1, the distributor must provide to the registry manager the NSP identifier of the NSP to which the ICP is usually connected.*

*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 the correct NSP was examined. The registry list as at 30/08/19 was reviewed to determine compliance.

### Audit commentary

The NSP for each ICP is notified to the registry as part of the new connection process described in **section 3.2**.

The ICP's connection is traced to the transformer using G.E.M.A. GIS. The transformer is then mapped to the NSP. Placing the ICP in the GIS is mandatory, and the new connection cannot be completed without this step.

Once connection paperwork is received, the as laid drawings are checked to confirm the correct transformer, and the GIS is updated.

NSP changes for more than 14 days are unlikely and occur very rarely. There is a process in place for the network operations and GIS team to advise the registry team if NSP changes occur.

Analysis identified 36 street suburb town combinations with active ICPs connected to more than one NSP. Eleven streets were checked; for nine streets NSPs were confirmed to be correctly assigned, and two streets had one ICP each assigned to an incorrect NSP. Both ICPs were corrected during the audit, but incorrect event dates were applied because the update date was recorded as the event date. This is recorded as non-compliance in **section 2.1**:

ICP	Old NSP	New NSP	Effective date applied	Correct effective date
0006664556AL006	STU0111	BPD1101	07/10/19	17/06/16
0007243868AL3C6	TKA0331	ABY0111	10/10/19	03/08/18

The previous audits have recommended a periodic check of NSP mapping to ensure that any errors are identified and corrected. Alpine Energy is planning GIS enhancements which will make checking NSP mapping easier, and this check will be completed regularly once these changes are complete. I repeat the previous recommendation to maintain visibility.

Recommendation	Description	Audited party comment	Remedial action
NSP mapping	Check of NSP mapping to be carried out periodically.	I have requested that our GIS team create a ICP mapping line trace to compare to the ICP database info and compare any discrepancies currently this is a manual system and doesn't really highlight issues until too late. Once the automated system is sorted completing it regularly is simple	Identified

### Audit outcome

Non-compliant



Non-compliance	Description		
Audit Ref: 4.2 With: Clause 7(1),(4) and (5) Schedule 11.1 From: 30-Aug-19 To: 30-Oct-19	Two ICPs temporarily had an incorrect NSP recorded. Potential impact: Medium Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as moderate as the process will mitigate errors most of the time. The volume of potentially mis-mapped ICPs is low therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
I have requested that our GIS team create a ICP mapping line trace to compare to the ICP database info and compare any discrepancies. We have amended the 2 x ICPs we had incorrect		22/11/19	Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	
I have requested that our GIS team create a ICP mapping line trace to compare to the ICP database info and compare any discrepancies		WIP	

#### 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 3 business days after receiving a request for that information.*

##### Audit observation

The management of customer queries was examined.

##### Audit commentary

Alpine Energy occasionally receives direct requests for ICP identifiers and these are provided immediately.

##### 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 determine correct and unique addresses was examined. The registry list for 30/08/19 was reviewed to determine compliance.

##### **Audit commentary**

The address is captured at the time of ICP creation. GPS coordinates are recorded for all except 20 active and inactive ICPs.

All active and inactive ICPs have unique and locatable addresses.

##### **Audit outcome**

Compliant

#### 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**

This was examined as part of the new connection process.

##### **Audit commentary**

For new connections, this clause is well understood, and Alpine Energy Network's policy requires each ICP to have its own service fuse. If a historic pre 2002 connection that cannot be isolated is found, the ICPs will be separated.

##### **Audit outcome**

Compliant

#### 4.6. Distributors to Provide ICP Information to the Registry manager (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 1 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):
  - a) the nameplate capacity of the generator; and
  - b) 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 at 30/08/19 was reviewed to determine compliance. A typical sample of data discrepancies were checked, as described in the commentary.

Registry data validation processes are discussed in **section 2.1**.

#### Audit commentary

Review of the registry list identified some data discrepancies. Non-compliance is recorded where data remained incorrect at the time of the on-site audit, or was not identified and corrected through Alpine Energy's processes.

#### NSP information

Assignment of dedicated NSP status was checked.

There is only one NSP each for the TWZ0331ALPEG and TKA0331ALPEG balancing areas, and it is expected all ICPs within these balancing areas will have a dedicated NSP status of Y. As recorded in the 2018 audit, ICP 0007283027ALA00 was connected to TWZ0331 in the TWZ0331ALPEG balancing area and had a dedicated NSP status of N. A backdated correction to Y was processed during the audit.

The ICPs within balancing area CENTRALALPEG mostly have dedicated NSP set to N. The GIS team intends to investigate to determine the correct dedicated NSP statuses, as many of the ICPs were set up prior to the implementation of the current GIS system 3-4 years ago. The new GIS can be used to determine connectivity for each ICP, and over time more ICPs are moving to dedicated NSP = Y.

NSP	Dedicated NSP = N	Dedicated NSP = Y
ABY0111	1606	16
BPD1101	604	15
STU0111	3213	13
TIM0111	17834	135
TMK0331	6600	196

Assignment of NSPs was reviewed in **section 4.2**.

#### Initial Electrical Connection Dates

The accuracy of initial electrical connection dates was checked by comparing them to the meter certification date (where present) and the earliest active date for all 187 new connections which were electrically connected during the audit period. For 11 ICPs there was a discrepancy between the initial

electrical connection date and earliest active date, and/or initial electrical connection date and meter certification. The initial electrical connection date was confirmed to be correct for ten of the ICPs, and incorrect for ICP 0004282423ALD60. The discrepancy occurred because the meter was connected later by Wells and the network inspection date was applied in error.

ICP	Earliest active date	Meter certification date	Initial electrical connection date	Correct initial electrical connection date
0004282423ALD60	04/03/19	04/03/19	13/02/19	04/03/19

No ICPs at “ready” or “new connection in progress” status had initial electrical connection dates populated.

All active ICPs commissioned after 29/08/13<sup>1</sup> had initial electrical connection dates populated, except ICP 0004720199AL03D. The date was missed due to an oversight, and was correctly updated during the audit.

I checked a sample of ten ICPs with initial electrical connection dates prior to 29/08/13 which were updated during the audit period. Initial electrical connection dates are not required for ICPs connected prior to this date, but if populated they should be accurate.

ICP	Earliest active date	Meter certification date	Initial electrical connection date	Correct initial electrical connection date
0009800107ALA72	1/04/1999	1/04/1999	4/10/2002	1/04/1999 or blank
0004610016AL6ED	1/04/1999	1/04/1999	4/10/2002	1/04/1999 or blank

### Installation type and generation details

Applications for distributed generation are received, and approved or declined. The result is communicated to the customer and trader. Once installation is complete, it must be inspected and if compliant the inspector will connect it. The inspection date is applied as the event effective date for the addition of distributed generation details.

There is currently no regular check between the trader profile, meter register flow direction and Alpine Energy’s distributed generation details. A recommendation is raised in relation to this in **section 2.1**.

The registry list recorded 397 ICPs with generation capacity. 64 of these ICPs did not have a PV1, EG1, HHR or GXP profile. 59 of the affected ICPs had I flow meter registers, and five did not. I checked a sample of 15 ICPs including the five without I flow meters. I found that in all cases Alpine Energy had received inspection paperwork confirming that generation was installed, and their registry information was correct.

Five ICPs had profiles indicating generation and/or I flow registers, but no distributor generation details recorded. I confirmed that Alpine Energy’s records were correct for four of the ICPs, generation had either been removed or had not been installed. For ICP 0005062403AL329 generation had been installed, but completed inspection paperwork had not been provided by the inspector. A correctly backdated update was processed during the audit once the inspection paperwork was received.

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<sup>1</sup> When recording initial electrical connection dates became required.

ICP 0004625307AL50A had installation type L with generation details recorded due to an oversight when adding the distributed generation details. The installation type was corrected to B during the audit.

The generation fuel types were compared to the retailer's profiles and I did not identify any instances where the retailer profile indicated a different fuel type to what Alpine Energy had recorded.

### Unmetered load

Part 11 states the distributors must provide unmetered load type and capacity of the unmetered load to the registry "if known". If distributor unmetered load is populated, it is required to be accurate.

#### Unmetered load details format

102 active ICPs have a value in the Unmetered load details – Distributor field. The Authority's Guidelines on Unmetered Load Management Version 2.1 recommends the distributor unmetered load details are populated on the registry in the following format: "watts;running hours per day;other text".

For 26 ICPs, Alpine Energy has closely followed the recommended format. In some cases kW were used instead of W, and/or ":" was used instead of ";".

The other 76 ICPs were created prior to 2009, and the unmetered load is not in a format where the loads can be compared between Alpine Energy and the trader.

I recommend the Electricity Authority's recommended format be adopted. The relevant format is shown below in an extract from the unmetered load guidelines on the Authority's website.

The field definitions are:

Information	Format
Connected load	Watts, 4 digits, zero decimal places. Eg 1565
Semi colon separator	;
Running hours per day	Hours to 2 digits, and decimal hours to 1 decimal place Eg 02.5 (ie two and one half hours)
Semi colon separator	;
Other text	Free form as required

Example strings:

- 0110;10.5; Street light corner Rons Rd and Beatty St  
This is a 110 watt connected capacity street light that runs for 10.5 hours per day.
- 1525;01.0; Sewage pump outside 76 Guthries Rd  
This is a 1525 watt connected capacity sewage pump that runs for 1 hour per day.

Recommendation	Description	Audited party comment	Remedial action
Distributor unmetered load details	Update the unmetered load details to include the wattage, on hours and description where this is known and not included in the existing description.	I plan for us to look at all unmetered sites in 2020 and ensure they are correctly rated and entered to the registry, where load details are unknown we will visit and update as required	Identified

#### No unmetered load recorded

ICP 0004610016AL6ED had a backdated update to remove unmetered load details of “Weighbridge - lights only”. Alpine Energy confirmed that standard unmetered load was connected for a light and power outlet, which are very rarely used. The distributor unmetered load details should have been updated to reflect this, rather than being removed. Non-compliance is recorded below, and in **section 2.1**.

#### Trader unmetered load is recorded without distributor unmetered load

Seven active ICPs had trader unmetered load details recorded with no distributor unmetered load details. Alpine Energy confirmed the correct unmetered load details and updated the registry during the audit.

#### Distributor unmetered load is recorded without trader unmetered load

All 102 active ICPs with distributor unmetered load details recorded also have trader unmetered load details recorded.

#### Distributor unmetered load details differ from the trader unmetered load details

For the 26 ICPs where distributor unmetered load was in a format which enabled recalculation, I compared the figures to the trader unmetered load. For 21 ICPs Alpine Energy’s value matched the trader’s value within  $\pm 1$  kWh. The other five ICPs were checked:

- for one ICP Alpine Energy’s unmetered load details were confirmed to be correct; and
- for four ICPs Alpine Energy’s unmetered load details were incorrect, and corrections were processed during the audit.

#### Shared unmetered load

No shared unmetered load is recorded on the registry, and Alpine Energy does not intend to allow any shared unmetered load to be connected.

### **Status**

Non-compliance is recorded in **section 4.11** because:

- ICP 0001890253AL261 has a status reason code of 2 (Installation Dismantled) applied but should have had 1 (Setup in error) applied; and
- ICP 0002252075ALB2E has been decommissioned but has a status of ready for decommissioning recorded on the registry.

### **Audit outcome**

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 4.6</p> <p>With: Clause 7(1)(o)&amp;(p) Schedule 11.1</p> <p>From: 30-Aug-19</p> <p>To: 30-Oct-19</p>	<p>One ICP temporarily had an incorrect dedicated NSP status, and was corrected during the audit.</p> <p>ICPs 0004282423ALD60, 0009800107ALA72, and 0004610016AL6ED have incorrect initial electrical connection dates populated.</p> <p>One ICP temporarily had incorrect distributed generation details due to late receipt of inspection paperwork and was corrected during the audit.</p> <p>One ICP temporarily had an incorrect installation type and was corrected during the audit.</p> <p>Four ICPs temporarily had incorrect distributor unmetered load details and were corrected during the audit.</p> <p>ICP 0004610016AL6ED had a backdated update to remove unmetered load details of "Weighbridge - lights only", but should have been updated to reflect that standard unmetered load was connected for a light and power outlet, which are very rarely used.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Multiple times</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>Controls are rated as moderate, because the automated registry update process and validation processes are adequate to ensure that most information is accurate.</p> <p>The audit risk rating is low, as most of this information does not have a direct impact on reconciliation. The unmetered load associated with 0004610016AL6ED is expected to be very low.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
We will plan to use more notification files in 2020 and upskill staff to improve things		2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Just work on what we have already to add additional processes		2020	

#### 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 manager 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 for 30/08/19 and event detail report for 01/12/18 to 30/08/19 were examined to identify any new connections that have either no price category code assigned, or changes to price category codes greater than ten days from the first active date.

### Audit commentary

The price category and chargeable capacity (if any) are known at the time of the ICP being created therefore these are recorded correctly in the first instance.

All new ICPs created during the audit period had pricing information loaded prior to initial 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

The registry list as at 30/08/19 was reviewed to determine compliance.

GPS coordinates for a sample of 25 ICPs were mapped using to determine their accuracy relative to the physical address listed.

### Audit commentary

GPS coordinates are optional, but if populated the registry requires New Zealand Transverse Mercator 2000 (NZTM2000) coordinates. GPS coordinates are recorded for all except 20 active and inactive ICPs.

I plotted a sample of GPS coordinates for 25 ICPs including the maximum and minimum easting and northing coordinates. I found that the coordinates were in NZTM2000 format, and were consistent with the other addressing information available.

### 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

The management of ICPs in relation to the use of the “ready” status was examined. The registry list for 30/08/19 and event detail report for 01/12/18 to 30/08/19 were examined in relation to the use of the “ready” status.

##### Audit commentary

Alpine Energy’s new connection process ensures that a trader has taken responsibility for ICPs before the status is changed to “ready”.

The ICP database will only allow one price category, and the requirement to ensure that an ICP has a single price category will always be met. The pricing category is selected based on the load group and updated if necessary once connection paperwork is received. The load group is independently checked as part of the new connections process.

All 38 ICPs at “ready” status had a single price category assigned and proposed trader identified.

##### 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

Processes to manage the distributor status were reviewed. The registry list for 30/08/19 and event detail report for 01/12/18 to 30/08/19 were examined in relation to the use of the “distributor” status.

##### Audit commentary

Alpine Energy’s list file shows two ICPs that have an ICP status of “distributor” and both of these are for embedded networks.

Alpine Energy confirmed that there is no shared unmetered load on their network.

#### **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 for 30/08/19 and event detail report for 01/12/18 to 30/08/19 were reviewed to identify ICPs at the “decommissioned” or “ready for decommissioning” status.

A sample of ten “decommissioned” ICPs was examined. I also examined all ICPs at “ready for decommissioning” status.

##### **Audit commentary**

###### **Decommissioning**

Requests are made directly to Alpine Energy where decommissioning is required. The fieldwork is then carried out and notification comes back to Alpine Energy on standard documentation. The registry is then updated to the decommissioned status. Alpine Energy monitors ICPs that have been physically decommissioned to ensure the retailer changes the status to “ready for decommissioning” so that Alpine Energy can change the status to “decommissioned”. ICPs are not decommissioned unless an application is received.

A sample of ten ICPs were checked and confirmed to have the correct decommissioning date recorded, or the first available date where previous registry events prevented decommissioning on the physical decommissioning date. Nine ICPs had the correct status and status reason code selected. ICP 0001890253AL261 has a status reason code of 2 (Installation Dismantled) applied but should have had 1 (Setup in error) applied.

###### **Ready for decommissioning**

The number of ICPs at this status continues to decrease each year. There were two ICPs with a status of “ready for decommissioning” in the list file.

ICP	Ready for decommissioning since	Comment
0001102399AL582	16/01/18	This ICP is used annually at Caroline Bay for the Christmas carnival, and disconnected when not in use. Alpine Energy have confirmed with the trader that it is not to be decommissioned, and the trader's status reason code is incorrect.
0002252075ALB2E	23/07/14	This ICP was confirmed to be decommissioned from 23/07/14 but the status has not been updated on the registry. This is recorded as non-compliance below.

### Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 4.11</p> <p>With: Clause 20</p> <p>Schedule 11.1</p> <p>From: 12-Sep-17</p> <p>To: 30-Oct-19</p>	<p>ICP 0001890253AL261 has a status reason code of 2 (Installation Dismantled) applied but should have had 1 (Setup in error) applied.</p> <p>ICP 0002252075ALB2E has been decommissioned, but has a status of ready for decommissioning recorded on the registry.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: None</p> <p>Controls: Strong</p> <p>Breach risk rating: 1</p>		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	<p>There are monitoring controls over decommissioning, including checks that paperwork is returned and identification of ICPs moved to ready for decommissioning status. One exception occurred very early in the audit period, and the other occurred prior to the audit period. It is unlikely these errors would occur for ICPs decommissioned now.</p> <p>The impact is low. The correct status code was applied for 0001890253AL261, only the status reason was incorrect. ICP 0002252075ALB2E was inactive and had physically been decommissioned.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Again I think the additional reporting and knowledge in this area will tidy a lot of these smaller ones up		mid 2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Registry training and registry reporting of files		early 2020	

#### 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 2 months after the date the code is entered in the table.*

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

##### **Audit observation**

The price category code table on the registry was examined.

##### **Audit commentary**

The price category code table on the registry was examined. Alpine Energy did not create any new price category codes during the audit period.

##### **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

The loss category code table on the registry was examined.

#### Audit commentary

The loss category code table on the registry was examined. Alpine Energy end dated four loss factor codes effective from 31/03/20 on 05/08/19. No other changes were made.

Alpine Energy intends to complete a loss factor review in the next three months and will enter new loss factors effective from 01/04/20.

#### 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 2 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 in the registry, the distributor must enter the replaced loss factor on the table in the registry.*

#### Audit observation

The loss category code table on the registry was examined.

#### Audit commentary

The loss category code table on the registry was examined. Alpine Energy did not update any loss factor values during the audit period.

#### 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 two 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.*

*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 was reviewed.

#### Audit commentary

Alpine Energy has not created or decommissioned any NSPs 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 2 local networks. In all other cases, the request must be made at least 1 month before the NSP is electrically connected or the ICP is transferred.*

#### Audit observation

The NSP table was reviewed.

#### **Audit commentary**

No NSPs have been created or decommissioned 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 give written notice to 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 was reviewed.

#### **Audit commentary**

No balancing area changes have occurred 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 give notice to the reconciliation manager at least 1 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**

The NSP table was reviewed.

#### **Audit commentary**

Alpine Energy has not created any new embedded networks during the audit period.

#### **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 give written notice to 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 3 business days after the change takes effect.*

##### Audit observation

The NSP table was reviewed.

##### Audit commentary

No balancing area changes have occurred 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 give written notice to any trader trading at the ICP of the transfer at least 1 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 give written notice to the Authority in the prescribed form, no later than 3 business days before the transfer takes effect.*

##### Audit observation

The NSP table was reviewed.

#### **Audit commentary**

Alpine Energy 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 1 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 table was examined.

#### **Audit commentary**

Alpine Energy does not have responsibility for any NSP metering.

#### **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 date 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 table was examined.

**Audit commentary**

Alpine Energy does not have responsibility for any NSP metering.

**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 give written notice to:*

- *the previous network owner (Clause 29(1)(a) of Schedule 11.1)*
- *the reconciliation manager (Clause 29(1)(b) of Schedule 11.1)*
- *the Authority (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 1 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 table was examined.

**Audit commentary**

Alpine Energy has not initiated any changes of network owner 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 advise the reconciliation manager and the gaining MEP.*

**Audit observation**

The NSP table was examined.

#### **Audit commentary**

Alpine Energy do not own any embedded networks therefore there have been no changes of MEP for embedded gate meters.

#### **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 Authority 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 table was examined.

#### **Audit commentary**

Alpine Energy 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 table was examined.

#### **Audit commentary**

Alpine Energy 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 give written notice to the registry manager 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 give written notice to the registry manager 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

Processes for the management of shared unmetered load were discussed. The registry list as at 30/08/19 was reviewed to identify any ICPs with shared unmetered load connected.

#### Audit commentary

Alpine Energy has no existing shared unmetered load and does not intend to allow any new shared unmetered load connections.

#### 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 give written notice to all traders affected by that change or decommissioning as soon as practicable after the change or decommissioning.*

#### Audit observation

Processes for the management of shared unmetered load were discussed. The registry list as at 30/08/19 was reviewed to identify any ICPs with shared unmetered load connected.

#### Audit commentary

Alpine Energy has no existing shared unmetered load and does not intend to allow any new shared unmetered load connections.

#### 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

The “Guidelines on the calculation and the use of loss factors for reconciliation purposes” was published on 26/06/18. Loss factor review processes are under consultation, and I checked the Network Technical Losses Calculation Methodology Consultation Paper (31/07/19) against the guideline.

I reviewed the rolling UFE report provided by the Authority.

#### Audit commentary

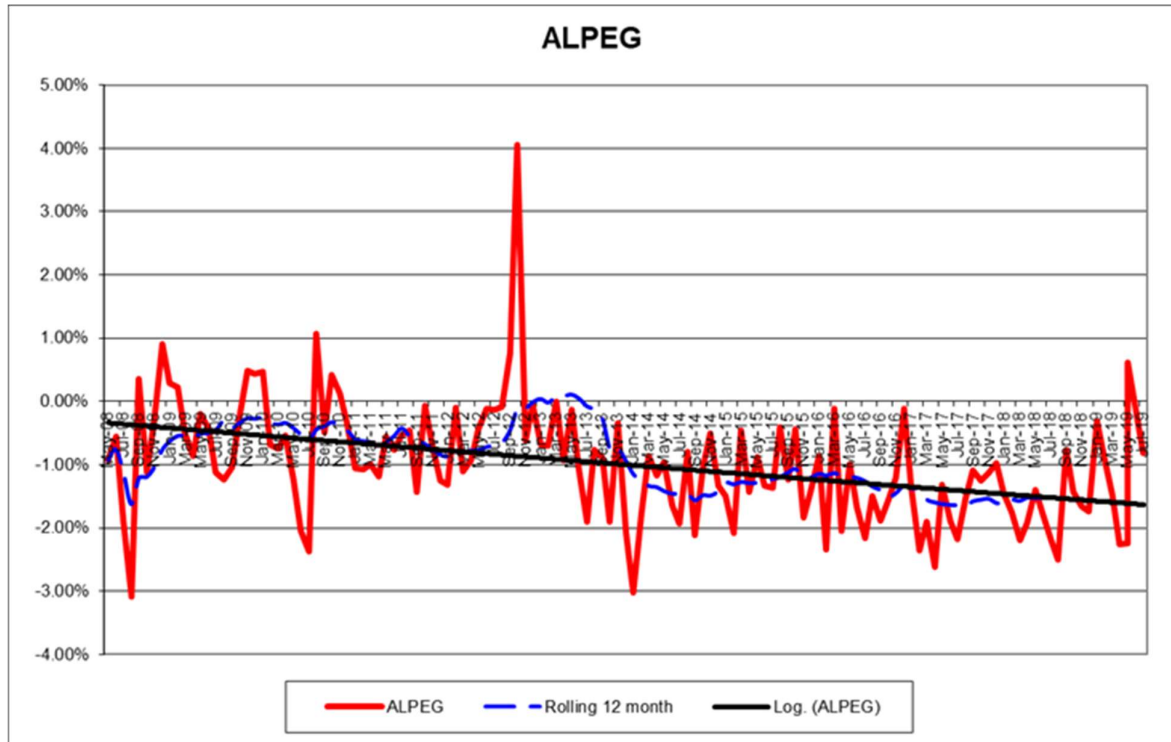
Alpine Energy has four different factors; AOP (generation), LV, HV (11kV) and HV (33 kV). There have been no changes to the loss factor values since 1999 for A11, A33 and ALV, and since 2006 for AOP.

Alpine Energy had begun a review of its loss factors this year, and intends to update the loss factors along with their pricing effective from 01/04/20. Several steps of this process are already complete.

1. A consultation paper on the Network Technical Losses Calculation Methodology was issued on 31/07/19.
2. A report on the calculation methodology was issued on 19/08/19.
3. Provisional losses for ABY0111 were calculated using the agreed methodology and reviewed at a meeting on 29/10/19. Some further smart meter information is needed to complete these calculations.

Once the ABY0111 losses are finalised and approved, it will be used as a model for the other NSPs.

The graph below shows that the combined loss factors for all connection types are likely to be too high by around 1%.



The Code also requires information to be “complete and accurate”. The loss factors have not changed since 1999 and the difference between reconciliation losses and loss factors indicates the loss factors are not “complete and accurate”. The unaccounted-for electricity (UFE) is allocated to retailers so there is no adverse impact on reconciliation, however Retailers will make pricing decisions based on published loss factors and if the factors are not accurate this may have an impact. New Retailers in particular may rely more on published loss factors because they will not have their own history.

#### Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 8.1</p> <p>With: Clause 11.2</p> <p>From: 01-Dec-18</p> <p>To: 30-Oct-19</p>	<p>Loss factors are not accurate in relation to reconciliation losses.</p> <p>Potential impact: Medium</p> <p>Actual impact: Medium</p> <p>Audit history: Once</p> <p>Controls: Moderate</p> <p>Breach risk rating: 4</p>
Audit risk rating	Rationale for audit risk rating
<b>Medium</b>	<p>The controls are rated as moderate because a compliant loss factor review is well underway and expected to be completed in the next three months.</p> <p>UFE is allocated to participants; therefore there is no adverse impact on settlement; however traders may use published losses in pricing decisions, therefore the use of inaccurate loss factors could lead to incorrect pricing, which is considered to have a medium impact.</p>

Actions taken to resolve the issue	Completion date	Remedial action status
We are well under way with the loss factor review and we will have it in place for 2020. With it fully documented a Breach risk rating of 4 is rather harsh as it was identified and progressed very well	1/1/2020	Identified
<b>Preventative actions taken to ensure no further issues will occur</b>	<b>Completion date</b>	
Once we have the tools to complete the assessment we can then periodically review then as required	Ongoing	



## CONCLUSION

Alpine Energy has good validation processes in place. Field services jobs are monitored closely to ensure that paperwork is returned, and the returned paperwork is carefully checked to ensure that work has been completed as expected and the ICP database and registry are updated accurately.

The key issues requiring resolution are expected to be resolved by early 2020.

- Loss factors are currently under review, and Alpine Energy intends to provide revised loss factors effective from 1 April 2020.
- Alpine Energy continues to have difficulty confirming some initial electrical connection dates in Timaru, because separate contractors must be used for the network and metering connections and the work is not always able to be completed on the same day. This can cause temporary network connections for reasons other than meter testing, and late initial electrical connection dates. Smartco will change their contractor to a provider who is qualified to complete network and metering connections from 01/01/20, which will resolve this issue by allowing network and metering connections to consistently be completed at the same time.
- Planned GIS enhancements will make it easier to review NSP assignment and dedicated NSP status for historic ICPs.

The audit found nine non-compliances and makes four recommendations. The audit risk rating is 15, indicating that the next audit should be completed in 12 months. Taking into account that:

- Most data accuracy issues identified during the audit were cleared immediately
- The only issue with a risk rating above two (loss factor review) is expected to be resolved in the next three months; and
- that Alpine Energy intends to resolve the issues identified

I recommend that the next audit should be completed in 16 months, on 4 April 2021.

## PARTICIPANT RESPONSE

It was another relatively good audit Peter and I are far more comfortable with the process and have a greater understanding of what's required by 'The Code'. We have had a productive year with tidying up our ICP database and Margaret and Peter spent a lot of time working through data to standardise descriptions and addresses, fuse sizes, cable types etc.

The Loss Factors is another huge step forward and the amount of work put into it by our engineering Planning Team will hopefully put us right for our technical losses in 2020.

Next year I plan to look specifically at unmetered loads and sort the information we have on file for them and update any information where we can. I suspect there may even be some inactive ones we can look to decommission with the land owners and traders.

Our general reporting either day to day or monthly I would like to expand to ensure we pick up some of the additional errors that slip through.

Again I think Peter, Tarryn and I learn quite a bit from our audits and overall are happy with how it went and thank Tara for her time and the constructive work she did with us. Ultimately I would like to get to and 18 month audit period but are still happy with a 12 that we achieved.