

**ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTOR AUDIT REPORT**

For

TOP ENERGY

Prepared by: Ewa Glowacka

Date audit commenced: 11 September 2017

Date audit report completed: 27 October 2017

Audit report due date: 28-Oct-17

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	8
1.6. Hardware and Software	8
1.7. Breaches or Breach Allegations	9
1.8. ICP and NSP Data	9
1.9. Authorisation Received	9
1.10. Scope of Audit	10
1.11. Summary of previous audit	10
2. Operational Infrastructure	11
2.1. Requirement to provide complete and accurate information (Clause 11.2(1) and 10.6(1))	11
2.2. Requirement to correct errors (Clause 11.2(2) and 10.6(2))	13
3. Creation of ICPs	15
3.1. Distributors must create ICPs (Clause 11.4)	15
3.2. Participants may request distributors to create ICPs (Clause 11.5(3))	15
3.3. Provision of ICP Information to the registry manager (Clause 11.7)	16
3.4. Timeliness of Provision of ICP Information to the registry manager (Clause 7(2) of Schedule 11.1)	16
3.5. Timeliness of Provision of Initial Electrical Connection Date (Clause 7(2A) of Schedule 11.1)	18
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)	21
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)	22
3.10. Temporary electrical connection of NSP that is not point of connection to grid (Clause 10.30(A))	23
3.11. Definition of ICP identifier (Clause 1(1) Schedule 11.1)	23
3.12. Loss category (Clause 6 Schedule 11.1)	24
3.13. Management of “new” status (Clause 13 Schedule 11.1)	24
3.14. Monitoring of “new” & “ready” statuses (Clause 15 Schedule 11.1)	25
3.15. Embedded generation loss category (Clause 7(6) Schedule 11.1)	25
4. Maintenance of registry information	27
4.1. Changes to registry information (Clause 8 Schedule 11.1)	27
4.2. Notice of NSP for each ICP (Clauses 7(1), (4) and (5) Schedule 11.1)	29
4.3. Customer queries about ICP (Clause 11.31)	29

4.4.	ICP location address (Clause 2 Schedule 11.1)	29
4.5.	Electrically disconnecting an ICP (Clause 3 Schedule 11.1)	31
4.6.	Distributors to Provide ICP Information to the Registry manager (Clause 7(1) Schedule 11.1)	31
4.7.	Provision of information to registry after the trading of electricity at the ICP commences (Clause 7(3) Schedule 11.1)	35
4.8.	GPS coordinates (Clause 7(8) and (9) Schedule 11.1)	35
4.9.	Management of “ready” status (Clause 14 Schedule 11.1)	35
4.10.	Management of “distributor” status (Clause 16 Schedule 11.1)	37
4.11.	Management of “decommissioned” status (Clause 20 Schedule 11.1)	38
4.12.	Maintenance of price category codes (Clause 23 Schedule 11.1).....	39
5.	Creation and maintenance of loss factors	41
5.1.	Updating table of loss category codes (Clause 21 Schedule 11.1)	41
5.2.	Updating loss factors (Clause 22 Schedule 11.1)	41
6.	Creation and maintenance of NSPs (including decommissioning of NSPs and transfer of ICPs).....	43
6.1.	Creation and decommissioning of NSPs (Clause 11.8 and Clause 25 Schedule 11.1)	43
6.2.	Provision of NSP information (Clause 26(1) and (2) Schedule 11.1)	43
6.3.	Notice of balancing areas (Clause 24(1) and Clause 26(3) Schedule 11.1)	44
6.4.	Notice of supporting embedded network NSP information (Clause 26(4) Schedule 11.1).....	44
6.5.	Maintenance of balancing area information (Clause 24(2) and (3) Schedule 11.1)	45
6.6.	Notice when an ICP becomes an NSP (Clause 27 Schedule 11.1)	45
6.7.	Notification of transfer of ICPs (Clause 1 to 4 Schedule 11.2)	46
6.8.	Responsibility for metering information for NSP that is not a POC to the grid (Clause 10.25(1) and 10.25(3))	46
6.9.	Responsibility for metering information when creating an NSP that is not a POC to the grid (Clause 10.25(2))	47
6.10.	Obligations concerning change in network owner (Clause 29 Schedule 11.1)	47
6.11.	Change of MEP for embedded network gate meter (Clause 10.22(1)(b))	48
6.12.	Confirmation of consent for transfer of ICPs (Clauses 5 and 8 Schedule 11.2)	48
6.13.	Transfer of ICPs for embedded network (Clause 6 Schedule 11.2).....	49
7.	Maintenance of shared unmetered load	50
7.1.	Notification of shared unmetered load ICP list (Clause 11.14(2) and (4))	50
7.2.	Changes to shared unmetered load (Clause 11.14(5)).....	50
8.	Calculation of loss factors	51
8.1.	Creation of loss factors (Clause 11.2).....	51
Conclusion	52
Participant response	52

EXECUTIVE SUMMARY

This audit was performed at the request of Top Energy (TOPE), as required by clause 11.10 of Schedule 11, to assure compliance with the Electricity Industry Participation Code 2010. The relevant rules audited are as required by the Guidelines for Distributor Audits, version 7.0, issued by the Electricity Authority.

Top Energy created 362 new ICPs on its network. During the audit Top Energy made it clear that the company's policy is to have the registry information correct as per clause 11.2 of the Code. In some instances, this would mean having to backdate registry transactions, but this is considered secondary to the objective of having accurate information in the registry. This has led to some non-compliances which we would term as technical non-compliance.

The company implemented a rigid process of comparing Club ICP information with the registry last year. There are a number of reports used by Top Energy to monitor the accuracy of information in the registry, but some areas, such as embedded generation (solar) or "disappearing" UML data in the registry, needs more attention. It appears that Club ICP has an anomaly of deleting entries in the network part of the registry when new updates are uploaded. It is a known problem and it needs to be continued to be monitored, until a solution is found, working together with Hexagon.

Overall compliance has improved thanks to a number of reports used by Top Energy to proactively monitor the accuracy of information in the registry.

Seven non-compliances were found and two recommendations recorded. It is more than last year. This is because a new audit template provided by the Authority was used to create this report. This template has been separating some previous non-compliances out, which resulted in two non-compliances instead one in this report. Overall the level of compliance has improved.

We thank Top Energy for its full and complete cooperation in this audit.

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)	Unmetered load information is missing, incorrect information for embedded generation (solar)	Moderate	Low	2	Identified
Requirements to correct errors	0	11.2(2)	Incorrect data is proactively corrected but there are some outstanding issues effecting a small number of ICPs identified in the last audit	Moderate	Low	2	Identified
Timeliness of provision of Initial Electrical Connection Date	0	7(2A) of Schedule 11.1	Five ICPs out of 362 new connection had Initial Electrical Connection Date populated later than 10BD	Strong	Low	1	Identified
Changes to registry information	4.1	8 of Schedule 11.1	Some updates to the registry were done later than 3BD. These were mostly updates of the Status “decommissioned” and clean-up of Initial Electrical Connection Date after the last audit	Moderate	Low	2	Identified
ICP location address	4.4	2 of Schedule 11.1	Four ICPs have identical addresses and for one ICP the address description does not allow the ICP to be readily located (GPS coordinates recorded)	Strong	Low	1	Identified
Distributor to provide ICP information to the registry manager	4.6	7(1) of Schedule 11.1	Incorrect information in the registry in relation to Initial Electrical Connection Date, connection of solar panels, UML	Moderate	Low	2	Identified
Management of “ready” status	4.9	14 of Schedule 11.1	Top Energy receives confirmation from a trader accepting responsibility for the ICP	Moderate	Low	2	Identified

			after the registry changes the ICP status to “ready” because a proposed trader specified by a customer was uploaded				
Future Risk Rating						12	

Future risk rating	1-2	3-6	7-9	10-19	20-24	25+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

RECOMMENDATIONS

Subject	Section	Recommendation	Description
Timeliness of provision of Initial Electrical Connection Date	0	Verify the date of Initial Electrical Connection Date in the registry for ICP 0000008513TEAC0	The date of electrical connection and the date the status changed to “Active” is one day earlier than IECD populated in the registry.
Management of “new” status	3.13	Investigate four ICPs with the status “new”, which were created this year	Four ICPs created this year have the status “new”, which is not in line with the new connection process

ISSUES

Subject	Section	Issue	Description

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.

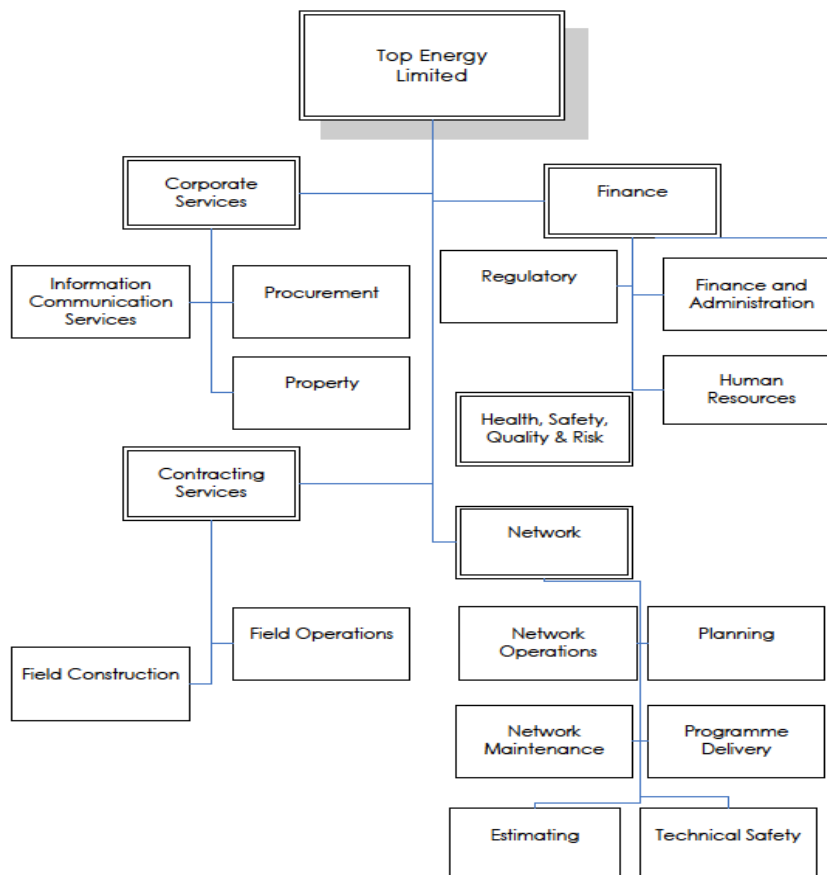
Audit observation

It was discussed with Top Energy and it was confirmed that there are no exemptions in place which are relevant to the scope of this audit.

Audit commentary

We checked the Electricity Authority website and confirm that there are no exemptions in place.

1.2. Structure of Organisation



1.3. Persons involved in this audit

Name	Title	Company	Comment
Paul Doherty	General Manager Finance	Top Energy Ltd	Contact person
Helen Rush	Administrator	Top Energy Ltd	
Caroline Pusch	Administrator	Top Energy Ltd	
Sarah Da Silva	Metering Services Co-ordinator	Top Energy Ltd	
Sandra Dearly	GIS Technician	Top Energy Ltd	
Esther Delamain	Business Analyst	Top Energy Ltd	
Ewa Glowacka	Electricity Authority Approved Auditor	TEG & Associates Ltd	

1.4. Use of contractors (Clause 11.2A)

Code reference

Clause 11.2A

Code related audit information

A participant who uses a contractor

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

Audit observation

There are no contractors who assist with, or are used in, Top Energy operations that were audited.

Audit commentary

During the audit, we did not identify any contractors which assist Top Energy to meet their obligations that are relevant to the scope of this audit.

1.5. Supplier list

Club ICP is supported by Hexagon

DigSILENT is provided by Powerfactory

1.6. Hardware and Software

Oracle Server is used to run the ICP database and retrieve reports from the registry.

- Club ICP is supported by Hexagon; it is used for managing the ICP database and connections to the registry.
- DigSILENT Powerfactory – network management tool for modelling electricity flows and recording specifications for equipment used to transfer electricity.

1.7. Breaches or Breach Allegations

Top Energy confirms there are no exemptions in place, relevant to the scope of this audit.

1.8. ICP and NSP Data

Distributor	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	No of ICPs
TOPE	KOE1101	Kaikohe			KOE1101TOPEG	G	01/04/2012	32,959

Top Energy provided a list of all ICP's as of the 30 August 2017. The total number of ICPs in the registry was 37,212.

Status	Number of ICPs (11/09/2017)	Number of ICPs (2016)	Number of ICPs (2015)
New (999,0)	31	36	144
Ready (0,0)	159	84	57
Active (2,0)	31,633	31,325	31,024
Distributor (888)	1	1	1
Inactive – new connection in progress (1,12)	15	5	14
Inactive – electrically disconnected vacant property (1,4)	1,000	979	1,001
Inactive – electrically disconnected remotely by AMI meter (1,7)	47	4	0
Inactive – electrically disconnected at pole fuse (1,8)	8	1	2
Inactive – electrically disconnected due to meter disconnected (1,9)	4	0	0
Inactive – electrically disconnected at meter box fuse (1,10)	0	0	0
Inactive – electrically disconnected at meter box switch (1,11)	1	0	0
Inactive – electrically disconnected ready for decommissioning (1,6)	60	49	73
Inactive – reconciled elsewhere (1,5)	0	0	0
Decommissioned (3)	4,253	4,215	4,095

1.9. Authorisation Received

Top Energy provided a letter of authorisation to the auditors permitting the collection of data from other parties for matters directly related to the audit.

1.10. Scope of Audit

This audit was performed at the request of Top Energy (TOPE) as required, by clause 11.10 of Part 11, to assure compliance with the Electricity Industry Participation Code 2010. The audit covers the following processes under clause 16A.23 of Part 16A, performed by Top Energy:

- (a) -The creation of ICP identifiers for ICPs
- (b) -The provision of ICP information to the registry and the maintenance of that information
- (c) - The creation and maintenance of loss factors

The audit was carried out on the Top Energy premises at the John Butler Centre in Kerikeri, and Puketona, on the 11/12 September 2017.

1.11. Summary of previous audit

The previous audit was carried out on 7/8 September 2016, by Ewa Glowacka (TEG & Associates Ltd). The findings of the audit are shown below:

Subject	Clause	Non-compliance	Cleared
ICP information in registry	7(1)(m)(p) of Schedule 11.1 & 11.2 of Part 11	For some ICPs, UML details not recorded in the registry, Initial Energisation Date for 2 ICPs were missing. Incorrect installation date for solar panel for 10 ICPs	Still existing
Distributor to change ICP information provided to registry	8(2)(b) of Schedule 11.1	Some updates to ICP information were not performed within 3 BDs	Still existing
ICP location address	2 of Schedule 11.1	2 ICPs do not have addresses that allow the ICP to be readily located	Still existing
Updating table of price category codes	23 of Schedule 11.1	7 new price category codes were uploaded to the registry later than 2 months of the date they take effect	Cleared

Subject	Clause	Recommendation for improvements	Cleared
ICP location address	2 of Schedule 11.1	To upload GPS coordinates or more precise street/road description for 23 ICPs for PCM and Phone Booths	Still existing

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

Compliance with these clauses was reviewed to assess if all practicable steps had been taken to provide accurate information.

Audit commentary

Our overall comment is that Top Energy is committed to having complete and accurate information in the registry. As always, there is room for improvement, but it would be unfair to say that company does not take all practicable steps to ensure that the information that is provided to other parties is complete and accurate. Top Energy runs a really “tight ship” in the area of new connections. Making sure that no installation is electrically connected without a traders’ request and having received information from the field promptly. There are a number of reports used by Top Energy to monitor the accuracy of information in the registry, more details are in the section below, but some areas such as, embedded generation (solar) or “disappearing” UML data in the registry, needs more attention. A lot of work was done to remove incorrect Initial Electrical Connection Dates in the registry, which was identified in the last audit. Incorrect dates were removed from 29,237 ICPs which had been deleted but there are still a small number left.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.1 With: 11.2(1) From: 16-Aug-16 To: 31-Aug-17	Unmetered load information is missing, incorrect information for embedded generation (solar) Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	We have recorded the controls as moderate. There are good reports in place to monitor the accuracy of data but there are still some areas which need more attention; no impact on settlement market because of the small number of ICPs therefore audit risk rating is recorded as low		
Actions taken to resolve the issue		Completion date	Remedial action status
As the audit mentioned, a lot of effort has been applied to achieve compliance in this area. Further actions for the year ahead: <ul style="list-style-type: none"> - Discuss with software vendor to add a field to track solar installs within Club ICP - Talk to MEP's re updating registry when meter is changed - Continue to work with councils and road authorities to improve unmetered records - Re-enter IECD's that are missing 		31 Mar 2018	Identified
		Ongoing	
		31 Dec 2018	
Preventative actions taken to ensure no further issues will occur		Completion date	
We will continually review and improve our processes and invest in training to enhance our skills and knowledge of the code.		Ongoing	

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

To be proactive and to correct errors, Top Energy, on a weekly basis runs reports to check information from the registry against Club ICP. These reports include duplicate addresses, status differences, price category codes, ICPs that have been electrically connected that have not been made “active” in the registry.

Every three weeks another set of reports is run checking Club ICP information against the registry information such as “ready” no trader, “active” no Initial Electrical Connection Date (IECD) in the registry, ICP status “1,6”, “active” no IECD in Club ICP.

Having such a thorough set of reports definitely assists in identifying errors or missing information at an early stage and correcting it. There are still some areas for improvement such as, Initial Electrical Connection Date or solar connections, embedded generation.

Audit commentary

As described in the previous section, Top Energy is proactively working towards reducing the amount of incorrect or missing information in the registry. There are still outstanding data corrections (small number of ICPs) identified in the last audit such as Initial Electrical Connection Date.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.2 With: 11.2(2) From: 16-Aug-16 To: 30-Aug-17	Incorrect data is proactively corrected but there are some outstanding issues effecting a small number of ICPs identified in the last audit Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	We have recorded the controls as moderate. There are good processes in place which require some enhancements; minor if at all impact on traders and settlement outcome, therefore audit risk rating is recorded as low		
Actions taken to resolve the issue		Completion date	Remedial action status
As the audit mentioned, a lot of effort has been applied to achieve compliance in this area. Further actions for the year ahead: <ul style="list-style-type: none"> - Provide refresher training for the new staff on the ICP creation process - Continue to review reports to identify errors - Look at changing the time of day the upload/download process is completed to eliminate date variances 		31 Dec 2018	Identified
		Ongoing	
		31 Mar 2018	
Preventative actions taken to ensure no further issues will occur		Completion date	
We will continually review and improve our processes and invest in training to enhance our skills and knowledge of the code.		Ongoing	

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

A request for a new connection is made by the customer, or his/her representative (usually electrician), using the Application Form for Network Connection. The Application can be received by mail, fax, e-mail or in person (owner or electrician).

At the time of requesting an ICP for new connection, a customer is requested to specify from which trader they plan to buy electricity. Once an application is received it is passed to an estimator to assess if there is enough transformer capacity in the area. If there is sufficient connection capacity, an ICP identifier is created straight away. 20% of applications for new connections are in this category.

A new installation which requires additional work and design is managed separately and investigation work on site is conducted. If any work is required a quote is sent to the customer. The customer's contribution is required to be paid before the work commences. Once the payment is made an ICP identifier is created. After a customer receives an ICP for a connection (via email or over the phone), he/she communicates with the chosen trader.

There has been a change in the process. In previous years estimators were part of the contracting division of the company. Now they are a part of the network division therefore they review both applications for a very "simple" connection and more complex connections, which require additional cabling or line work.

Top Energy uses the Club ICP to create ICPs identifiers for connections on its network.

Audit commentary

We reviewed 20 new installations to confirm that the process described above is followed. We confirm that process was followed. There are more details in section 3.4.

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 3 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

An ICP identifier is issued to a customer or electrician not a participant.

Audit commentary

This clause is not applicable to Top Energy because an ICP identifier is issued to a customer or his/her representative.

Audit outcome

Not applicable

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

Top Energy staff use Club ICP to create new ICPs based on information provided by a customer in the Application for Network Connection. Club ICP creates the UIS file and it is uploaded to the registry overnight to create the ICP in the registry.

At the time of creating a new ICP all information (including a proposed trader provided by a customer at the time of application) is known therefore the registry assigns the status “Ready” to the loaded ICP.

Audit commentary

We reviewed the EDA file for the period 16/8/16 to 31/8/17 and the LIS file dated 30 August 2018 and confirm, all required information is entered in a timely manner. This is covered in more detail later in the report.

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

We “walked” through, step by step, 20 new connections to assess if ICPs were created prior to when it was traded. We reviewed all documents and email exchanges between parties. The summary information is shown below:

ICP	ICP creation date	SR from a trader	Electrically connected
0000008168TED48	16/08/2016	26/10/2010	31/10/2016
0000008177TE83B	31/08/2016	06/09/2016	18/10/2016
0000008195TE204	14/09/2016	25/11/2006	28/11/2016
0000008219TE753	03/10/2016	07/10/2016	03/02/2017
0000008243TEDCA	19/10/2016	25/10/2016	28/10/2016
0000008268TEE4B	14/11/2016	22/11/2017	23/11/2016
0000008299TE219	25/11/2016	09/12/2016	13/12/2016
0000008326TE671	13/12/2016	19/12/2016	02/03/2017
0000008345TE541	20/12/2016	09/01/2017	31/01/2017
0000008361TE91E	20/01/2017	02/06/2007	16/06/2017
0000008382TEF64	09/02/2017	03/03/2017	15/03/2017
0000008391TE909	14/02/2017	04/04/2017	15/05/2017
0000008435TEF1E	13/03/2017	10/04/2017	21/04/2017
0000008454TECAB	22/03/2017	13/07/2017	20/07/2017
0000008488TE2F7	13/04/2017	24/04/2017	26/04/2017
0000008534TEA5F	16/05/2017	17/05/2017	31/05/2017
0000008603TE36E	23/06/2017	09/08/2017	16/08/2017
0000008604TEEA4	26/06/2017	30/06/2017	05/07/2017
0000008620TE2FB	11/07/2017	18/07/2017	10/08/2017
0000008513TEACO	03/05/2017	12/05/2017	22/05/2017

Audit commentary

Top Energy has a well structure process for new connections which is followed to the letter. The Registry always receives ICP information before electricity being traded at the ICP. Analysis of the EDA file confirmed this.

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

We randomly chose 20 new installations, which were electrically connected within the last 12 months, to check timelines of the provision of Initial Electrical Connection Date to the registry. The results are shown below.

ICP	Electrically connected	Initial Electrical Connection Date populated in the registry (IECD)
0000008168TED48	31/10/2016	02/11/2016
0000008177TE83B	18/10/2016	31/10/2016
0000008195TE204	28/11/2016	30/11/2016
0000008219TE753	03/02/2017	08/02/2017
0000008243TEDCA	28/10/2016	03/11/2016
0000008268TEE4B	23/11/2016	25/11/2017
0000008299TE219	13/12/2016	15/12/2016
0000008326TE671	02/03/2017	08/03/2017
0000008345TE541	31/01/2017	13/02/2017
0000008361TE91E	16/06/2017	23/06/2017
0000008382TEF64	15/03/2017	20/03/2017
0000008391TE909	15/05/2017	17/05/2017
0000008435TEF1E	21/04/2017	28/04/2017
0000008454TECAB	20/07/2017	24/07/2017
0000008488TE2F7	26/04/2017	28/04/2017
0000008534TEA5F	31/05/2017	02/06/2017
0000008603TE36E	16/08/2017	21/08/2017
0000008604TEEA4	05/07/2017	07/07/2017
0000008620TE2FB	10/08/2017	14/08/2017
0000008513TEAC0	22/05/2017	23/05/2017

We noted that for ICP 0000008513TEAC0, the date of the status change to “Active” is one day earlier than the date of Initial Electrical Connection Date populated in the registry. It is probably a mistake. It is our recommendation to check the documentation from the inspector.

As part of further compliance assessment, we checked timeliness of IECD for all new connections. There were 362 new connections. For five new connections (ICPs) the Initial Electrical Connection Dates were populated later than 10 BD.

ICP	IECD	Registry updated	BD
0000008342TE88B	06/03/2017	27/03/17	-16
0000008343TE4CE	06/03/2017	27/03/17	-16
0000008344TE904	21/06/2017	17/07/17	-19
0000008406TE426	28/02/2017	27/03/17	-20
0000008448TE518	07/04/2017	01/05/17	-17

Top Energy’s process is very thorough. Each job is recorded in a spreadsheet, which contains all details. A separate spreadsheet is created for each day to keep track of all jobs. The Initial Electrical Connection Date is recorded in the spreadsheet, Club ICP is updated the same day.

Audit commentary

Top Energy has a good process for new connections and the population of Initial Electrical Connection Date but we identified five ICPs for which the date was populated later than 10 BD. In theory, such an omission should be picked up by the monitoring reports but, somehow, they did but it was late.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.5 With: 7(A) of Schedule 11.1 From: 23-Dec-16 To: 21-Jun-17	Five ICPs out of 362 new connections had Initial Electrical Connection Date populated later than 10BD Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	We have recorded the controls as strong. There are reports in place to monitor compliance in this area but maybe they should be run more often or maybe the correction of errors is too slow; Settlement outcome not effected therefore audit risk rating is recorded as low.		
Actions taken to resolve the issue		Completion date	Remedial action status
As the audit mentioned, a lot of effort has been applied to achieve compliance in this area with the implementation of strong controls. Further actions for the year ahead: <ul style="list-style-type: none"> - Review process for CT meters as we do not control these installations 		31 Mar 2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We will continually review and improve our processes and invest in training to enhance our skills and knowledge of the code.		Ongoing	

Recommendation	Description	Audited party comment	Remedial action
Verify the date of Initial Electrical Connection Date in the registry for ICP 0000008513TEACO	The date of electrical connection and the date of the status changed to "Active" is one day earlier than the IECD populated in the registry.	The IECD for ICP 0000008513TEACO has been corrected to 22/05/2017	N/A

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.

Audit observation

A review of the new connection process confirmed compliance with clause 11.17(1A) because it does follow the process in clause 10.31 and connects ICPs on trader's request. Before an ICP is connected Top Energy receives a request (SR) from a trader asking for a connection, electrical connection, and installing meters. In this scenario, Top Energy acts as a trader's agent to electrically connect an installation. Before a job is issued, it is checked that the trader requesting the electrical connection is the same as the one recorded in the registry. If it is not the case, it is confirmed and if necessary the registry is updated. Once the job is completed the paperwork, with installation details including meter serial number, is emailed to the trader.

Audit commentary

We checked transactions in the EDA file related to uploading of ICPs and did not identified any ICPs with the status "ready", which were backdated. Our conclusion is that Top Energy is compliant with 11.17 (2)

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.

Audit observation

Top Energy is very strict when new connections are connected. Unless the company receives a SR from the trader recorded in the registry, no job is created for Top Energy's inspector to go on site. All traders' requests go through VircomEMS, which is easier than in previous years. It allows Top Energy to streamline their processes.

Audit commentary

We reviewed the documented new connection process, which is robust. We walked through 20 new installations and confirm that the process is followed.

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.*

Audit observation

Top Energy has not been asked to temporarily electrically connect any installation since the last audit.

Audit commentary

If Top Energy is asked by an MEP to temporarily electrically connect it would, but it has not occurred.

Audit outcome

Compliant

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

Code reference

Clause 10.30

Code related audit information

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

The distributor must, within 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

Top Energy does not have any NSP on its network that is not a point of connection to the grid.

Audit commentary

Compliance was not assessed because Top Energy does not have such NSPs.

Audit outcome

Not applicable

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

Top Energy does not have any NSP on its network that is not a point of connection to the grid.

Audit commentary

Compliance was not assessed because Top Energy does not have such NSPs.

Audit outcome

Not applicable

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:

yyyyyyyyyyxxccc where:

- *yyyyyyyyyy 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 LIS file was examined. There is a unique distributor code used within the Top Energy area, this is "TE". The ICP is created by the ICP Club application in prescribed format.

Audit commentary

Club ICP creates ICPs based on a sequential number, unique distributor code and checksum, which is generated according to the algorithm. The algorithm was provided by the Market Administrator. If an ICP does not meet the requirements of the algorithm, it is rejected by the registry.

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 LIS registry file date 30 August 2017 was examined and we confirm compliance. We would like to note that the registry design prohibits the assigning of more than a single loss category code to an ICP.

Audit commentary

All ICPs recorded in the registry have a single loss category code except ICPs with the status “Decommissioned”.

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

According to new connection process Top Energy does not use the status “new” because all relevant information, including a proposed retailer, are uploaded to the registry which assigns the status “ready”.

Upon analysis of the LIS file, dated 30 August 2017, we identified ICPs (0000008366TE4D4, 0000008442TE789, 0000008443TEBCC and 0000008582TE962) with the status “new”. They were created in the period between January to June this year.

Audit commentary

We discussed with the company why these four ICPs have the status “new”, which should not be the case. The comment was that these ICPs appear to have been “forgotten” during a transition from the Contracting Division and the Network Division. It seems that at the time of the application for the supply, customers did not specify a proposed retailer. Top Energy is certain that none of these ICPs is electrically connected because they are the only ones who are authorised to do it.

Our recommendation is to investigate these four ICPs in question. It could be that there is a gap in the new connections process.

Audit outcome

Compliant

Recommendation	Description	Audited party comment	Remedial action
Investigate four ICPs with the status "new", which were created this year	Four ICPs created this year have the status "new", which is not in line the new connection process	The four ICP's have been corrected.	N/A

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

We examined the LIS file dated 30 August 2017. We identified 9 ICPs with the status "ready" and 25 ICPs with the status "new".

Audit commentary

Last year Top Energy sent a letter to all customers and traders to ask if the ICPs were still required. Some customers or traders replied some of them did not. Due to the results of last year actions, the number of ICPs with the status "new", decreased from 75 to 17. Last year the number of ICPs with the status "ready" was 2, this year it is 9. This year Top Energy is planning to write a letter to customers and email to traders asking for their commitment if they are still planning to use these ICPs. Top Energy definitely has a process in place, it is just a matter of time and patience to follow through.

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:*
 - *the unique loss category code assigned to the ICP*
 - *the ICP identifier of the ICP*
 - *the NSP identifier of the NSP to which the ICP is connected*
 - *the plant name of the embedded generating station.*

Audit observation

We examined the LIS file dated 30 August 2017. Top Energy does not have an embedded generation station that has a capacity of 10 MW or more on its network.

Audit commentary

Compliance was not assessed because Top Energy does not have an embedded generation station that has a capacity of 10 MW or more on its network.

Audit outcome

Not applicable

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 3 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 8 business days after the change takes effect.

If the change to the NSP identifier is for more than 14 days, the time within which notification must be effected in accordance with Clause 8(3) of Schedule 11.1 begins on the 15th day after the change.

Audit observation

We examined the EDA file for the period of 16/8/16 to 31/8/17 to assess compliance. The results are shown below:

Activity	No of updates	No of updates later than 3BD	Date range of updates [BD]	Comment
Address	6,257	700 (11.18%)	4 to 3683	The most backdated changes relate to decommissioned ICPs or change of GPS coordinates
Network	32,996	34 (0.1%)	4 to 756	Last year 1.9% of updates were backdated.
Pricing	4,036	1,175 (29.1%)	4 to 370	Last year 1.95% of updates were backdated.
Status (0)	477			Always notified before electricity traded at the ICP
Status (999)	430			Always notified before electricity traded at the ICP. Club ICP always uploads two files even if a proposed trader is recorded in Club ICP at the time of the ICP creation
Status (3)	58	55 (94.8%)	4 to 741	Last year 66.0% of updates were backdated.

Audit commentary

Pricing –. for 95.7% of ICPs the price code change is no more than 22BD. The company policy is not to backdate requests beyond 3BD but if a trader request a date within the same calendar month, it is accepted because it is the same billing period. If the price category code is incorrect, financial arrangements are put in place outside of the registry.

Network – the bulk of network updates was the removal of 29,237 incorrect Initial Electrical Connection Dates in the registry (15/9/16) and 994 on 10/10/16. It was a follow-up from the last audit. The rest of the updates (2,765) were a mixture of Initial Electrical Connection Date, embedded generation information, unmetered load and others. There were only four transactions backdated between 133 and 756BD. We reviewed all of them with Top Energy and it was a mixture of changing of the proposed trader, which Club ICP does not handle well and an update from Contact Energy. There will always be exceptions like that, which is difficult to classify.

Top Energy has only one NSP, KOE1101, therefore clause 8(3) of Schedule 11.1 is not applicable.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.1 With: 8 of Schedule 11.1 From: 16-Aug-16 To: 31-Aug-17	Some updates to the registry were done later than 3BD. They were mostly updates of the Status “decommissioned” and a clean-up of Initial Electrical Connection Date after the last audit Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	We recorded controls as moderate. The company tries to restrict the number of backdated updates but to have the registry information correct as per clause 11.2 of the Code is more important. No impact on settlement outcome therefore audit risk rating recorded as low		
Actions taken to resolve the issue		Completion date	Remedial action status
Our policy remains that of achieving an accurate Registry as this is our understanding of the expectations of the Electricity Authority. No further actions are planned over and above our current process as in the attempt to have accuracy (through data cleansing), these events will occur from time to time.			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We will continue to meet the objective of an accurate Registry even though at times this may mean an audit non-compliance at times.		Ongoing	

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

Top Energy has only one NSP on its network, KOE1101. It is very clear, at the time of ICP creation, to which NSP the ICP will be connected.

Audit commentary

Top Energy has only one NSP so there is no issue when assigning an NSP at the time of ICP creation.

Audit outcome

Compliant

4.3. Customer queries about ICP (Clause 11.31)

Code reference

Clause 11.31

Code related audit information

The distributor must advise a customer (or any person authorised by the customer) or embedded generator of the customer or embedded generator's ICP identifier within 3 business days after receiving a request for that information.

Audit observation

Any request from a customer for advice on an ICP for an existing connection is answered immediately, while the customer is on the phone.

Audit commentary

Calls from customers do not happen often but Top Energy receives many phone calls from traders or electricians asking them to confirm an ICP or asking for additional information or clarification.

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 LIS file, dated 30 August 2017, was examined. We identified 4 ICPs with identical addresses (two pairs). They are ICPs assigned to payphones in Paihia. No GPS coordinates were recorded to allow them to be easily located.

There are 13 ICPs whose addresses do not allow the ICP to be readily located but they all have GPS coordinates recorded in the registry except one, 0000008434TE35B.

Audit commentary

The work, which Top Energy have done over the last few years in this area, has brought excellent results. Non-compliance is identified for a very small number of ICPs. We believe that this area will be fully compliant in the next few months.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.4 With: 2 of Schedule 11.1 From: 16-Aug-16 To: 31-Aug-17	Four ICPs have identical addresses and for one ICP the address description does not allow the ICP to be readily located (GPS coordinates recorded) Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating:1		
Audit risk rating	Rationale for audit risk rating		
Low	We have recorded the controls as strong. There are reports in place to monitor compliance in this area and only a small number of ICPs require correction; Settlement outcome not effected therefore audit risk rating is recorded as low		
Actions taken to resolve the issue		Completion date	Remedial action status
As per our last audit, we continue to actively apply GPS co-ordinates to newly created ICP's, or when they are visited for maintenance.		Ongoing	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	

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

There are no known situations where an ICP could not be de-energised without the de-energisation of another ICP. The company policy precludes such a situation.

Audit commentary

This clause has been in place for a number of years and Top Energy was always found compliant. Before a new ICP is created, a connection is validated (visually) in GIS to make sure that such situation does not occur.

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 from metering information*
 - c) *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 types*
 - c) *the initial electrical connection date of the ICP (Clause 7(1)(p) of Schedule 11.1).*

Audit observation

The LIS and Metering Information files (PR-255) dated 30 August 2017 were examined to assess compliance.

We identified the following areas where information was incomplete or missing:

1. No UML details in the "Unmetered Load Details – distributor" field in the registry for 145 ICPs but traders recorded daily units. Some of them were corrected during the audit but we are unsure as to how many. There is a possibility that some data was removed by Club ICP in November 2011;
2. 30 ICPs have Import/Export meters installed and programmed as EG. Similar
3. ICP 0000007446TEFE3 has the Dedicated flag "Y". There is only one ICP assigned as the dedicated supply. For the rest of the ICPs the dedicated flag is "N". It does not matter because Top Energy has only one NSP.
4. Initial Electrical Connection Date – incorrect for 27 ICPs. These ICPs were created in 1999 so it is rather unlikely that some of them were first electrically connected for example in 2016. Our observation is that it is the date that solar panels were installed.

Audit commentary

Similar non-compliances were identified during the last audit. The population of information for EG is a mixture of data not populated at all or deleted by Club ICP during following updates. Top Energy installs import/export meters therefore information is available. It appears that Club ICP is not configured appropriately for solar connection information therefore it is even more important to design good monitoring tools.

Last year we identified a discrepancy between the date of solar panel connections and the date entered by Top Energy. We randomly chose 10 solar installations connected this year and compared the date of installation of import/export meter and the date of solar connection in the registry. It appears that the previously identified problem is still there.

ICP	Date of solar connection in TOPE records	Date of solar connection in the registry
0000006692TE80C	08/06/2017	15/09/2016
0000732170TEF96	08/08/2017	10/08/2017
0000006155TED2B	26/06/2017	30/06/2017
0000530140TE3F6	13/02/2017	04/07/2017
0000941460TE271	29/08/2017	01/09/2017
0000740800TEA3B	13/02/2017	28/02/2017
0000783560TE693	14/03/2017	23/03/2017
0000497430TE54A	10/01/2017	11/01/2017
0000263350TE7C3	22/03/2017	24/03/2017
0000005164TE476	25/07/2017	28/07/2017

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 4.6</p> <p>With: 7(1) of Schedule 11.1</p> <p>From: 16-Aug-16</p> <p>To: 30-Aug-17</p>	<p>Incorrect information in the registry in relation to Initial Electrical Connection Date, connection of solar panels, UML</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>We have recorded the controls as moderate. There are reports in place to monitor compliance in this area but based on results it appears that these reports are not very effective; Settlement outcome not effected therefore audit risk rating is recorded as low</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>As the audit mentioned, a lot of effort has been applied to achieve compliance in this area. Further actions for the year ahead:</p> <ul style="list-style-type: none"> - Discuss with software vendor to add in a field for solar installation dates / information - See why registry is using upload date rather than install date as this is the cause of several non-compliances. 		31 Mar 2018	Identified
Preventative actions need to be taken to ensure no further issues will occur		Completion date	
<p>We will continually review and improve our processes and invest in training to enhance our skills and knowledge of the code. We are also reviewing our ICP Management software requirements over the next 12 months.</p>			

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

As a part of the new connections process, Top Energy assigns the actual price category code and the actual chargeable capacity, if applicable, of the ICP at the time an ICP is created.

Audit commentary

The actual price category code is assigned based on information given by a customer. Connections with customers with higher capacity are discussed separately before an ICP is created. We identified only three ICPs with a higher capacity charge than 63 kVA, 75 ICPs with chargeable capacity 63 kVA.

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 LIS file dated 30 August 2017 was reviewed. All ICPs with the status “active” or “de-energised” have the GPS coordinates field populated. Decommissioned ICPs do not have GPS coordinates recorded.

Audit commentary

We confirm that GPS coordinates meet the NZTM2000 as per registry specification.

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 process adopted by Top Energy is that when an ICP is uploaded to the registry it contains all the information which allow the registry to assign the status of "ready". The ICP has a single price category code but Top Energy does not have it in writing, at this point in time, that the trader will take responsibility for the ICP. Trustpower rings Top Energy and confirms that they were contacted by a customer and sends an email confirming acceptance of an ICP. Genesis simply updates the registry status to "new connection in progress" and then sends SR via VircomEMS.

According to the EDA file, a single price category code is recorded by Top Energy, when the ICP information is uploaded to the registry

Audit commentary

A trader is notified when a new ICP is created and a customer specifies them as a trader from whom they want to buy electricity, which not exactly an agreement from a trader to take responsibility for the ICP. The safeguard of not connecting an ICP without a trader accepting responsibility is the fact that Top Energy's inspectors only connect and electrically connect an installation after receiving a service request from a trader. Top Energy controls any activities on its network very well.

Top Energy does not have a "blanket" agreement with any trader to accept new ICPs.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.9 With: 14 of Schedule 11.1 From: 16-Aug-16 To: 31-Aug-17	Top Energy receives confirmation from a trader accepting responsibility for the ICP after the registry changes the ICP status to “ready” because a proposed trader specified by a customer was uploaded Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	We have recorded the controls as moderate. Top Energy has a good process in place to receive confirmation from a trader accepting responsibility for the ICP but it is received after an ICP has the status changed to “ready” in the registry. Audit risk rating low, no impact on settlement outcomes		
Actions taken to resolve the issue		Completion date	Remedial action status
We believe that our process and respective controls are strong as we obtain authorisation from the trader prior to livening through a service request.		N/A	Disputed
Preventative actions taken to ensure no further issues will occur		Completion date	
Continue with current process and control.			

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

Top energy has one ICP (0000005544TE522) with the status of “distributor”, representing a connection to an embedded network.

Audit commentary

We checked the LIS file and confirm that the information is correctly populated. The ICP has a reconciliation flag “LE” assigned.

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 process has not changed since the last audit. Top Energy decommissions an ICP upon trader instruction via VircomEMS. Top Energy linemen removes equipment and a trader is notified. On some occasions, a trader may ask Top Energy to check the installation, for example, after receiving a notification from a meter reader that the building “was gone” or meters were gone. In such circumstances, a trader is notified of findings accordingly. From time to time Top Energy has a request from a contractor to dismantle a connection on the customer’s behalf. In such situations Top Energy contacts a trader and a lineman inspects the site and takes appropriate action.

After physically dismantling a connection and notification is sent to the trader, the next step is for a trader to change the registry status to “Inactive-ready for decommissioning”. If, within 2 weeks the status is not changed, a reminder email is sent. Once this is done Top Energy changes the ICP to “decommissioned”.

ICP	SR	Site visit	Trader changed registry status	TOPE registry update
0000007819TE439	24/08/2017	24/08/2016	25/08/16	01/09/16
0000051500TE379	10/11/2016	17/11/2016	28/11/16	14/12/16
0000056802TE294	11/08/2016	12/08/2016	22/08/16	01/09/16
0000222450TE2F4	19/12/2016	24/01/2017	31/01/17	09/02/17
0000320240TE973	31/07/2017	01/08/2007	07/08/17	10/08/17
0000434460TE94A	18/07/2016	19/07/2016	27/07/16	04/08/16
0000474950TE02F	05/07/2016	06/07/2016	13/07/16	02/08/16
0000542440TEFOA	04/08/2016	12/08/2016	16/08/16	01/09/16
0000621710TE80D	15/07/2016	18/07/2016	10/04/14	04/08/16
0000834511TEB98	24/11/2016	25/11/2016	30/11/16	14/12/16
0000880559TE3A0	18/01/2017	21/01/2017	09/02/17	15/02/17
0000946715TED00	08/07/2016	11/07/2016	13/07/16	02/08/16

Audit commentary

The process of decommissioning an ICP is robust and works effectively. Once per week Top Energy checks if traders have updated the registry status to “1,6”. It is a manual process checking each job separately. It is the reason the registry status is not updated within 3 BD, as was described in section 4.1.

Audit outcome

Compliant

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

Code reference

Clause 23 Schedule 11.1

Code related audit information

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

Each entry must specify the date on which each price category code takes effect, which must not be earlier than 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 Codes table in the registry was examined. New price category codes were added as from April 2016, which was covered in the previous audit.

Audit commentary

The last update of the Price Category Code was in March 2016, start date 1 April 2016. Seven new price category codes covered unmetered load, residential standard and low uses, large distribution generation etc.

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

We examined the Loss Factor Codes table in the registry. There were no new entries for Top Energy since 2014.

Audit commentary

Top Energy has 4 Loss Factor Codes in the registry.

- GLV (flat loss factor applies to all ICPs except site-specific) – 1.1320
- IND1 (ICP 0000984310TEBBE and 0000930130TE465) – 1.0273
- IND2 (ICP 0000984000TE210) – 1.0464
- GEN1 – 1.000

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

We examined the Loss Factor Codes table in the registry. Loss factors have single value for a whole year, which cover a range of trading periods. There are no separate loss factors codes for summer or winter.

Audit commentary

Top Energy has not changed loss factors since 2014. The losses were re-calculated in the past, when the network configuration changed. Top Energy considers that what is recorded in the registry is accurate.

Audit outcome

Compliant

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

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

Code reference

Clause 11.8 and Clause 25 Schedule 11.1

Code related audit information

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

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

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

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

We examined the NSP mapping table in the registry. Since the last audit Top Energy did not establish a new, or decommission, an NSP. There is only one NSP on its network.

Audit commentary

Based on examination of the NSP mapping table in the registry it was confirmed that no new NSP was created and no NSP was decommissioned since the last audit

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

Top Energy has not created a new NSP since the last audit, as described in the previous section, therefore the reconciliation manager was not asked to create a unique NSP identifier.

Audit commentary

This clause is not applicable because Top Energy has not created a new NSP since the last audit. Compliance was not assessed.

Audit outcome

Not applicable

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

Top Energy did not create any new NSP in the last 12 months.

Audit commentary

Top Energy did not create any new NSP and it is unlikely that it ever will. Compliance was not assessed.

Audit outcome

Not applicable

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

Top Energy did not create any new NSP or transfer of an ICP to an NSP that is a point of connection between a network and an embedded network owned by the distributor.

Audit commentary

Top Energy did not become the owner of embedded network. Compliance was not assessed.

Audit outcome

Not applicable

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

Top Energy has only one balancing area, KOE1101TOPEG. They were no changes to it.

Audit commentary

Examination of the NSP mapping table in the registry showed that there were no changes to the balancing area in the last 12 months. There is still only one NSP on the Top Energy network.

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

Top Energy has not transferred any ICP which resulted in an ICP becoming an NSP.

Audit commentary

Top Energy did not establish any embedded network. Compliance was not assessed.

Audit outcome

Not applicable

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

Top Energy did not transfer any ICPs.

Audit commentary

Top Energy did not establish any embedded network. There are no such plans. Compliance was not assessed.

Audit outcome

Not applicable

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 are 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

Top Energy does not have any NSPs that are not connections to the grid for which they are responsible.

Audit commentary

This clause is not applicable to Top Energy because they do not have responsibility for an NSP that is not a point of connection to the grid. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

Clause 10.25(2)

Code related audit information

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

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

Audit observation

Top Energy does not have any NSPs that are not connections to the grid for which they are responsible.

Audit commentary

This clause is not applicable to Top Energy because they do not have responsibility for an NSP that is not a point of connection to the grid. Compliance was not assessed.

Audit outcome

Not applicable

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

Since the last audit, Top Energy did not acquire all or part of a new network.

Audit commentary

This clause is not applicable to Top Energy because the situation did not occur. Compliance was not assessed.

Audit outcome

Not applicable

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

Top Energy does not own any embedded network.

Audit commentary

This clause does not apply to Top Energy because they are not owner of embedded network. Compliance was not assessed.

Audit outcome

Not applicable

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

Top Energy did not establish any embedded network.

Audit commentary

This clause does not apply to Top Energy because it did not establish an embedded network in last 12 months. Compliance was not assessed.

Audit outcome

Not applicable

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

Top Energy did not establish any embedded network since the last audit.

Audit commentary

This clause does not apply to Top Energy because it is established an embedded network. Compliance was not assessed.

Audit outcome

Not applicable

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

Historically there is no shared unmetered load on the Top Energy network. The company does not permit the installation of shared unmetered load on its network.

Audit commentary

We examined the LIS file dated 30 August 2017 and confirm, there were no ICPs of shared unmetered load.

Audit outcome

Compliant

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

Code reference

Clause 11.14(5)

Code related audit information

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

Audit observation

As describe in the above section, there is no shared unmetered load on Tope Energy's network.

Audit commentary

This clause does not apply to Top Energy because there is no shared unmetered load on its network and there are no plans to have it. Compliance was not assessed.

Audit outcome

Not applicable

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

Top Energy used the same methodology this year to calculate loss factors as it did for the last few years. The methodology of calculation of loss factors is based on the requirements set out in the Electricity Authority's "Guidelines on the calculation and the use of loss factors for reconciliation purposes V2.1" issued on 1 November 2010.

Top Energy's customers are metered at low and medium voltage. For each of these voltages Loss Factor is calculated. The table below indicates the Loss Factor value applicable to each Loss Factor Code from 1 April 2017. These have derived from load-flow modelling of the distribution network including power transformers, sub-transmission circuits, high voltage feeders, distribution transformers and low voltage distribution reconciliation losses.

Loss Factor Code	Applied to customer connected to	Loss factor
GLV	LV network 230/400V	1.1320
IND1	0000930130TE465 (JNL Mill) 0000984310TEBBE (Triboard Mill)	1.0273
IND2	0000984000TE210 (AFFCO)	1.0464
GEN1	0000003490TE5AE (Ngawha generation)	1.0000

In order to calculate the Technical Losses at each stage of the network, DigSILENT PowerFactory was used. Top Energy's network model is detailed to the HV terminal of distribution transformers.

Reconciliation losses are calculated from the last 24 months' worth of energy injection and consumption information for network.

Audit commentary

We reviewed Top Energy's website and confirm that the brief outline of loss factor calculation is published.

Audit outcome

Compliant

CONCLUSION

PARTICIPANT RESPONSE

We appreciate the constructive nature of the audit and the recognition that overall compliance has improved from last year reflective of the continual improvement focus over the last few years. We do note that we remain non-compliant in a few areas, all of which provide no material reconciliation issues.

Our objective is to maintain an accurate registry and at times this position can lead to audit compliance issues which is frustrating for the team. Their commitment to this objective is to be commended and although there will always be opportunities for improvement, comments such as “Top Energy runs a really “tight ship” in the area of new connections” is testament to this commitment.

We continue to invest in improving our compliance and knowledge of the Code requirements. This includes both attendance at Electricity Authority workshops but also reviewing our system requirements and its suitability for the future. This is a specific focus for the next 12 months.