

ELECTRICITY INDUSTRY PARTICIPATION CODE DISTRIBUTOR AUDIT REPORT

For

VECTOR

Prepared by: Ewa Glowacka of TEG & Associates

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EXECUTIVE SUMMARY

This reconciliation participant audit was performed at the request of Vector to encompass the Authority's request for annual audits, as required in clause 11.10 of Schedule 11 of the Electricity Industry Participation Code 2010, to assure compliance with the Code. The relevant rules audited are as required by the Guidelines for Distributor Audits V7.2, issued by the Electricity Authority.

Vector has two participant codes covering two geographical areas VECT and UNET. VECT is for the Auckland region south of the Harbour Bridge and UNET is for north of the Harbour Bridge plus West Auckland.

The audit identified 11 non-compliances. Overall Vectors' compliance has improved.

Since the last audit the number of ICPs with the Status "Active" has increased by 11,000. On average 1,000 new ICPs are created every month. 1,603 distributed generation applications were received. Covid has slowed down the growth of Vector's network but it is still quite rapid.

Vector have continued to focus on data accuracy and use the Audit Compliance Reports as part of their BAU processes. Data accuracy overall has improved. Vector are working with traders to populate the missing Initial Electrical Connection Dates. As of 3 June, Vector has implemented a new connection process (re-engineered). The re-engineered new connection process requires retailers to accept an ICP in Siebel and nominate a warranted person from the list provided by Vector. The warranted person is required to provide Vector directly with the Initial Electrical Connection Date within 5 BD after liveness. We believe it should have a significant impact on Vectors' non-compliance relating to Initial Electrical Connection Dates (IECD).

Since the last audit Vector have changed the rules for updating the price plan. They will now only back date as far as a year or to the latest price plan change event (whichever is the most recent). The distributed generation process is generally well managed but is reliant on the applicant providing the COC, which often are provided late or not at all.

The audit period is 23/08/2020 to 31/07/2021.

The date of the next audit is determined by the Electricity Authority and is dependent on the level of compliance during this audit. Table 1 of the Guidelines for Reconciliation Participant audit provides some guidance on this matter. The Future Risk Rating score is 21 which results in an indicative audit frequency of 6 months. We have considered this in conjunction with Vector's responses and recommend that the next audit be in 12 months as Vector is addressing the main areas of non-compliance such as Initial Electrical Connection Date and an earlier audit would not add any value to this.

We thank Vector's staff for their full and complete cooperation in this audit. Their response to any request for information or clarification was answered in a timely manner and each time, in depth supporting evidence was provided.

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Requirements to provide complete and accurate information	2.1	11.2	Inaccurate or missing information in the registry for distributed generation, UML, NSP, and Initial Electrical Connection Dates not populated in the Registry.	Moderate	Low	2	Identified
Requirement to correct errors	2.2.	11.2(2)	Incorrect or missing historical information in the registry across a number of areas	Moderate	Low	2	Identified
Participants may request distributors to create ICPs	3.2	11.5(3)	No notification of delay to ICP creation for 30 ICPs requested by traders	Moderate	Low	2	Identified
Provision of ICP information to the registry manager	3.3	11.7	8 UML ICPs did not have details recorded in the registry 3,075 ICPs with no initial electrical connection date	Moderate	Low	2	Identified
Timeliness of Provision of ICP Information to the registry manager	3.4	7(2) of Schedule 11.1	34 ICPs (11 UNET, 23 VECT) not updated on the registry prior to commencement of trading	Moderate	Low	2	Identified
Timeliness of Provision of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	2,858 late updates initial electrical connection dates in the registry, small number of ICPs for which Vector and trader information were different	Moderate	Low	2	Identified

Changes to registry information	4.1	8 of Schedule 11.1	Registry event updates backdated more than three business days	Moderate	Low	2	Identified
Notice of NSP for each ICP	4.2	7(1)(b) of Schedule 11.1	13 out of 20 ICPs sampled were mapped to incorrect NSP	Strong	Low	1	Identified
ICP location address	4.4	2 of Schedule 11.1	1,535 ICPs with addresses that are not readily locatable	Moderate	Low	2	Identified
Distributors to provide ICP Information to the registry manager	4.6	7(1) of Schedule 11.1	Distributed generation details incorrect for a small number of ICPs. 11 UML ICPs did not have details recorded in the registry 5 ICPs (LE) the Dedicated NSP flag incorrectly set to "N" 7 ICPs (GN) incorrectly Dedicated NSP flag set to "Y"	Moderate	Low	2	Identified
Management of "ready" status	4.9	14 of Schedule 11.1	Some ICPs are loaded to the registry with READY status before being accepted by trader in Siebel	Moderate	Low	2	Identified
Future Risk Rating						21	

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

RECOMMENDATIONS

Subject	Section	Recommendation	Description

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

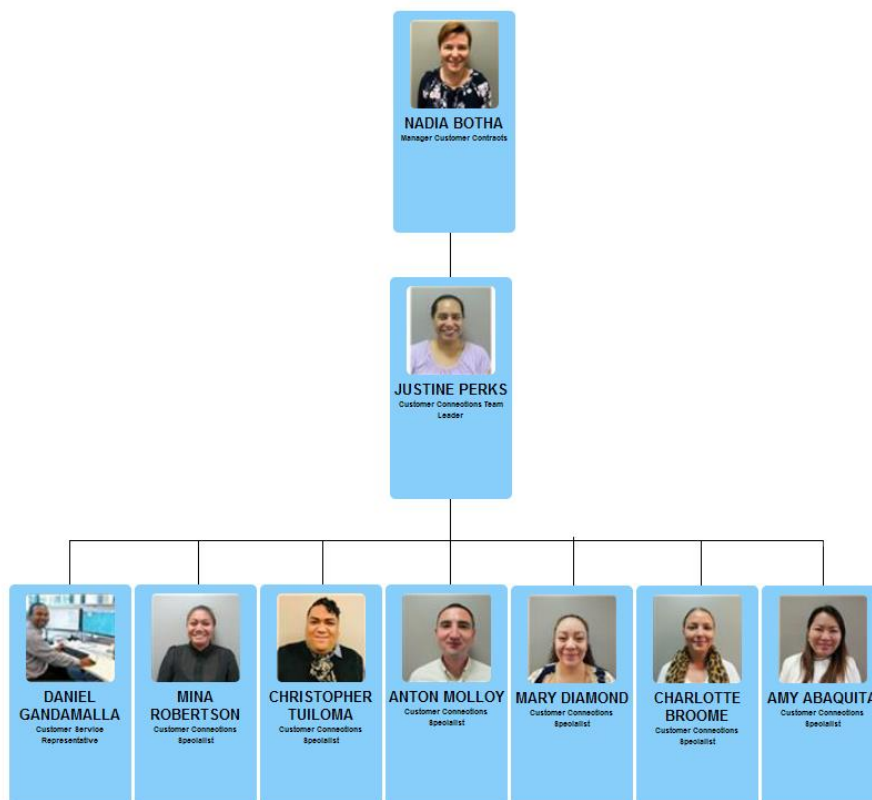
Vector confirms that there are no exemptions in place which are relevant to the scope of this audit.

Audit commentary

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

1.2. Structure of Organisation

Customer Connections Org Chart



1.3. Persons involved in this audit

Name	Title	Company
Justine Perks	Customer Connections Team Leader	Vector Ltd
Michelle Gasson	Billing Team Leader	Vector Ltd
Anton Molloy	Customer Connections Specialist	Vector Ltd
Amy Abaquita	Customer Connections Specialist	Vector Ltd
Christopher Tuiloma	Customer Connections Specialist	Vector Ltd
Daniel Gandamalla	Customer Connections Specialist	Vector Ltd
Mary Diamond	Customer Connections Specialist	Vector Ltd
Jacques de la Bat	Senior Planning Engineer	Vector Ltd
Hayden Oswin	Information Specialist	Vector Ltd
Naomi Achaval Macizo	Lead Information Specialist	Vector 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, the Vector operations that were audited.

Audit commentary

Activities covered by the scope of this audit, including fieldwork and inspection are conducted by Vector employees.

1.5. Supplier list

Gentrack is used by Vector for ICP creation, and the storing of information (transactions) related to ICPs is provided by Gentrack NZ.

1.6. Hardware and Software

Gentrack Velocity is the main software application used for both ICP creation and data maintenance. This software also handles the registry interface and the updating of ICP information in the registry. Vector also uses the CMS (Customer Management System) Siebel, which plays a pivotal role in Vectors'

communication with traders. The GIS system used is called Small World. All systems are accessed by individual passwords.

1.7. Breaches or Breach Allegations

We confirm that there were no breaches related to areas covered by this audit.

1.8. ICP and NSP Data

We examined the NSP mapping table. Vector has two participant codes covering two geographical areas VECT and UNET. VECT is for the Auckland region south of the Harbour Bridge and UNET is for north of the Harbour Bridge plus West Auckland.

UNET

Distributor	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	No of active ICPs
UNET	ALB0331	ALBANY			NORTHRNUNETG	G	01/05/08	60,575
UNET	ALB1101	ALBANY			NORTHRNUNETG	G	01/05/08	3,392
UNET	HEN0331	HENDERSON			NORTHRNUNETG	G	01/05/08	39,520
UNET	HEP0331	HEPBURN ROAD			NORTHRNUNETG	G	01/05/08	45,463
UNET	SVL0331	SILVERDALE			NORTHRNUNETG	G	01/05/08	35,295
UNET	WEL0331	WELLSFORD			NORTHRNUNETG	G	01/05/08	15,903
UNET	WRD0031	WAIRAU ROAD			NORTHRNUNETG	G	14/05/13	40,640

Status	Number of ICPs (9/8/2021)	Number of ICPs (2020)	Number of ICPs (2019)	Number of ICPs (2018)	Number of ICPs (2017)	Number of ICPs (2016)
New (999)	3	3	1	3	6	19
Ready (0)	458	585	466	452	429	297
Active (2,0)	240,788	235,745	232,055	228,106	224,210	221,272
Distributor (888)	55	50	50	47	46	44
Inactive- new connection in progress (1,12)	503	360	273	341	392	193
Inactive – vacant (1,4)	3,330	3,206	3,171	3,097	3,164	2,992
Inactive – AMI remote disconnection (1,7)	915	781	793	796	588	415
Inactive – at pole fuse (1,8)	6	4	7	3	1	2
Inactive – de-energized due to meter disconnected (1,9)	265	254	210	236	52	16
Inactive – de-energized at meter box switch (1,10)	5	6	9	7	1	0
Inactive- at meter box switch (1,11)	13	7	4	6	2	0
Inactive – ready for decommissioning (1,6)	331	276	242	180	614	717

Inactive (1,0)	1	0	0	3	2	1
Inactive – reconciled elsewhere (1,5)	0	0	1	0	0	5
Decommissioned (3)	23,407	22,455	21,591	20,769	19,550	18,617

There are 55 embedded networks connected to the UNET network. 6 of these were connected to UNET during the audit period and are discussed in relevant sections. The new networks are detailed in the table below:

Distributor	NSP POC	Description	Parent Network	Parent POC	Balancing Area	Network Type	Start Date
TENC	TOD0011	3-5 Oracle Drive Auckland	UNET	ALB0331	TOD0011TENCEN	EN	1/04/21
ISNZ	BMR0011	119 Bruce McLaren Road Henderson	UNET	HEP0331	BMR0011ISNZEN	EN	1/10/21
TENC	TGN0011	The Groves 4155 Great North Rd	UNET	HEP0331	TGN0011TENCEN	EN	1/07/21
TENC	TBV0011	The Botanic Retirement Village	UNET	SVL0331	TBV0011TENCEN	EN	28/07/21
TENC	TSM0011	Silverdale Mall Auckland	UNET	SVL0331	TSM0011TENCEN	EN	1/07/21
TENC	STL0011	The Sentinel	UNET	WRD0331	STL0011TENCEN	EN	1/10/20

VECT

Distributor	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	No of active ICPs
VECT	HEP0331	Hepburn road			AUCKLNDVECTG	G	01/05/08	5,136
VECT	HOB1101	Hobson street			AUCKLNDVECTG	G	24/01/14	10,639
VECT	MNG0331	Mangere			AUCKLNDVECTG	G	01/05/08	25,714
VECT	MNG1101	Mangere			AUCKLNDVECTG	G	21/12/15	1
VECT	OTA0221	Otahuhu			AUCKLNDVECTG	G	01/05/08	18,492
VECT	PAK0331	Pakuranga			AUCKLNDVECTG	G	01/05/08	45,420
VECT	PEN0221	Penrose			AUCKLNDVECTG	G	01/05/08	8,511
VECT	PEN0331	Penrose			AUCKLNDVECTG	G	01/05/08	75,013
VECT	PEN1101	Penrose			AUCKLNDVECTG	G	01/11/14	27,629
VECT	ROS0221	Mt. Roskill			AUCKLNDVECTG	G	01/05/08	44,739
VECT	ROS1101	Mt. Roskill			AUCKLNDVECTG	G	01/04/12	22,812
VECT	TAK0331	Takanini			AUCKLNDVECTG	G	01/05/08	46,496
VECT	WIR0331	Wiri			AUCKLNDVECTG	G	01/05/08	20,432

Status	Number of ICPs (9/8/2021)	Number of ICPs (2020)	Number of ICPs (2019)	Number of ICPs (2018)	Number of ICPs (2017)	Number of ICPs (2016)
New (999)	3	13	1	0	8	17

Ready (0)	740	939	1,117	553	728	333
Active (2,0)	351,033	345,798	341,060	336,352	332,328	330,511
Distributor (888)	143	134	121	105	103	87
Inactive- new connection in progress (1,12)	1,028	502	426	397	438	182
Inactive – vacant (1,4)	5,265	4,630	4,096	3,958	4,616	4,377
Inactive – AMI remote disconnection (1,7)	1,424	1,170	1,039	851	614	316
Inactive – at pole fuse (1,8)	18	12	13	19	9	2
Inactive – de-energized due to meter disconnected (1,9)	1,265	1,234	1,195	1,168	201	69
Inactive – de-energized at meter box switch (1,10)	15	19	15	8	4	0
Inactive- at meter box switch (1,11)	7	5	10	8	5	0
Inactive – ready for decommissioning (1,6)	745	582	477	296	632	667
Inactive (1,0)	0	2	2	0	0	0
Inactive – reconciled elsewhere (1,5)	2	0	0	2	2	18
Decommissioned (3)	57,733	55,511	53,972	52,292	50,598	48,569

There are 143 embedded networks connected to the VECT network. 13 of these were connected to VECT during the audit period and are discussed in relevant sections. The new networks are detailed in the table below:

Distributor	NSP POC	Description	Parent Network	Parent POC	Balancing Area	Network Type	Start Date
TENC	PAZ0111	ANZ CENTRE	VECT	HOB1101	PAZ0111TENCE	EN	1/06/21
TENC	TFS0013	136 Fanshawe Street, Akl	VECT	HOB1101	TFS0013TENCE	EN	1/01/21
TENC	TPW0013	30 Madden Stage1	VECT	HOB1101	TPW0013TENCE	EN	1/01/21
TENC	TQS0012	125 Queen Street Auckland	VECT	HOB1101	TQS0012TENCE	EN	1/07/21
TENC	VGH0011	GHD CENTRE	VECT	HOB1101	VGH0011TENCE	EN	1/01/21
PSPI	BTC0011	BOTANY TOWN CENTRE	VECT	PAK0331	BTC0011EBSLE	EN	1/02/21
TENC	TMX0011	602 Great South Road, Akl	VECT	PEN0331	TMX0011TENCE	EN	1/01/21
TENC	VWC0011	WATERCARE BUILDING	VECT	PEN0331	VWC0011TENCE	EN	1/01/21
TENC	KFA0111	21 Pitt Street	VECT	PEN1101	KFA0111TENCE	EN	1/01/21
TENC	TBE0011	2-16 TAKU TAI SQUARE	VECT	PEN1101	TBE0011TENCE	EN	1/04/21
TENC	TNU0011	8 Nugent Street Auckland	VECT	PEN1101	TNU0011TENCE	EN	28/04/21
TENC	TSN0011	79 QUEEN STREET	VECT	PEN1101	TSN0011TENCE	EN	1/04/21
SMRT	THP0011	HOPETOUN RESIDENCES	VECT	ROS1101	THP0011SMRTE	EN	1/10/21

1.9. Authorisation Received

Vector provided a letter of authorisation to Ewa Glowacka, permitting the collection of data from other parties for matters directly related to the audit.

1.10. Scope of Audit

This reconciliation participant audit was performed at the request of Vector (VECT) to encompass the Authority's request for annual audits, as required in clause 11.10 of Schedule 11 of the Electricity Industry Participation Code 2010, to assure compliance with the Code. The audit was carried out remotely on 7 and 8 September 2021 due to the North Island lockdown.

The audit covers the following processes under clause 16A.23 Part 16A performed by Vector

- (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

1.11. Summary of previous audit

Vector provided a copy of their previous audit report, conducted by Rebecca Elliot of Veritek Limited in October 2020. This found 16 non-compliances and made 3 recommendations. The current status of these has been updated below:

Subject	Section	Clause	Non-Compliance	Comments
Material Changes	1.12	16A.11	Material change audit not conducted for automation of the new connection and registry update processes.	Cleared
Requirement to provide complete and accurate information	2.1	11.2(1) and 10.6(1)	<p>Registry information not complete and accurate:</p> <ul style="list-style-type: none"> • missing initial electrical connection dates; • incorrect event dates for some updates; • unmetered load details missing from eight ICPs electrically connected during the audit period, • LE ICPs created with the incorrect NSP dedication flag of "N"; and • 11 ICPs connected to the incorrect network not backdated to correct date. <p>Some 2019 audit discrepancies not corrected during the audit period.</p>	Still exists
Requirement to correct errors	2.2	11.2(2)	Errors not corrected as soon as practicable.	Still exists

Participants may request distributors to create ICPs	3.2	11.5(3)	No notification of delay to ICP creation for three ICPs requested by traders.	Still exists
Provision of ICP information to the registry	3.3	11.7	9,058 ICPs with no initial electrical connection date populated since this requirement came into effect. Eight ICPs with unmetered load created during the audit period but where Vector has no unmetered load recorded.	Still exists
Timeliness of Provision of ICP Information to the registry manager	3.4	7(2) of Schedule 11.1	61 VECT ICPs not updated on the registry prior to commencement of trading. Five UNET ICPs not updated on the registry prior to commencement of trading.	Still exists
Timeliness of provision of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	29,428 late initial electrical connection dates for VECT. 20,749 late initial electrical connection dates for UNET.	Still exists
Connection of ICP that is not an NSP	3.6	11.17	Nine late proposed trader updates for VECT. One late proposed trader update for UNET.	Cleared
Connection of ICP that is not an NSP	3.7	10.31	A proposed trader is not recorded for UNET ICPs 1002080470UN9A2 and 1002092185UNA5E, which are at the "Ready" status.	Cleared
Changes to registry information	4.1	8 of Schedule 11.1	Registry event updates backdated greater than three days.	Still exists
Notice of NSP for each ICP	4.2	7(1)(b) Schedule 11.1	35 of the 80 ICPs sampled mapped to the incorrect NSP.	Still exists
ICP location address	4.4	2 Schedule 11.1	1,655 ICPs with addresses that are not readily locatable.	Still exists
Distributor to provide ICP information to the registry.	4.6	7 (1) (m)&(p) of Schedule 11.1	Distributed generation details incorrect for a small number of ICPs. A small number of ICPs with an incorrect initial electrical connection date populated. Three incorrect unmetered load details.	Still exists

			One "GN" ICP with an incorrect dedication flag of "Y". 48 LE ICPs with the incorrect NSP dedication flag of "N".	
GPS coordinates	4.8	7(8) and (9) Schedule 11.1)	Six ICPs with the incorrect GPS co- ordinates.	Cleared
Management of "Ready" status	4.9	14 Schedule 11.1	UNET ICPs 1002080470UN9A2 and 1002092185UNA5E are incorrectly recorded at the "ready" status without a proposed trader. These should be "decommissioned - set up in error".	Still exists
Management of "decommissioned" status	4.11	20 schedule 11.1	ICPs decommissioned but not updated to decommissioned on the registry.	Cleared
Notification of transfer of ICPs	6.7	4 & 10 schedule 11.2	Three ICPs with no permission from the Electricity Authority to backdate the transfer request.	Cleared

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

We performed a check of the LIS files, dated 09/08/2021, and the Audit Compliance Summary Reports for the audit period, and had discussions with a number of Vector staff to assess if all practicable steps had been taken to provide accurate information.

Audit commentary

Vector monitors the registry NOT files on a weekly basis. Many processes have been automated therefore the amount of incomplete and inaccurate information is decreasing. The re-engineered new connection process, which asks retailers to accept an ICP in Siebel and nominate a warranted person from the list provided by Vector, should have a significant impact on Vectors' non-compliance relating to Initial Electrical Connection Dates (IECD). The warranted person is required to provide the IECD to Vector within 5 BD after livening.

The table below shows a summary of our findings:

Section	Registry discrepancy
3.3	<ul style="list-style-type: none">8 UML ICPs did not have details recorded in the registry3,085 ICPs with no initial electrical connection date populated since this requirement came into effect
3.4	<ul style="list-style-type: none">31 ICPs where the input date of the Ready status was after initial electrical connection.
3.5	<ul style="list-style-type: none">2,858 late updates initial electrical connection dates in the registry, small number of ICPs for which Vector and trader information were different
4.1	<ul style="list-style-type: none">Registry event updates backdated more than three business days
4.2	<ul style="list-style-type: none">13 out of 20 ICPs sampled were mapped to incorrect NSP
4.4	<ul style="list-style-type: none">1,535 ICPs with addresses that are not readily locatable
4.6	<ul style="list-style-type: none">Distributed generation details incorrect for a small number of ICPs.11 UML ICPs did not have details recorded in the registry5 ICPs (LE) have the Dedicated NSP flag set incorrectly to "N"7 ICPs (GN) Dedicated NSP flag set incorrectly to "Y"

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref 2.1 With: 11.2(2) From: 23-Aug-20 To: 31-Jul-21	Inaccurate or missing information in the registry for distributed generation, UML, NSP, and Initial Electrical Connection Dates not populated in the Registry. 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	The controls are rated as moderate overall but some opportunities for further improvements are in progress which will strengthen controls once in place. The audit risk rating is low as the incorrect information has a small or no effect on reconciliation.		
Actions taken to resolve the issue		Completion date	Remedial action status
DG – Vector will review our distributed generation process to: <ul style="list-style-type: none"> improve follow up with customers/installers to obtain CoCs in a timely manner; better identify when distributed generation has been installed at a site. IECD – Please see audit ref 3.5 NSP – Please see audit ref 4.1 and 4.2		Investigation by Jan 2022.	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
DG – TBA. Dependent on investigation outcomes. IECD – Please see audit ref 3.5 NSP – Please see audit ref 4.1 and 4.2			

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

Compliance with these clauses was reviewed to assess if all practicable steps had been taken to provide accurate information. The registry LIS files, and the Audit Compliance reports were examined to confirm compliance. Processes were discussed with Vector staff.

Audit commentary

Vectors have processes in place to identify and resolve registry discrepancies. Many processes are automated such as ICP creation and decommissioning. There was evidence of historical data discrepancies being corrected in the registry during the audit period, for example addresses, IECDs and decommissioned ICPs.

Not all discrepancies are being corrected as soon as practicable. Missing registry information is building up daily as IECDs and distributed generation information, for example, is not updated within the required timeframes causing non-compliance. These errors then need to be identified using the exception reports for remedial action. At the moment they are run monthly, perhaps consideration should be given to running these reports more frequently.

Examples include:

- No IECD in registry but ICP is Active
- Difference between two dates, date of becoming Active and IECD (livening date)
- Distributed generation incorrect installation type and no capacity
- Trader profile indicated solar installed, but no CoC received from a customer

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref 2.2 With: 11.2(2) From: 23-Aug-20 To: 31-Jul-21	Incorrect or missing historical information in the registry across a number of areas 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	The controls are rated as moderate as in most cases incorrect information is captured. The audit risk rating is low as the incorrect IECD or lack of it is not used in this reconciliation period.		
Actions taken to resolve the issue		Completion date	Remedial action status
IECD – Please see audit ref 3.5			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
IECD – Please see audit ref 3.5			

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

Code reference

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

Code related audit information

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

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

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

Audit observation

This is a new clause that came into force on 01/02/2021. It was discussed during the audit.

Audit commentary

It is Vectors' policy to not work on the customers' installation. If there is a problem with the meter, customers are advised to contact their retailer or their electrician.

Audit outcome

Compliant

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

Code reference

Clause 11.30A

Code related audit information

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

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

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

Audit observation

This is a new clause that came into force on 01/02/2021. It was discussed during the audit.

Audit commentary

We examined the Vector website and confirmed that information about Utilities Disputes is present.

At the bottom of the email sent to customers there is the following text:

"If you have a complaint we can't resolve, you can contact Utilities Disputes, a free and independent dispute resolution service. Details are available on our webpage at vector.co.nz"

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 and discussed with the Connection Team.

We randomly selected 30 new connection applications, per code, lodged during the audit period. We checked them from the point of application through to when the ICP identifiers were created. The sample included ICPs with:

- various meter categories,
- various proposed traders,
- connected to different NSPs
- unmetered load

Audit commentary

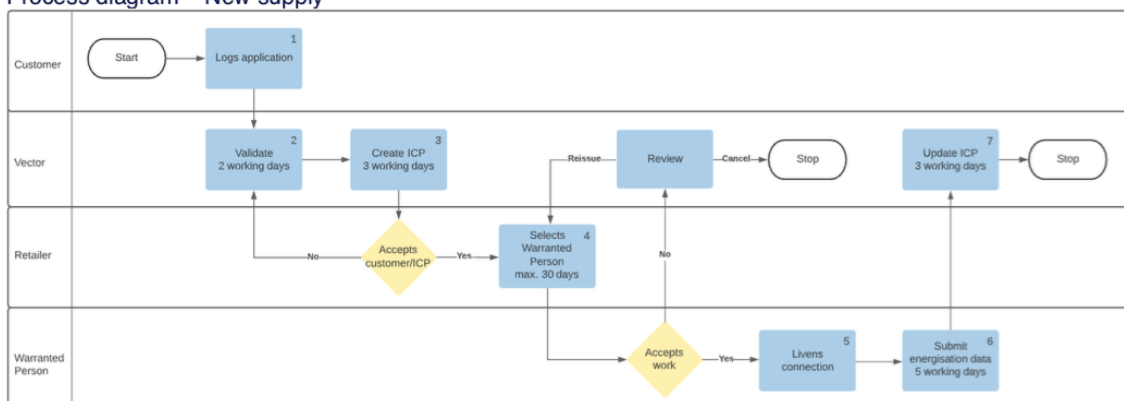
The customer, or their chosen agent, logs an application for a new ICP (or retailer if a BTS to permanent conversion is required). The application is reviewed by the Vector Connections team and approved if all information is accurate, and capacity is available. Applications are validated using the following parameters:

- Check all necessary details have been provided
- Check that a network supply point has been installed and has sufficient capacity available
- Ensure it's not a duplicate and address is approved
- Populate the price plan and connection details
- Set the status of the "Validate Data" activity to "Complete" in Siebel

Once the application is validated the system automatically generates the ICP. When an ICP is created the customer and retailer specified by the customer is notified. The retailer contacts the customer, selects the warranted person, and confirms acceptance of the ICP. The warranted person arranges the livening and provides Vector with the energisation data. Vector updates the ICP in the registry.

The "process diagram" shows the process.

3. Process diagram – New supply



Vector creates ICPs as required by this clause. The sampling conducted confirms compliance.

In a situation where new subdivisions are built; a developer is asked to provide a site plan and a new job is evaluated by a planning department.

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

In the majority of cases ICPs are requested by a customer or his/her representative. In some situations, ICPs are requested by traders, during this audit period 56 ICPs were created at their request. We reviewed all ICPs.

Audit commentary

Vector identified 56 ICPs that were requested by the trader. These were examined and found 37 of the 56 ICPs were not created within three business days of request. In 30 cases the trader was not advised about delay. It is recorded as non-compliance.

There were different reasons for why ICPs were not created within 3 BD, such as, high volume of applications to be processed, site visit required to confirm if supply available, additional information required etc.

The creation of LE ICPs (gate meters of embedded networks) was discussed. 15 LE ICPs created during the audit period were reviewed. None were able to be created within the three business days of the request as these generally require engineering approval. However, this was communicated to the participant (or their designated agent) in all instances.

We reviewed the EDA files and confirmed that no LE ICPs were backdated.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.2 With: 11.5(3) From: 23-Aug-20 To: 31-Jul-21	No notification of delay to ICP creation for 30 ICPs requested by traders Potential impact: Low Actual impact: Low Audit history: Once previously Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are assessed as moderate. They will mitigate non-compliance most of the time but there is room for improvement. Audit risk rating is assigned as low. No impact on settlement outcomes.		
Actions taken to resolve the issue		Completion date	Remedial action status
Not Applicable		N/A	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Vectors current process for notification of delay is to contact and notify the customer direct. Further process review needs to be completed to ensure retailer requests are identified separately and that retailers are included in the notification along with the customer.		December 2021	

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

The new connection process for populating all required registry fields was examined and discussed with Vector's staff. The LIS files and the Audit Compliance reports were examined to determine compliance.

Audit commentary

According to the new connection process an application is received for all new connections. Vector accepts application for unmetered load. At present, UML information is not yet incorporated into the new connection application form, it is still under development, due to be released next year. The detailed information is exchanged via email. Vector provided a copy of such an email.

The process for updating the registry is automated fully automated. Updates to the registry are twice daily, once at midday and once in the evening (10pm).

During the audit period 6,052 ICPs were created on the Northern network (UNET) and 8,330 on the Auckland network (VECT). All the required information for these ICPs was populated excluding the population of the initial electrical connection date for 3,075 ICPs (1,751 UNET 2,014 VECT) and 2 UML ICPs on the Auckland network and 6 UML ICPs on the Northern network.

Non-compliant

Non-compliance	Description		
Audit Ref: 3.3 With: 11.7 From: 23-Aug-20 To: 31-Jul-21	8 UML ICPs did not have details recorded in the registry 3,075 ICPs with no initial electrical connection date populated Potential impact: Low Actual impact: Low Audit history: Twice previously Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are assessed as moderate. Vector implemented a new connection process to address the issue of lack of IECD. The ICPs sampling confirmed that the process is working well. Audit risk rating is assigned as low. No impact on settlement outcomes.		
Actions taken to resolve the issue		Completion date	Remedial action status
UML – The 8 issues identified have been corrected. IECD – Please see audit ref 3.5		08/10/2021	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
UML – Vector are reviewing our online ICP application form and will be requesting UML details as part of the new form. IECD – Please see audit ref 3.5		June 2022	

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

Vector provided the EDA files for the audit period to assess compliance. We reviewed the new connections process and discussed with Vector's staff.

Audit commentary

The customer, or their chosen agent, logs an application for a new ICP (or retailer if a BTS to permanent conversion is required). The application is reviewed by the Vector Connections team and approved if all the information is accurate, and capacity is available. As soon as an ICP is created the trader and the customer/agent are notified. The trader is asked to nominate a warranted person for the connection.

Hi,
A new ICP [ICP number], has been created for [address].
Please select a warranted person and complete the retailer confirmation activity to confirm your acceptance of this ICP.
Vector have approved the following:

- Phase: [phase size]
- Fuse: [fuse size]
- BTS: [bts flag Y/N]

If you have any questions, please contact us.
Kind regards,
Vector Connections Team

We assessed the timeliness of providing information to the registry prior to electricity being traded at the ICP using the Audit Compliance report. We found some ICPs for which information was not provided to the registry before the trader changed the status to "Active". The findings are tabled below:

Update type	Late updates	Comment
Ready status	31 ICPs (11 UNET, 20 VECT)	The date of electrical connection was later than the input date of Status "ready". The most backdated ICP was 1002093312LC9C0, by 199 BD.
Backdated date of ICP creation	1002141947UN7E4	ICP was created on 29/05/2021 backdated to 11/12/2020. It was an illegal job. It was livened without Vector or retailer knowledge. The retailer, Contact only became involved when a customer moved into the property and then tried to sign up with them to pay for their power, at which point Contact approached Vector for an ICP. Contact wasn't responsible for the original connection. The date Vector used for the ICP creation was the date the customer signed in with Contact so that they could be billed appropriately. The actual livening date is not known.
Change of ICP creation date	3 ICPs	1002140906LC2B0 and 1002140905LCE70 – they were created on 10/05/2021, later on the effective date was changed to 31/03/21. IECD is 01/05/2021.

		1002108871LC5B6 – it was created on 29/09/2020, later on, the effective date was changed to 25/05/2019. IECD is 25/05/2019.
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It was discussed with the Connection Team. Their comment was that it was done at the request of traders. Some of these ICPs were originally created with the Status “New”. It is noted as a technical non-compliance.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.4 With: 14 of Schedule 11.1 From: 01-Jun-20 To: 31-Jul-21	34 ICPs (11 UNET, 23 VECT) not updated on the registry prior to commencement of trading Potential impact: Low Actual impact: Low Audit history: Once previously Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are rated as moderate as there can be incidents that require Vector to create backdated ICPs at the request of traders. The audit risk rating is low because energy is reconciled.		
Actions taken to resolve the issue		Completion date	Remedial action status
ICPs were corrected and backdated at the time of identification.			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>In the majority of these cases, Vector were requested to create the ICPs prior to an installation supply point being installed for the purpose of obtaining CTs. In these cases, ICPs were created in NEW status. Once the supply point is installed, Vector then change the status to READY.</p> <p>We currently have a delay in our process between the date the supply is installed and the change to READY status which is resulting in non-compliance for some of these jobs.</p> <p>Vector are currently looking at this process to determine ways to remove the delay.</p>		Jan 2022	

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 new connection process was examined. The LIS files and the Audit Compliance reports for the audit period were examined to identify all ICPs for which Initial Electrical Connection dates were not updated within 10 business days of electrical connection. We sampled 30 ICPs created during the audit period.

Audit commentary

The Audit Compliance Report recorded 11,523 ICPs (6,723 VECT, 4,809 UNET) which had been moved to the status “active” after 29/08/13 that did not have an initial electrical connection date populated. We sampled 10 ICPs with missing initial electrical connection dates for each network and asked for comments from Vector. For all listed ICPs Vector had not received information from traders. The UoSA agreement between Vector and traders put the obligation on traders to populate Siebel with the Initial Electrical Connection Date (IECD). To date, this has not appeared to have worked very well. We would like to note that a high percentage of the 11,523 ICPs, without IECD are ICPs livened in the past and their volumes have already been submitted for reconciliation, by traders, to the RM. There is no impact on settlement outcomes.

To address the issue, on 1 June 2021 Vector implemented a modified new connection process. According to the new process, the trader must accept the ICP in Siebel by clicking a box and nominating a warranted person from a list provided by Vector. The warranted person is allowed to connect and electrically connect an installation on the Vector network. Vector manages a list of warranted people who are allowed to work on their network. The warranted person is notified by Vector that they were selected as the warranted person for this connection. The new process put the obligation on the warranted person to enter the following information into Siebel:

Warranted Person Information	Installation Data
Company Name: Sels Electrical Services	Energisation Date: 16/08/2021
Name: nick smith	RoI Number: sels44119
Unique Id: e252050	ESC Number: ns44119
	Coc Number: lin mayne mt albert
	Phase Installed: 1
	Fuse Installed: 60
	kVA: 13.8
	Line Voltage: 233
	Cable Size: 16
	Mains Type: O
	Tariff: Uncontrolled
	Connection Point: Pole
	Test Results: 233v 076a 0.34ohm
	Unmetered Supply: <input type="checkbox"/>

If the warranted person does not meet their obligation a reminder email is sent.

Hi,
Vector have received notification that ICP [ICP number], [address] has now been livened.
Please provide the energisation data within 5 working days of livening.
Kind regards,
Vector Connections Team

It is early days, but we are confident that the new process will address non-compliance issue with the Initial Electrical Connection date being populated late or not at all. We examined ICPs created and livened

after 01/06/2021. Taking into consideration that it takes time for parties to implement the new requirements, we selected 16 ICPs per code created and livened at the end of July and checked the most recent entries in the registry.

- 14 ICPs (87.5%) on VECT had IECD populated at the time this report was written.
- 10 ICPs (62.5%) on UNET had IECD populated at the time this report was written.

From our point of view, the new controls are working quite well. After 5 days Vector sends a reminder to those warranted people to remind them of their obligation to provide IECD within 5 BD after livening.

Examination of the Audit Compliance Report found 2,858 Initial Electrical Connection Dates (IECD) were updated more than 10 business days after initial electrical connection:

Code	Number of ICPs		
	2021	2020	2019
VECT	1,795	29,428	5,098
UNET	1,063	20,479	4,153
Total	2,858	50,177	9,251

Out of 1,795 VECT late updates of IECD, 512 (29%) relate to ICPs electrically connected during this audit period.

Out of 1,063 UNET late updates of IECD, 497 (47%) relate to ICPs electrically connected during this audit period.

Vector is working hard to populate missing information; they work closely with traders and MEPs to find IECD for each ICP. The fact that historic information is populated has the flow on effect of an increased number of late updates which impacts compliance with this clause. From Vectors' point of view, it is more important to have correct information in the registry as per clause 11.2 even if updates are later than 10 BD.

The sampling of 30 late updates of IECD identified the following causes of that:

- 24 ICPs (80%) - due to the delay in the trader providing the information to Vector
- 3 ICPs (10%) - due to the delay in warranted person providing the information to Vector
- 3 ICPs (10%) – due to IECD being removed when a feeder was changed

IECD is different to that of the first active date and/or the meter certification date

The Audit Compliance Reports identified 52 (35 VECT & 17 UNET) ICPs where the initial electrical connection date is different to that of the first active date and/or the meter certification date. These were examined and found:

UNET

ICP	Metering Installation Certification Date	IECD	Status Event Date	Elapsed Days IECD and Status Event Date	Comment

1002142744UNFCF	17/06/2021	16/06/2021	17/06/2021	1	IECD corrected
1002142488UN83D	11/07/2021	11/06/2021	11/06/2021	0	IECD is correct
1002144114UN401	09/07/2021	07/07/2021	09/07/2021	2	IECD corrected
1002143841UNC2F	06/07/2021	05/07/2021	06/07/2021	1	IECD corrected
1002143105UN689	01/07/2021	30/06/2021	01/07/2021	1	IECD corrected
1002110730UNBAC	29/06/2021	11/03/2021	29/06/2021	110	Awaiting response from retailer & metering company to confirm correct dates.
1002142177UN2F1	02/06/2021	02/06/2021	03/06/2021	1	Awaiting response from retailer & metering company to confirm correct dates.
1002108623UN124	20/10/2020	02/10/2020	02/10/2020	0	Awaiting response from retailer & metering company to confirm correct dates.
1002136274UN10B	18/02/2021	17/02/2021	18/02/2021	1	IECD corrected
1002135711UN451	17/02/2021	07/02/2021	17/02/2021	10	IECD to be corrected. Awaiting retailer to reverse claim in order to fix.
1002124045UNB10	20/01/2021	13/01/2021	20/01/2021	7	Awaiting response from retailer & metering company to confirm correct dates.
1002123964UN769	12/01/2021	05/01/2021	12/01/2021	7	Awaiting response from retailer & metering company to confirm correct dates.
1002093779UNEF1	22/09/2020	04/08/2020	22/09/2020	49	Awaiting response from retailer & metering company to confirm correct dates.
1002107069UNE76	22/09/2020	17/09/2020	22/09/2020	5	Awaiting response from retailer & metering company to confirm correct dates.
1002107716UNBF7	19/09/2020	18/09/2020	19/09/2020	1	Awaiting response from retailer & metering

					company to confirm correct dates.
1002105603UN651	11/09/2020	11/08/2020	11/09/2020	31	Awaiting response from retailer & metering company to confirm correct dates.
1002092287UN9D8	20/08/2020	09/07/2020	20/08/2020	42	Awaiting response from retailer & metering company to confirm correct dates.

VECT

ICP	Metering Installation Certification Date	IECD	Status Event Date	Elapsed Days IECD and Status Event Date	Comment
1002142398LC786	23/06/2021	21/06/2021	23/06/2021	2	IECD corrected
1002142911LC697	23/06/2021	21/06/2021	23/06/2021	2	IECD corrected
1002143002LC853	23/06/2021	21/06/2021	23/06/2021	2	IECD corrected
1002142397LC858	22/06/2021	21/06/2021	22/06/2021	1	IECD corrected
1002142396LC41D	22/06/2021	21/06/2021	22/06/2021	1	IECD corrected
1002142395LC8DD	22/06/2021	21/06/2021	22/06/2021	1	IECD corrected
1002140543LC156	01/06/2021	01/06/2021	03/06/2021	2	Awaiting response from retailer & metering company to confirm correct dates.
1002109166LCA78	28/10/2020	20/10/2020	28/10/2020	8	Awaiting response from retailer & metering company to confirm correct dates.
1002112558LC51B	20/04/2021	04/02/2021	20/04/2021	75	Awaiting response from retailer & metering company to confirm correct dates.
1002138835LC735	12/04/2021	10/04/2021	12/04/2021	2	Awaiting response from retailer & metering company to confirm correct dates.
1002139354LC62E	15/04/2021	14/04/2021	15/04/2021	1	Awaiting response from retailer & metering company to confirm correct dates.
1002106983LC4E0	30/03/2021	15/03/2021	30/03/2021	15	Awaiting response from retailer & metering company to confirm correct dates.
1002136089LCE54	17/03/2021	20/02/2021	17/03/2021	25	Awaiting response from retailer & metering company to confirm correct dates.

1002136619LC7B5	03/03/2021	01/03/2021	03/03/2021	2	Awaiting response from retailer & metering company to confirm correct dates.
1002112010LC0AF	15/02/2021	10/02/2021	15/02/2021	5	Awaiting response from retailer & metering company to confirm correct dates.
1002111136LC791	03/02/2021	02/02/2021	03/02/2021	1	Awaiting response from retailer & metering company to confirm correct dates.
1002124732LC691	28/01/2021	21/01/2021	28/01/2021	7	IECD corrected
1002124729LC2E8	28/01/2021	21/01/2021	28/01/2021	7	Awaiting response from retailer & metering company to confirm correct dates.
1002112538LCAEB	11/12/2020	10/12/2020	11/12/2020	1	Awaiting response from retailer & metering company to confirm correct dates.
1002113420LCAF6	28/12/2020	16/12/2020	28/12/2020	12	Awaiting response from retailer & metering company to confirm correct dates.
1002112658LC618	07/12/2020	07/12/2020	29/12/2020	22	Awaiting response from retailer & metering company to confirm correct dates.
1002113041LC542	11/12/2020	11/12/2020	16/12/2020	5	Awaiting response from retailer & metering company to confirm correct dates.
1002109531LC3BB	20/10/2020	14/10/2020	20/10/2020	6	Awaiting response from retailer & metering company to confirm correct dates.
1002109609LC554	21/10/2020	19/10/2020	21/10/2020	2	IECD corrected
1002109214LCCA3	20/10/2020	19/10/2020	21/10/2020	2	Awaiting response from retailer & metering company to confirm correct dates.

1002109213LC169	20/10/2020	19/10/2020	20/10/2020	1	Awaiting response from retailer & metering company to confirm correct dates.
1002109702LC284	16/10/2020	15/10/2020	16/10/2020	1	Awaiting response from retailer & metering company to confirm correct dates.
1002106271LC77C	25/09/2020	25/08/2020	25/09/2020	31	Awaiting response from retailer & metering company to confirm correct dates. Probably typo
1002094504LC084	16/08/2020	16/07/2020	16/08/2020	31	Awaiting response from retailer & metering company to confirm correct dates. Probably typo
1002105604LC18F	25/08/2020	24/08/2020	25/08/2020	1	Awaiting response from retailer & metering company to confirm correct dates.
1002093927LC97D	16/08/2020	16/07/2020	16/08/2020	31	Awaiting response from retailer & metering company to confirm correct dates.

IECD is different to that of the first active date populated by a trader

The Audit Compliance Reports identified 560 (322 VECT & 238 UNET) ICPs where IECD is different to that of the first active date populated by trader date populated during the audit period. It was discussed with Vector's staff. The reason for discrepancies is not known. The tables below show the range of date difference between IECD and the first Active date populated by trader date. For almost 50% VECT ICPs and for 66% UNET ICPs the difference is 1 day.

Code	Date difference	Number of ICPs	Percentage of total	Comment
UNET	-120	1	0.42%	
UNET	-61	5	2.10%	The same address
UNET	-37	1	0.42%	
UNET	-32	1	0.42%	
UNET	-30	4	1.68%	Probably typo
UNET	-28	1	0.42%	
UNET	-20	1	0.42%	
UNET	-18	1	0.42%	
UNET	-16	1	0.42%	
UNET	-14	1	0.42%	
UNET	-12	1	0.42%	
UNET	-11	1	0.42%	
UNET	-8	1	0.42%	
UNET	-6	2	0.84%	
UNET	-5	36	15.13%	
UNET	-4	27	11.34%	
UNET	-3	19	7.98%	
UNET	-2	25	10.50%	
UNET	-1	109	45.80%	
	Total	238		

Code	Date difference	Number of ICPs	Percentage of total	Comment
VECT	-44	1	0.31%	
VECT	-30	1	0.31%	
VECT	-25	1	0.31%	
VECT	-18	1	0.31%	
VECT	-14	1	0.31%	
VECT	-12	1	0.31%	
VECT	-11	1	0.31%	
VECT	-7	29	9.01%	
VECT	-6	4	1.24%	
VECT	-5	2	0.62%	
VECT	-4	16	4.97%	
VECT	-3	12	3.73%	
VECT	-2	40	12.42%	
VECT	-1	212	65.84%	
	Total	322		

It is recorded as non-compliance in **section 2.1** It was discussed during the audit. Vector comment was that the Initial Energisation Date populated in the registry is what they were provided by the retailer (or their agents) for the livening date.

IECD recorded by Vector, not yet Active status in the registry

The Audit Compliance Reports identified 33 (19 VECT & 14 UNET) ICPs that are not yet active but have IECD recorded. These were examined and found:

- 1 ICP - Emailed inspector to confirm date.
- 1 ICP -Have emailed retailer and Vircom.
- 18 ICPs - Have emailed retailer. No response received yet
- 6 ICPs - Retailer/Vircom confirmed live. Retailer will update status.
- 7 ICPs - Retailer has since made active

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 3.5</p> <p>With: 7(2A) of Schedule 11.1</p> <p>From: 23-Aug-20</p> <p>To: 31-Jul-21</p>	<p>2,858 late updates initial electrical connection dates in the registry, small number of ICPs for which Vector and trader information were different</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>The controls are rated as moderate. The process was changed on 01/06/2021, that the warranted person (livening person) will provide this information directly to Vector. Close monitoring needs to be implemented; it needs to be evaluated in the next audit. The audit risk rating is low as this has no direct impact on reconciliation.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>Missing IECD</p> <p>Vector continue to follow up with retailers to obtain the livening data for all historical jobs and jobs created prior to the June 2021 process change.</p>		Ongoing	Identified
<p>Incorrect IECD Dates</p> <p>Vector are checking with the retailers, meter owners and livening agents (where that information is available to us) to confirm the correct dates. Registry will be updated accordingly.</p>		Ongoing	
<p>IECD recorded, not yet active</p> <p>16 ICPs have now been updated by the retailers and the dates match with Vector</p> <p>5 ICPs have been updated by the retailer however the dates do not match. Further investigation required.</p> <p>12 ICPs still to be updated by the retailer. All have meter details populated which match Vector IECD.</p>		08/10/2021	
Preventative actions taken to ensure no further issues will occur		Completion date	

<p>Missing IECD</p> <p>IECD – Vector implemented a new livening process on 3 June which covers:</p> <ul style="list-style-type: none"> • Obtaining data direct from the warranted person • Monitoring of missing data • Reviewing date discrepancies <p>We believe these changes will reduce the non-compliance in this area.</p> <p>Incorrect IECD Dates</p> <p>Further investigation is required to determine root cause. Review of discrepancies will also be increased.</p> <p>Vector have created a new role within the team which will focus on audit reviews, investigation and correction of errors.</p> <p>IECD recorded, not yet active</p> <p>Not applicable. ICPs identified had all been livened.</p>	<p>03/06/2021</p> <p>Dec 2021</p> <p>N/A</p>	
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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

To assess compliance of the new connections, process the EDA files and the Audit Compliance reports were reviewed. It was discussed with the Connection Team.

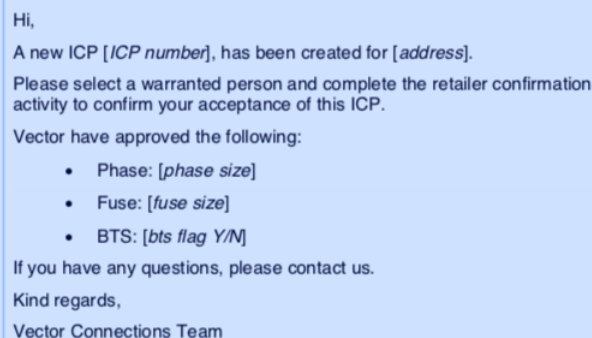
Vector has no known shared unmetered load recorded and does not allow shared unmetered load to be connected.

Audit commentary

On 1 June 2021 Vector modified their new connection process. One of the reasons was to address a non-compliance issue, noted in recent audits, of failing to populate Initial Electrical Connection date for high number of ICPs in the registry.

Previously, the default for new ICP was its acceptance by a trader. There was a mechanism for the trader to reject an ICP. It was a process similar to the “blanket acceptance of ICPs” as adopted by other networks. Traders nominated a warranted person, who was authorised on work on the Vector network. Once the installation was electrically connected, the trader was under obligation to populate details of “livening” including Initial Electrical Connection date in Siebel. This process did not work very well.

According to the new process as soon as an ICP is created, a customer and a specified by a customer trader is notified about it via email. The example of the email is shown below:

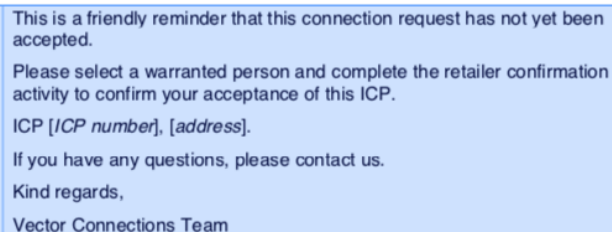


Hi,
A new ICP [ICP number], has been created for [address].
Please select a warranted person and complete the retailer confirmation activity to confirm your acceptance of this ICP.
Vector have approved the following:

- Phase: [phase size]
- Fuse: [fuse size]
- BTS: [bts flag Y/N]

If you have any questions, please contact us.
Kind regards,
Vector Connections Team

If a trader does not respond within 30 days a reminder is sent



This is a friendly reminder that this connection request has not yet been accepted.
Please select a warranted person and complete the retailer confirmation activity to confirm your acceptance of this ICP.
ICP [ICP number], [address].
If you have any questions, please contact us.
Kind regards,
Vector Connections Team

The change is that the trader must accept the ICP in Siebel by clicking a box and nominating a warranted person from a list provided by Vector. The warranted person is allowed to connect and electrically connect an installation on the Vector network.

We reviewed 60 new connections to assess compliance. In the sample we included ICPs for 4 new connections were created using the modified process. A review of these ICPs showed that Vector is compliant with this clause because it follows the process set out in clause 10.31 (**section 3.7**).

As soon as an ICP is generated it is downloaded to the registry. At the time that a warranted person is on site for connection and is electrically connecting the ICP (both happen at the same time), the trader is recorded in the registry as accepting responsibility for the ICP. Some traders started using the “New connection in progress” status, which is also another way to accept responsibility for the ICP.

ICP	Trader accepted ICP in Siebel	Trader updated status to "New connection in progress"	Trader updated status to ACTIVE
1002142705UN12F	17/06/21	21/06/21	7/07/21
1002142950LC877	16/06/21	16/06/21	5/07/21
1002143794LC939	1/07/21	1/07/21	13/07/21
1002144634LCC42	16/07/21	16/07/21	23/07/21

The review of registry files did not identify any ICP which did not have a proposed trader recorded prior to connection to the network.

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

To assess compliance of the new connections, process the EDA files and the Audit Compliance reports were reviewed. It was discussed with the Connection Team.

Vector has no known shared unmetered load recorded and does not allow shared unmetered load to be connected.

A diverse characteristics sample of 60 new connection applications per code created during the audit period were checked to determine if compliance was met.

Audit commentary

On 1 June 2021 Vector modified their new connection process. One of the reasons was to address a non-compliance issue, noted in recent audits, of failing to populate the Initial Electrical Connection date for the majority of ICPs in the registry.

Previously the default for a new ICP connection was its acceptance by a trader. There was a mechanism for the trader to reject an ICP. It was a process similar to the “blanket acceptance of ICPs” as adopted by other networks. Traders nominated a warranted person, who was authorised to work on the Vector network. Once the installation was electrically connected, the trader had an obligation to populate the details of “livening” including the Initial Electrical Connection date in Siebel. It did not work very well.

According to the new process as soon as an ICP is created, a customer and a specified by a customer trader, is notified via email. The example of the email is shown below:

Hi,

A new ICP [ICP number], has been created for [address].

Please select a warranted person and complete the retailer confirmation activity to confirm your acceptance of this ICP.

Vector have approved the following:

- Phase: [phase size]
- Fuse: [fuse size]
- BTS: [bts flag Y/N]

If you have any questions, please contact us.

Kind regards,

Vector Connections Team

The change is that the trader must accept the ICP in Siebel by clicking a box and nominating a warranted person from a list provided by Vector. At present there are 13 warranted people allowed to connect and electrically connect an installation on the Vector network. They are independent companies employing inspectors who are authorised to hang meters on behalf of MEPs.

We reviewed 60 new connections to assess compliance. In the sample we included ICPs for 4 new connections were created using the modified process. The table below shows the timeline for sampled ICPs created after implementing the modified new connection process.

ICP	ICP uploaded to the registry	Trader accepted ICP in Siebel	Trader updated status to "new connection in progress"	Trader updated status to ACTIVE	Trader
1002142705UN12F	10/06/21	17/06/21	21/06/21	7/07/21	GENE
1002142950LC877	15/06/21	16/06/21	16/06/21	5/07/21	TRUS
1002143794LC939	29/06/21	1/07/21	1/07/21	13/07/21	MEEN
1002144634LCC42	12/07/21	16/07/21	16/07/21	23/07/21	MEEN

We found the process compliant with this clause because by clicking a box in Siebel the trader requests the ICP connection by accepting the ICP. The warranted person goes on site and electrically connects the ICP at the request of the trader.

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 discussed.

Audit commentary

Vector does not electrically connect any installation. According to the Vector User System Agreement, a trader nominates a warranted person from the list provided by Vector, who is approved to electrically connect a new point of connection to its network.

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 trader responsible for ensuring there is a metering installation for the point of connection.

The distributor that initiates the connection under Part 11 and connects the NSP 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 only NSP connections that are not point of connection to the grid are embedded networks within the Vector network. Vector did not create any new NSPs during the audit period.

Audit commentary

It is the embedded network owner's responsibility to comply with this clause.

Audit outcome

Compliant

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

Code reference

Clause 10.30A and 10.30B

Code related audit information

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

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

A distributor may only electrically connect an NSP if:

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

Audit observation

The only NSP connections that are not point of connection to the grid are embedded networks within the Vector network. Vector did not create any new NSPs during the audit period.

Audit commentary

It is the embedded network owner's responsibility to comply with this clause.

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:

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

We examined the new connection process and LIS files dated 09/08/2021.

Audit commentary

There is a unique distributor code "LC" used within the Auckland City and "UN" within the Northern Region. Gentrack 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.

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

Vector provided the LIS files. We examined them to confirm all active ICPs have a single loss category code.

Audit commentary

At the time of an ICP identifier creation, a single loss category code is assigned. The registry design prohibits the assigning of more than a single loss category to an ICP. 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

The new connection process was examined and discussed with Vector’s staff. The registry LIS file as at 31/07/20 was reviewed.

Audit commentary

The majority of requests for new connections are received from the customer or its representative.

The VECT LIS file contained 3 ICPs with the “New” status.

- 1002144057LC974 - it was created in advance because no transformer was installed
- 1002075000LC856 - created in error
- 1002137679LC9E5 - was a timing difference and the ICP became active prior to the audit.

The UNET LIS file contained 3 ICPs with the “New” status. One was a timing difference and the ICP became active prior to the audit. The remaining two ICPs found that work is required to be done on the network before these will be ready for connection to the network.

- 1002135401UNDFF – trader asked to cancel
- 1002135894UN35B - trader asked to cancel, did not want to accept the customer; the customer has not replied within a month to query if they want to nominate another trader
- 1002135894UN35B – slow acceptance by a trader

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 process to monitor ICPs with “New” and “Ready” status was reviewed. The LIS files and the Audit Compliance reports were examined to determine compliance. The process was discussed with Vector’s staff.

Audit commentary

At the time of audit, the following number of ICPs held in the registry held the status “Ready” for longer than 24 months. There were no ICPs with the status “New” for longer than 24 months.

Distributor Code	READY (2021)	READY (2020)	READY (2019)	READY (2018)	READY (2017)
UNET	20*	18	60	9	22
VECT	26	20	55	19	30

* 5 ICPs were decommissioned prior to the audit.

Once per month Vector sends an email to a list of ICPs unclaimed for longer than 24 months, asking them to confirm if still they still require these ICPs or whether they can be decommissioned - setup in error. Vector provided copies of emails sent to traders.

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 registry files were examined.

Audit commentary

VECT does not have any ICP with a generation capacity over 10 MW.

UNET has one ICP (0001442868UN4DC) with generation capacity over 10 MW, which has an individual loss factor of RDVL.

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.

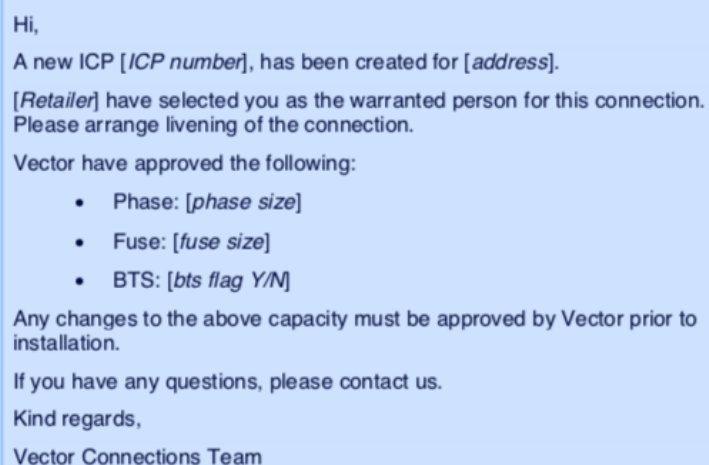
Audit observation

The new connection process was reviewed. It was discussed with Vector's staff.

Audit commentary

According to the Vector new connection process, only reconciliation participants can authorise the electrical connection of an installation. Once a new ICP is created, a nominated trader is notified and asked for acceptance of the ICP. Once the ICP is accepted, the reconciliation participant is asked to select the warranted person in Siebel and arrange the ICP electrical connection.

Below is shown a sample email sent to the reconciliation participants.



Hi,

A new ICP [ICP number], has been created for [address].

[Retailer] have selected you as the warranted person for this connection. Please arrange liveing of the connection.

Vector have approved the following:

- Phase: [phase size]
- Fuse: [fuse size]
- BTS: [bts flag Y/N]

Any changes to the above capacity must be approved by Vector prior to installation.

If you have any questions, please contact us.

Kind regards,

Vector Connections Team

Audit outcome

Compliant

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

Code reference

Clause 10.30C and 10.31C

Code related audit information

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

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

Audit observation

This is a new clause that came into force on 01/02/2021. It was discussed during the audit with the Vector staff.

Audit commentary

Vector uses Northpower and Electrix to electrically disconnect installations which can't be disconnected remotely. Any disconnections are done at the request of the retailer recorded on the registry. If the ICP needs to be permanently disconnected (decommissioned) it can be requested by a customer or the retailer. If the request was made by a customer, the retailer is notified.

Decommissions and temporary disconnections can both be carried out by Vector (Northpower or Electrix) at customers or retailers (recorded in the registry) request. The difference is that the work they do is completed on the Vector network side (the fuse isolation point in pit, pillar or on the pole). Vector does not disconnect or touch the metering. Metering is the responsibility of the retailer and MEP.

Audit outcome

Compliant

3.18. Meter bridging (Clause 10.33C)

Code reference

Clause 10.33C

Code related audit information

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

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

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

If the distributor bridges a meter, the distributor must notify the responsible trader within 1 business day, and include the date of bridging in its advice.

Audit observation

This is a new clause that came into force on 01/02/2021. It was discussed during the audit.

Audit commentary

Vector stated that their policy is not to bridge meters. It is always done by MEPs, however if for hot water issues it is not possible to fix, they are carried out on the network side i.e. in pillar, pole etc

If the problem is with the meter, customers are advised to contact their retailer.

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 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 10 business days, the notification must be provided no later than the 13th 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 3 business days after the registry manager has advised the distributor that the ICP is ready to be decommissioned, or 3 business days after the distributor has decommissioned the ICP.

Audit observation

The management of registry updates and NSP changes was reviewed. The process was discussed with Vector's staff.

The LIS files, Audit Compliance reports, and the EDA files for the audit period were reviewed to determine compliance. A diverse sample, of 10 backdated events by event type, were reviewed to determine the reasons for the late updates.

Audit commentary

Any changes to ICP information are done in Gentrack. The updates to the registry are uploaded twice per day, at mid-day and at 10pm. A small number of updates are made directly in the registry as required e.g. changing the ICP status from "Ready" to "New" before it is decommissioned.

The Audit Compliance reports were analysed to identify backdated event updates. The summary of late updates is below:

Pricing events

The Audit Compliance reports found 35,215 pricing updates were late for VECT, and 23,242 were late for UNET. We sampled 20 ICPs across both codes;

- 9 ICPs - Late TBS to perm info from retailer
- 2 ICPs - New ICPs incorrectly set up at residential instead of TBS or General rate
- 2 ICPs - Plan corrected to match kVA change
- 3 ICPs - Sites were being billed on the ARUL/ARUS plan code since 2017 but the registry update had not gone up, this was a manual fix, data cleansing exercise
- 1 ICP - MEEN advises this site is metered not UML
- 1 ICP – unnecessary update by GT, ICP was already billed on this code
- 1 ICP - Site on HH rates but non communicating meter. Retailer cannot supply HH info and asks for backdate
- 1 ICP – change from business to residential

The sampled ICPs are a fair representation of reasons for late pricing updates.

Traders send price change requests through, and these are processed at the end of each month. Vector's UoSA allows pricing to be backdated. Since the last audit Vector have changed the rules for updating the price plan after energisation data is received. They will now only back date as far as a year or to the latest price plan change event (whichever is the most recent).

Decommissioning Status events

ICP decommissioning is requested by a customer/agent. Details provided by the customer are validated by Vector against the registry information then a job is raised in Siebel. The job is issued to Electrix (UNET) or Northpower (VECT). A trader and a MEP (to remove a meter) are notified via email. Once the job is complete it is confirmed with the trader and they are asked to change the registry status to "inactive-ready for decommissioning". If traders do not update the registry status within 5-10 days of decommissioning, an automated follow up notification is sent. Repetitive reminders to traders speed up the process and ensures that traders do not use ICPs that are physically decommissioned.

The Audit Compliance Reports recorded that 90.35% of all VECT status updates to decommissioned status' were made on time with an average of 5.48 days business days between Status Inactive Event Date and Status Event input date, and 85.61% of all UNET status updates to decommissioned were made on time with an average time of 5.30 days to update the registry.

It is a very good result considering the number ICPs which Vector is responsible for. The process is automated as much as possible and persistent reminders sent to traders help Vector decommission ICPs in a timely manner.

Network events

We reviewed network event updates recorded in the Audit Compliance Reports.

The overall compliance of the VECT network updates was 74.93 % with 3,012 late network update events with an average of 28.52 BD to update. 906 were more than 100 business days after the event date and 29 updates were more than 1,000 business days after the event date.

We sampled 12 late updates to check the reasons for late updates

- 6 updates were related to IECD date supplied to Vector late
- 2 updates were related to uploading solar install date after receiving CoC
- 4 updates related to data correction of an incorrect feeder, changing to "New" status to have it decommissioned

The overall compliance of UNET network updates was 76.66% with 1,669 late network update events with an average of 21.05 BD to update. 383 were more than 100 business days after the event date and 22 updates were more than 1,000 business days after the event date.

We sampled 10 late updates to check the reasons for late updates

- 4 updates were related to IECD date supplied to Vector late
- 2 updates were related to uploading solar install date after receiving CoC
- 3 updates related to data correction of incorrect feeder, changing to "New" status to have it decommissioned

The overall number of late updates decreased significantly in comparison with the previous audit period. On average it took 25 BD to update during this audit period. Previously it was around 445 BD.

Change of NSP

The process of NSP changes was examined. It has not changed during the audit period. The Audit Compliance Reports are monitored by the Connection Team and are used to identify potential discrepancies which are passed on to the Information Team for action.

The Audit Compliance Reports identified 183 (107 VECT and 76 UNET) late NSP changes. They are ICPs where the NSP was changed in the registry later than 8 business days. A sample of 10 late updates for each network code were examined and it was found that these were all corrections required due to two causes:

- 18 ICPs - Remediated as part of the review of the NSP Discrepancy report. They were included in Gentrack Bulk Upload file.
- 2 ICPs - due to entering the solar details that caused the earlier NSP change to be overwritten; they were corrected upon discovery and are backdated to the correct event date

If the change to the NSP identifier is for more than 10 business days, the notification must be provided no later than the 13th business day and be backdated to the date the change took effect. The Operations Team provide notifications of NSP changes that are for longer than 14 days. These are then updated in GIS and then this is uploaded to Gentrack, which updates to the registry. We examined the EDA files and identified six instances on the Auckland network and one instance on the Northern network as shown below

Date	Code	Number of ICPs	NSPs
10/09/20	VECT	624	PEN0221 to PEN0331
15/10/20	VECT	4814	PEN0221 to PEN0331
28/01/21	VECT	834	ROS0221 to PEN1101
12/02/21	VECT	548	OTA0221 to WIR0331
25/03/21	VECT	1895	MNG0331 to OTA0221
1/04/21	VECT	577	OTA0221 to WIR0331
15/04/21	VECT	1927	MNG0331 to OTA0221
24/03/21	UNET	3932	HEN0331 to ALB0331

In all instances Vector used an incorrect effective event date for the change. The Code stated that the notification to the registry must be backdated to the date the change took effect. It is recorded as non-compliance.

Distributed generation

5.32 % of all VECT distributed generation network updates were made late with an average time to update the registry of 80.19 BD. There were 569 late network updates. We sampled 10 late updates. All of them were as a result of late notification of the installation from the field.

7.62 % of all UNET distributed generation network updates were made late with an average time to update the registry of 78.36 BD. There were 509 late network updates. All of them were as a result of late notification of the installation from the field.

Address events

The Audit Compliance Reports recorded that 99.53% of all VECT address updates were made on time with an average time to update the registry of less than a day (0.25). There were 6 late address updates. 4 of them were GPS coordinates corrections, two others were GPS coordinates added and address corrections.

92.67% of all UNET address updates were made on time with an average time to update the registry of less than a day (0.71). There were 9 late address updates. 6 updates were address corrections and 3 others related to GSP coordinate corrections and adding GPS coordinates.

The backdating of events to the registry is recorded as non-compliance.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref 4.1 With: 8 of Schedule 11.1 From: 23-Aug-20 To: 31-Jul-21	Registry event updates backdated more than three business days 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	The controls are rated as moderate as the checks in place will mitigate risk most of the time. New process for pricing events was introduced. Overall number of late updates significantly decreased in comparison with the last audit period. Audit risk rating is recorded as low, level of compliance is high.		
Actions taken to resolve the issue		Completion date	Remedial action status
NSP - Data analysis to identify ICP records with incorrect effective network event dates and then appropriately remediated in Gentrack.		Approx. March 2022	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
NSP - Business analysis work and a system solution implemented in order to prevent ICP incorrect network event dates going forward.		Approx. June 2022	

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

We reviewed the LIS files, the Audit Compliance reports and the process for the creation of ICP identifiers. It was discussed with Vector's staff. We sampled 10 ICPs per code.

Audit commentary

The process for allocating new ICPs to the correct transformer (platform) was examined. Each ICP is reviewed in GIS to determine the correct transformer based on the ICP location. The transformer maps back to the NSP.

The Operational Information and Insights Team monitors potential NSP discrepancies using the Audit Compliance reports. If any discrepancies are noted, information is passed to the Connections Team.

There is an on-going project to “clean-up” the historic incorrect ICPs allocation to NSPs in the registry. The Audit Compliance reports found some active ICPs where 10%, or fewer ICPs, on a street have a different NSP, and there are fewer than three ICPs with a different NSP. The table below shows the number of ICPs with incorrectly assigned NSPs. It is evident that the on-going project to “clean-up” historic incorrect ICPs allocation to NSPs in the registry is providing good results.

Code	Number of ICPs		
	2021	2020	2019
VECT	110	179	308
UNET	99	110	250
Total	209	289	558

We sampled 20 ICPs from the Audit Compliance Reports identified as being on incorrect NSP. We asked Vector for comment

ICP	NSP used by ICP	Vector comment
1002068381LC09B	WIR0331	ICP appears to have been on the incorrect Platform/Transformer and remediated to the correct Platform/Transformer TAK0331
0404008062LC43D	OTA0221	ICP Premises address incorrect and remediated from Craig Place to Craig Road.
1002141404LC69D	PEN0221	ICP appears to have been incorrectly put on PEN0221 and remediated to PEN0331.
1002141137LC8A0	PEN0221	ICP appears to have been incorrectly put on PEN0221 and remediated to PEN0331.
1002140020LC763	HOB1101	Currently on PENDING Platform/Transformer. Trying to ascertain exact location of ICP premises.
0433803002LC1E1	TAK0331	ICP premises address incorrect. Awaiting remediation from Kimpton Road, Papatoetoe to Kimptons Road, Brookby.

1002140612LC618	HOB1101	ICP was on PENDING Platform/Transformer and remediated to correct Platform/Transformer PEN0331
1001262295LCF6B	TAK0331	ICP appears to have been on the incorrect Platform/Transformer and remediated to the correct Platform/Transformer PAK0331
0140893091LC939	ROS1101	Corner property. Most of this street fed from HOB1101 except for a couple of corner properties that are fed from ROS1101.
1001137028LC065	PEN0331	Unsure... possibility is that the report is confusing Victoria Street in the CBD with Victoria Street, Onehunga.
1002140298UN7D6	ALB1101	ICP appears to have been incorrectly put on ALB1101 and remediated to WRD0331.
1002138547UNDF1	HEP0331	ICP appears to have been incorrectly put on HEP0331 and remediated to HEN0331.
1002138072UN243	ALB1101	ICP was on PENDING Platform/Transformer and remediated to correct Platform/Transformer.
1002139630UN7C5	HEN0331	ICP appears to have been incorrectly put on HEN0331 and remediated to ALB0331.
1002124523UN06A	ALB1101	ICP was on PENDING Platform/Transformer and remediated to correct Platform/Transformer.
1002139309UNB69	HEN0331	ICP appears to have been incorrectly put on HEN0331 and remediated to ALB0331.
1002135454UN8B8	HEP0331	ICP appears to have been incorrectly put on HEP0331 and remediated to HEN0331.
1002109640UN3B4	HEN0331	ICP appears to have been incorrectly put on HEN0331 and remediated to ALB0331.
1002110417UN830	HEN0331	Unsure... possibility is that the report is confusing Green Road, Matakana with Green Road, Westgate.

1001144340UNCCF	SVL0331	Unsure... possibility is that the report is confusing Waterloo Road, Milford with Waterloo Road, Silverdale.
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The summary of our findings is below:

- 13 ICPs (65%) out of 20 had incorrect NSP assigned in the registry, it was corrected during the audit
- 2 ICPs - had incorrect addresses which were corrected
- 4 ICPs – the report is incorrect
- 1 ICP - trying to ascertain exact location of ICP premises

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.2 With: 7(1)(b) of Schedule 11.1 From: 23-Aug-20 To: 31-Jul-21	13 out of 20 ICPs sampled were mapped to incorrect NSP Potential impact: Low Actual impact: Low Audit history: Twice previously Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are recorded as strong as the mapping for new ICPs is robust and historic ICPs that are potentially mis-mapped are continually being worked through. Vector uses the Audit Compliance report to correct historic incorrect mapping. The risk rating is low as Vector has one balancing area per network and therefore an incorrect NSP has no direct impact on settlement outcomes		
Actions taken to resolve the issue		Completion date	Remedial action status
To mitigate the number of errors, the EA "Registry Audit Comparison Report – NSP Discrepancies" report is run for VECT and UNET on a monthly basis and the remediation's required are completed. There are other reports set up by Vector that show ICPs on Pending Transformers. These reports are run on a weekly basis and the remediations required are completed.		Ongoing	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Same as above.		Ongoing	

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

r's ICP identifier within 3 business days after receiving a request for that information.

Audit observation

It was discussed with Vector during the audit

Audit commentary

Customer queries for ICP information can be received by phone call or email. Where information is requested by phone, details can be provided immediately while the customer is on the line. Where information is requested via email, Vector has a 3 working days SLA which aligns with the requirement.

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 Audit Compliance reports for the audit period were reviewed to determine compliance.

Audit commentary

At the time of application, a customer agent provides an installation address. Validation of the application includes checking for duplicate addresses. GPS co-ordinates have been added to the majority of the ICPs. Vector continues to work through the historically hard to locate addresses and the volume of these continues to decrease.

The Audit Compliance reports show 781 ICPs on the Auckland network (VECT) and 754 ICPs on the Northern network (UNET) where all address fields are the same or where one or more GPS coordinates and street number and property name are null. As soon as the coordinates are populated for those ICPs with location addresses or GPS coordinates missing, compliance will be met.

There is another group of ICPs which are not being readily located. They are ICPs with neither street number, nor property name nor GPS coordinates. We identified 474 ICPs in this group. All of them are ICPs created in 1999 and 2000.

- 264 ICPs are on UNET network, 87% of them were created in 1999
- 210 ICPs are on VECT network, 82% of them were created in 2000.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.4 With: 2 of Schedule 11.1 From: 23-Aug-20 To: 31-Jul-21	1,535 ICPs with addresses that are not readily locatable 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	Controls are recorded as moderate as Vector is still working through historic ICPs. The audit risk rating is low as this has no direct impact on settlement outcomes		
Actions taken to resolve the issue		Completion date	Remedial action status
This is an ongoing piece of work. Vector continue to work on trying to identify and correct these historical address issues and are requesting help from the traders to resolve these.		Ongoing	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
As above			

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 discussed with Vector during the audit.

Audit commentary

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 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 LIS files, Audit Compliance reports, and the EDA files for the audit period were reviewed to determine compliance. A diverse sample of 10 data discrepancies was checked. It was discussed with the Connection Team.

Audit commentary

The analyses of registry files confirm the accuracy of ICP information uploaded to the registry by Vector. There are some exceptions in the area of UML, Dedicated NSP flag in the registry, distributed generation and Initial Electrical Connection Date (IECD), where it was identified that some information was incorrect. Each type of network information category is analysed in the following separate sections.

Unmetered Load

At present, UML information is not yet incorporated into the new connection application form. It is still under development, due to be released next year. Detailed information is exchanged via email requesting the following details:

- Will this be a constant supply (not seasonal or day on day off etc)
- Use less than 3,000 kw annually
- Consumption is less than 1 kVA
- Consumption in watts
- Unmetered type

An examination of the LIS files identified 725 UML ICPs on the UNET network and 1,700 UML ICPs on the VECT network. 32 new UML ICPs (UNET 13, VECT 19) were created during the audit period.

- 6 ICPs UNET did not have recorded details in the relevant registry field. It was corrected during the audit.
- 5 ICPs VECT did not have Vector entries, 2 ICPs (1002111042LCAC2 and 1002143422LC907) did not have recorded details in the relevant registry field because the information was not provided by customers. The details were received before this report was finalised and populated in the registry.

Analysis of the LIS files showed that 3 ICPs had VECT network details but not retailer details (1001123939LC1E5 and 1001243538LCF40), one of them was corrected during the audit (1001268198LCD73). All of them had daily kWh recorded by MERI.

We identified 28 ICPs which had “unmetered no load” recorded by GENE but not by Vector. These are historic and the unmetered load is not known by Vector, however Vector have requested GENE confirm the unmetered load details and if confirmed these details will be added. Daily Unmetered kWh is recorded as 0.5 kWh.

The description of UML details in the “Unmetered Load details” registry field used by Vector complies with the Guidelines. From 1 May 2008, distributors are required to identify any unmetered load during their new connections process and to provide the type and load (in kW) of that unmetered load to the registry. Retailers load values are, in most cases, but now always in W. We attempted to compare Vector and retailers UML load details. It was not an easy task; we identified 81 ICPs (11%) UNET and 93 ICPs (5.5%) VECT for which the difference was +/- 1 kW. The most important is a value of daily Unmetered kWh by traders because it is used for reconciliation. Vector closely monitors information in the registry and works with retailers to reconcile values.

Distributor ICPs “LE”

The analysis of the LIS files showed that Vector has 143 ICPs with the status of “distributor” on the Auckland network, and 55 ICPs on the Northern network. They are ICPs assigned to a so called gate meter between the Vector network and an embedded network located on its network, and the reconciliation type is “LE”.

During the audit period Vector created 4 ICPs for new embedded networks located on the Northern network and 11 ICPs on the Auckland network. Gate meters ICPs (reconciliation type flag in the registry is LE) are always created at the request of embedded network owners.

ICPs were setup correctly, except ICP 1002107432LCBEF, which had the registry Dedicated NSP flag set to “N”, which is incorrect. It was corrected during the audit.

Dedicated vs non-dedicated NSPs

We reviewed the dedicated and non-dedicated flag recorded for each ICP in the registry. All of Vector’s GN ICPs are expected to be set to “N” and LE ICPs are expected to be set to “Y”. The table below shows some irregularities.

ICP	Reconciliation type	Dedicated Flag	Comment
1002094149LC17B	GN	Y	Corrected during the audit to “N”
1002105542LC1A6	GN	Y	Corrected during the audit to “N”
1002105722LC451	GN	Y	Corrected during the audit to “N”
1002105723LC814	GN	Y	Corrected during the audit to “N”
1002112011LCCEA	GN	Y	Corrected during the audit to “N”
1002125236LC33E	GN	Y	Corrected during the audit to “N”
1002136978UN11B	GN	Y	Corrected during the audit to “N”
1002144173UN63B	GN	Y	Corrected during the audit to “N”

1002145805UNA40	GN	Y	Corrected during the audit to “N”
1001300254UNBA1	LE	N	Corrected during the audit to “Y”
1002107432LCEBF	LE	N	Corrected during the audit to “Y”
1002105645LCF6F	LE	N	Corrected during the audit to “Y”
1002105646LC3AF	LE	N	Corrected during the audit to “Y”
1001298651LCE53	LE	N	Corrected during the audit to “Y”
1001299030LCA40	LE	N	Corrected during the audit to “Y”
1001303708LCD46	LE	N	It was Y however has been changed to N. Still investigating the cause of the change.

Distributed Generation

Vector requires an application for all distributed generation. All applications have to be approved before allowing distributed generation to be connected to their network but Vector is reliant on customers following the process.

Once the application has been received a service request is created in Siebel. An application for up to 10 kW is approved automatically, more than 10 kW must be approved by a planning engineer. Siebel manages workflow and sends automated reminders to the applicant after ten business days of approval. Information is loaded to Gentrack and the registry, once the Code of Compliance (COC) has been received back from the contractor to confirm that the installation was electrically connected. As noted previously COC are slow in being returned and causes Vector to be late in updating this information to the registry.

The LIS files showed that there are 3,487 UNET and 3,170 VECT active ICPs with generation capacity. In a small number of ICPs we found an incorrect Installation flag in the registry, or 0 kW recorded in the Generation Capacity field.

ICP	Generation Capacity [kW]	Comment	Update
0000167444UN31C	0	Solar removed by a customer	Trader profile incorrect
1002040074UN019	0	Electric vehicle, error to be corrected	Corrected during the audit, entry was removed
1002063525UNA7C	0	5 kW to be reinstated in the registry	Corrected during the audit
0800537068LC12B	0	Akl Uni, diesel 720 kW, to be corrected	It is Auckland Uni, to be discussed with trader
1002092665LC5F2	0	No application for sola; to be removed	Corrected during the audit

Incorrect Installation type flag, it should be B.

ICP	Installation type	Comment	Update
0000196700UN78C	L	Changed by mistake to be corrected	Corrected during the audit
1001142187UN92D	L	Changed by mistake to be corrected	Corrected during the audit
1002055072UNE57	L	No application, entry to be removed	Corrected during the audit
1002063525UNA7C	L	Changed by mistake to be corrected	Corrected during the audit

Profile used by traders indicate distributed generation installed, none recorded by Vector

The Audit Compliance Reports identified 392 ICPs (174 VECT and 218 UNET) where the trader has indicated that distributed generation is present, and Vector have none recorded.

A sample of 14 ICPs were examined and found that, for the following, an application has never been received.

ICP	Vector's comment
0000596869UN09D	This is pending a COC
0000597694UN87A	This is pending a COC
0000181834UN2F0	This is pending a COC
0000203744UN873	This ICP was missed, CoC has been received. It has now been updated.
0000173326UND0A	This is pending a COC
0001262378UN5D5	This is pending a COC
0000124487UN146	This is pending a COC
0157540685LC720	This is pending a COC
0156504022LCF5F	This is pending a COC
0151669007LC2A9	This is pending a COC
0149115024LC053	This is pending a COC
0148710077LC465	This is pending a COC
0144285037LCCCA	Vector did not receive an application for this ICP. Email sent to retailer to query.
0558356929LC3CF	This is pending a COC

Vector recorded distributed generation; profile used by traders does not reflect it

We checked the LIS files and identified 1,571 (1,002 VECT and 660 UNET) active ICPs where Vector has distributed generation present, but the trader's profile does not reflect it. It was discussed with Vector

and it was confirmed that their entry in the registry is correct. We confirmation that import/export metering is recorded in the registry. There is a known issue with one trader's system not recording the correct distributed generation profile on the registry and when that traders' code is excluded, it reduces the number to 86 (43 VECT and 43 UNET) ICPs. A sample of 20 ICPs were checked, and we found all had Import/Export meters installed therefore it is most likely that the trader's profile is incorrect, unless all these ICPs are notified to RM as gifted energy.

We sampled the embedded generation information populated on the registry against the paperwork provided for a sample of 20 ICPs. The sampling details are shown below:

UNET

ICP	Effective date of EG installation in the registry	Generation Capacity in the registry [kW]	COC date	Generation Capacity in COC [kW]
0000235438UN9DF	24/12/2020	5	24/12/2020	5
0000236546UN4FD	26/07/2021	3	26/07/2021	3
0000468990UNEEF	26/11/2020	5	26/11/2020	5
0001263033UNB07	26/10/2020	5	26/10/2020	5
0001410529UNF00	10/10/2020	3	10/10/2020	3
1000754608UN644	06/10/2020	8	06/10/2020	8
1001108633UN042	23/07/2021	3.68	23/07/2021	3.68 (application form)
1001115777UN828	01/04/2021	5	01/04/2021	5
1001258442UNC9D	19/01/2021	8.2	19/01/2021	8.2
1001276298UN445	07/12/2020	5	07/12/2020	5
1002037319UND68	15/03/2021	5	15/03/2021	5

VECT

ICP	Effective date of EG installation in the registry	Generation Capacity in the registry [kW]	COC date	Generation Capacity in COC [kW]
0409575062LC8F3	27/03/2021	5	27/03/2021	5
0412351005LC875	12/04/2021	5	12/04/2021	5
0326720049LC870	05/02/2021	3.68	05/02/2021	3.68 (application form)
0168877481LC4A8	26/07/2021	5	26/07/2021	5

0350597243LC07F	26/07/2021	3	26/07/2021	3
0125135025LCDDC	22/12/2020	3.68	22/12/2020	3.68 (application form)
0398881189LCE2C	19/11/2020	8.2	19/11/2020	8.2
0445781041LCFB3	22/10/2020	5	22/10/2020	5
0357237528LC49A	17/11/2020	3.68	17/11/2020	3.68 (application form)

We checked the most recent generation fleet listings from the EMI site with the LIS files and this was discussed during the site audit. It is the updated list from the previous audit.

Station Name	ICP	2020 Comments	2021 Comments
Mansons Developments		Vector have been in touch with the trader but without an ICP little progress was made. Vector are going back to the trader to request a list of all ICPs associated with Mansons Developments in an attempt to identify the ICP/s associated with this generation. The generation capacity is recorded as 0.002 MW on the EMI spreadsheet.	Checked with Mercury they're not aware of any generation with the six Mansons Development ICP's that they hold. No further action Vector can take without an ICP or address at a minimum.
Watercare Mangere	0286447869LCCF5	This has no generation recorded on the registry. Vector checked with the trader recorded on the EMI spreadsheet. This ICP has switched to a different trader. Vector is checking with the current trader to confirm what is present.	Generation on site that they export – co-generation for the period 1 July 2018 to 30 June 2019 was 17,607kWh It looks like this customer exports back to the grid during the summer season. Waiting on retailer to confirm details so we can update the registry.
Whitford Landfill	0206259429LCF4D	The value of 5300 kW recorded in the registry is believed to be correct but is different to that recorded in the EMI spreadsheet of 3MW. This is with the Key Account Manager to confirm which value is correct.	Received confirmation capacity of 5MVA. Updated ICP
Redvale Landfill	1001249913UN499	No application for distributed generation has been received for this site. This is not the correct ICP associated with this generation. Vector are checking with the trader to	There is no generation; information on the EMI site is incorrect.

		find the correct ICP and confirm the load.	
Rosedale Landfill	0001264837UNE60 -	No application for distributed generation has been received for this site. This is not the correct ICP associated with this generation. Vector are checking with the trader to find the correct ICP and confirm the load.	There is no generation; information on the EMI site is incorrect.
Watercare Waitakere	0000100324UN5D6	No application for distributed generation has been received for this site. Vector are checking with the trader to find the correct ICP and confirm the load.	Waitakere Water Treatment Plant used to have a hydro generator but this has not functioned for many years. Therefore, there is not currently any DG or export from this site.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref 4.6</p> <p>With: 7(1)of Schedule 11.1</p> <p>From: 23-Aug-20</p> <p>To: 31-Jul-21</p>	<p>Distributed generation details incorrect for a small number of ICPs.</p> <p>11 UML ICPs did not have details recorded in the registry</p> <p>5 ICPs (LE) incorrectly the Dedicated NSP flag set to “N”</p> <p>7 ICPs (GN) incorrectly Dedicated NSP flag set to “Y”</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. Vector continues to improve monitoring of inaccuracies.</p> <p>The audit risk rating is assessed to be low as the discrepancies have only a minor impact to the market.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>UML recorded by GENE - These are sites that the meter has been historically removed, it is not that they have unmetered load connected. Likely that these are duplicated ICPS that need decommissioning. Information has been sent to Genesis to comment and confirm</p> <p>Dedicated NSP – All errors have been corrected.</p> <p>DG – Please see audit ref 2.1</p>		<p>Dec 2021</p> <p>08/10/2021</p>	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>Dedicated NSP – This has been found to be a training error – a misunderstanding of what the dedicated NSP flag was for. Further training has been provided to staff.</p>		08/10/2021	

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

We reviewed the new connection process, and the Audit Compliance reports to assess compliance.

Audit commentary

As a part of the new connections process, Vector assigns the actual price category code and the actual changeable capacity of the ICP at the time an ICP is created. The price category code is assigned based on capacity information given by the customer.

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 files were examined. We checked that the GPS coordinates used meet the NZTM2000 standard; We mapped 10 ICPs to check accuracy.

Audit commentary

Vector have worked with external agencies to match their addresses to GPS co-ordinates. Significant progress has been made since the last audit. There are approximately 80,000 ICPs still to have co-ordinates added. Some of the addresses are proving difficult to determine. The last audit recommended to contact MEPs for co-ordination where appropriate.

We checked GPS-Easting and GPS-Northing for 10 ICPs by converting their coordinates using the NZ Coordinates Conversion tool on Land Information NZ website and comparing the locations to the ICP address to Google Maps. The sampling showed that coordinates recorded in the registry are correct.

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 new connection process was examined. The EDA files and the Audit Compliance reports were analysed.

Audit commentary

The vast majority of ICP requests come directly from customers or their agents. Proposed retailer is a mandatory field on an application for supply. The ICP creation process is automated. The current process is to create all ICPs at the "READY" status.

When Vector receives an application, the request is validated to confirm if the requested supply is available. If the supply is available, then Vector creates the ICP straight into READY status and then passes it through to the retailer for acceptance.

If the supply is not available, Vector does further assessment:

- If the ICP is needed as the customer requires CTs from their retailer, then the ICP is released in a NEW status, the retailer is notified that it is only being released for CT purposes and that the network supply point is not yet installed.
- If the ICP is not needed for CTs, the request is put on hold and the customer is notified that the ICP will not be released until the network supply point has been installed.
- If further changes are required to the network to provide the customers requested supply it is sent the job for quoting.

If an ICP was originally created in NEW status, Vector uses the network installation date as the effective date for READY status (date when the pit, pillar, transformer or HV supply are installed).

Changing the status from READY back to NEW to allow ICP being decommissioned is always done manually via the registry web interface.

The price category field in Gentrack ensures each ICP can only have a single price category. Examination of the LIS files confirmed that all ICPs at "Ready" status had a single price category assigned and proposed trader identified.

We sampled 4 ICPs created after 1 June 2021 when the modified process was implemented to address issue with lack of IECD for some ICPs. The table below shows ICPs live cycle. Upon closer analysis of event dates, our conclusion is that the new process has unintentionally created a timing issue for the ICP status in the registry. Clause 14(2)(a) of Schedule 11.1 specifies that before an ICP is given the "Ready" status the distributor must identify the trader that has taken responsibility for the ICP. As the table shows, a trader accepts responsibility for an ICP after the ICP has been uploaded to the registry with the proposed retailer, which allows the registry to assign the status READY. It is a minor issue, which could be easily fixed. The new process implemented by Vector has built in good safeguards to prevent installations from being electrically connected without the trader taking responsibility for it.

ICP	ICP uploaded to the registry with the status READY	Trader accepted ICP in Siebel	Trader updated status to "New connection in progress"	Trader updated status to ACTIVE
1002142705UN12F	10/06/21	17/06/21	21/06/21	7/07/21
1002142950LC877	15/06/21	16/06/21	16/06/21	5/07/21
1002143794LC939	29/06/21	1/07/21	1/07/21	13/07/21
1002144634LCC42	12/07/21	16/07/21	16/07/21	23/07/21

All sampled ICPs were accepted by traders within a few days. Overall, we are positive that a number of ICPs is accepted by traders the same day as they notified. It assures that compliance is met.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.9 With: 14 of Schedule 11.1 From: 01-Jun-20 To: 31-Jul-21	Some ICPs are loaded to the registry with READY status before being accepted by trader in Siebel Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are recorded as moderate as some small process adjustments would be beneficial. The new process has unintentionally created a timing issue for the ICP status in the registry. The audit risk rating is low because a timing issue has no direct impact on settlement outcomes		
Actions taken to resolve the issue		Completion date	Remedial action status
As ICPs are requested by customers in the majority of cases and not the retailer, the ICP is created in ready and then sent to the retailer for acceptance. The retailer still has the opportunity to decline. Forcing the retailer to accept the job prior to releasing the ICP would result in delays for the retailer and will extend the time it takes for customers site to be livened. Vector will discuss options with the retailers on the best way forward.		Feb 2021	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
As above			

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

The LIS files and the Audit Compliance reports were examined.

The process was discussed with Vector’s staff. Vector’s policy is to not accept shared unmetered load. The only ICPs which are created with the “distributor” (888) status are ICPs of the point of connection between an embedded network and the Vector network.

Vector provided a list of all ICPs with the status “distributor” created during the audit period.

Audit commentary

The analysis of the LIS files showed that Vector has 143 ICPs with the status of “distributor” on the Auckland network and 55 ICPs on the Northern network. They are ICPs assigned to so called gate meters between the Vector network and an embedded network located on its network.

During the audit period Vector created 4 ICPs for new embedded networks located on the Northern network, and 11 ICPs on the Auckland network. Gate meters ICPs (Reconciliation Type flag in the registry is LE) are always created at the request of the embedded network owner.

We viewed all newly created ICPs and confirmed that all of them were correctly recorded in the registry and none of them were backdated.

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 decommissioning process was examined. The registry files and the Audit Compliance reports were analysed. We reviewed 20 ICPs across two networks for which updates of the registry were later than 5BD.

Audit commentary

A customer requests the decommissioning of an ICP via the website by filling in a form. A Call Centre also accepts requests for decommissioning. Vector asks a customer to quote an ICP, a meter number, a trader, a date. All these details are validated by Vector against the registry information then a job is raised in Siebel. The job is issued to Electrix (UNET) or Northpower (VECT). A trader and a MEP (to remove a meter) are notified via email. Once the job is complete it is confirmed with the trader and they are asked to change the registry status to “inactive-ready for decommissioning”. Once the registry is updated to “inactive – ready for decommissioning”, Vector is automatically notified so the status can be updated in Gentrack, which updates the registry overnight. The process is automated as much as possible.

If traders do not update the registry status within 5-10 days of decommissioning, an automated follow up notification is sent. Repetitive reminders to traders speed up the process and ensures that traders do not use ICPs that are physically decommissioned.

Vector's system checks for an open job in Siebel for any ICPs that are set to "Ready for decommissioning" in the registry by a trader. If no request has been lodged, a notification is followed up with a trader to verify the accuracy of registry information. There are some instances where traders incorrectly assign the "ready for decommissioning" status to an ICP.

The number of ICPs at "ready for decommissioning" status has increased over the years. This was discussed during the audit. Vector has streamlined the process as much as possible (automated). The increase in the number of ICPs "ready for decommissioning" is the result of a significant development on its network.

Code	Number of ICPs				
	2021	2020	2019	2018	2017
VECT	745	582	477	296	632
UNET	331	276	242	180	614
Total	1,076	858	719	476	1,246

We examined ICPs with the status "ready for decommissioning" in the LIS files. We identified 10 ICPs to which traders assigned the "ready for decommissioning" status during the audit period. We asked Vector for comments.

ICP	Trader assign "ready for decom" status	Vector's comment
1002064055UNE44	04/06/21	Will change to decommissioned. This errored due to later event.
1002066540UNFE3	13/08/19	Will change to decommissioned. This errored due to later event.
1002078425UN479	20/08/20	Will change to decommissioned. This errored due to later event.
1002080221UNBE9	13/07/21	Decommission request was cancelled.
1002091243UNDDD	18/04/21	Will change to decommissioned. This errored due to later event.
1002077312LC23D	15/05/21	No decommission request received.
1002079154LC3D0	26/11/20	Will change to decommissioned. This errored due to later event.
1002080453LC223	15/02/21	Decommission request was cancelled.
1002095062LCA5E	20/11/20	Will change to decommissioned. This errored due to later event.
1002123846LC9A9	5/08/21	Will change to decommissioned. This errored due to later event.

The overall comment is that most of the sampled ICPs (7 out of 10) were not picked up by Vector due to a later registry event. For the 3 others, no decommissioning has taken place by Vector.

Vector uses the actual date of physical removal of the connection as the date of decommissioning unless a metering update (MEP update) precludes it.

A sample of 17 ICPs, across two network codes, was checked to verify the accuracy of information.

ICP	Event date of decom VECT/UNET	Event Date of decom Trader	Trader	Vector's comment
0001431247UN404	03/11/2020	10/06/2019	CTCT	We had to use 03/11/2020 due to later metering event.
0000142225UN842	03/11/2020	09/07/2019	CTCT	We had to use 03/11/2020 due to later metering event.
0000169101UN133	28/05/2021	24/05/2021	CTCT	We had to use 28/05/2021 due to later metering event.
0000209834UNC61	04/08/2020	04/08/2020	UNET	Vector decommissioned supply on 04/08/2020
0000256469UND2A	18/12/2020	18/12/2020	UNET	Vector decommissioned supply on 18/12/2020
0000229064UNDA9	09/12/2020	08/12/2020	TRUS	Vector completed site visit on 09/12/2020.
0000134930UN3D7	20/11/2020	10/11/2020	PSNZ	Vector decommissioned supply on 10/11/2020 however we had to use 20/11/2020 as effective date in registry due to later events.
0000254667UN7F6	19/11/2020	16/11/2020	GENE	Vector decommissioned supply on 19/11/2020
0000204549UN94F	19/11/2020	16/11/2020	GEOL	Vector decommissioned supply on 19/11/2020
0000105331UN514	05/11/2020	04/11/2020	CTCT	Vector decommissioned supply on 04/11/2020 however we had to use 05/11/2020 as effective date in registry due to later events.
1002067852LCB77	29/09/2020	20/09/2020	MERI	Vector decommissioned supply on 20/09/2020 however we had to use 29/09/2020 as effective date in registry due to later events.
1001134362LC1B2	08/10/2020	29/09/2020	MERI	Vector decommissioned supply on 29/09/2020 however we had to use 08/10/2020 as effective date in registry due to later events.
0393035689LCCCB	02/02/2021	22/01/2021	MERI	Vector decommissioned supply on 22/01/2021 however we had to use 02/02/2021 as effective date in registry due to later events.

1001160241LCCD7	05/02/2021	14/07/2020	TRUS	Vector decommissioned supply on 22/01/2021 however we had to use 05/02/2021 as effective date in registry due to later events.
0615093053LCFB9	30/03/2021	2/12/2020	MEEN	Vector completed site visit on 30/03/2021.
1002105742LCBA1	22/03/2021	9/02/2021	CTCT	Vector completed site visit on 22/03/2021.
0120476029LCE36	16/10/2020	8/10/2020	PSNZ	Vector decommissioned supply on 08/10/2020 however we had to use 16/10/2020 as effective date in registry due to later events.

17 ICPs were sampled. For 2 out of those 17, the event date specified by the trader and event date used by Vector are the same. For the remaining 15 ICPs, the two dates are different.

Vector, as a distributor, is responsible for the physical removal of electrical installations associated with an ICP. In some cases, a distributor status event date is later than the status event date specified by the trader. Vector always aims to use the date that an electrical installation was physically removed. It is not always possible because of limitations in the registry. Regardless of the trader's effective date, if there is a later metering event uploaded by a MEP then Vector needs to use that metering event effective date. The registry won't allow them to use an earlier date.

The steps taken by Vector to update the registry to overcome its limitations are described below:

1. Decommission date is the date of physical disconnection from the supply.
2. Where #1 is not possible because the retailer has a later date recorded, Vectors' system uses the retailers chosen date.
3. Where #2 is not possible because a metering event (i.e., meter removal) entered by a MEP is a later date, Vector uses the meter removal date.
4. If the later event is a network event (address, network, or pricing) then it is reversed

It is a well-known problem for distributors which Vector approach in a practical way. The only way to address this issue would be to make changes to the registry by not allowing any additional updates once the ICP has the status "ready for decommissioning" assigned by a trader.

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.

Audit commentary

No new Price Category Codes were added to the registry during the audit period. The last update of the Price Category Code was in January 2020, start date 1 April 2020.

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.

Audit commentary

Vector has not created any new loss category codes for UNET or VECT during the audit period.

Audit outcome

Compliant

5.2. Updating loss factors (Clause 22 Schedule 11.1)

Code reference

Clause 22 Schedule 11.1

Code related audit information

Each loss category code must have a maximum of 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.

Audit commentary

Vector updated four loss factors both for UNET and VECT. Clause 22(5) of Schedule 11.1 prescribes that the date that a loss factor takes effect must not be earlier than 2 months after the date on which the loss factor is entered in the table.

Vector meet the requirements of this subclause. The updates to the eight loss factors were entered on 13/01/2021. New loss factors took effect on 01/04/2021.

Audit outcome

Compliant

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

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

Code reference

Clause 11.8 and Clause 25 Schedule 11.1

Code related audit information

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

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

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

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

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

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

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

Audit observation

We examined the NSP mapping table in the registry. It was discussed with Vector's staff.

Audit commentary

Based on an 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. The company has a process in place if such a situation arises. It is a long, well planned process which requires coordination with Transpower. The company indicated that due to a significant growth of Auckland city, there are plans to create one new NSP on the Auckland network and three new NSPs on the Northern network.

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

We examined the NSP mapping table in the registry. Vector has not created a new NSP, as described in the previous section, the reconciliation manager was not asked to create a unique NSP identifier.

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

We examined the NSP mapping table in the registry.

Audit commentary

Based on examination of the NSP mapping table in the registry it was confirmed that no new NSP was created.

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

It was discussed during the audit. Vector has not established any embedded network since the last audit. We examined the NSP mapping table in the registry.

Audit commentary

Vector has not established any embedded network since the last audit and there are no plans to do it in the future.

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

We examined the NSP mapping table in the registry.

Audit commentary

Vector has two balancing areas NORTHNRUNETG (North Shore) and AUCLNDVECTG (Auckland City). there were no changes to balancing areas 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

We examined the NSP mapping table in the registry.

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

There were 5 ICPs transferred between the UNET and VECT networks and five ICPs transferred from AIAL to the VECT network. These were corrections as detailed below:

Audit commentary

There was 1 ICP transferred between the UNET and VECT networks and 8 ICPs transferred from SMRT and TENC to the VECT network. These were corrections as detailed below:

ICP	Original NSP & Network	New NSP& Network	Date EA notified	Date of transfer
1002094278LC9C5	TAK0331 VECT	SVL0331 UNET	11/11/2020	01/12/2020
9000000001SN0B6	OPS0011 SMRT	MNG0331 VECT	31/03/2021	01/05/2021
9000000004SNDF9	OPS0011 SMRT	MNG0331 VECT	31/03/2021	01/05/2021
0186799128LC506	TOT0011 TENC	HOB1101 VECT	15/03/2021	01/05/2021
0146662032LCC55	TOT0011 TENC	HOB1101 VECT	15/03/2021	01/05/2021
0146652037LC036	TOT0011 TENC	HOB1101 VECT	15/03/2021	01/05/2021
0192768417LCC79	TOT0011 TENC	HOB1101 VECT	15/03/2021	01/05/2021
0193298511LCA04	TOT0011 TENC	HOB1101 VECT	15/03/2021	01/05/2021
0137686978LC59D	TOT0011 TENC	HOB1101 VECT	15/03/2021	01/05/2021

Vector provided copies of notifications, DS-010 (transfer) file and retailers' consent sent to the EA.

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

Distributor audit report V13

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

Vector does not have any NSPs that are not connections to the grid, for which they are responsible. The ownership of NSPs on its network, which are not a point of connection to the grid, lies with embedded network owners.

Audit commentary

This clause is not applicable to Vector 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 the reconciliation participant for the NSP (Clause 10.25(2)(b)); and
- no later than 5 business days after the date of certification of each metering installation, advise the reconciliation manager of
 - a) the MEP for the NSP (Clause 10.25(2)(c)(i)); and
 - b) the NSP of the certification expiry date (Clause 10.25(2)(c)(ii)).

Audit observation

As described in the section above, Vector 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 Vector 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

The NSP supply point table was reviewed.

Audit commentary

Vector have not initiated any changes of network owner.

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

Vector as such does not have any embedded network outside of its network.

Audit commentary

There are many embedded networks on the Vector network, but they are not the responsible participant. This clause is not applicable.

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

Vector identified 9 ICPs that have been transferred during the audit period. We examined the registry information.

Audit commentary

Permission from the trader was gained in all instances prior to the transfer of the ICPs. Vector provided a copy of correspondence.

Audit outcome

Compliant

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

Code reference

Clause 6 Schedule 11.2

Code related audit information

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

Audit observation

The NSP supply point table was reviewed.

Audit commentary

There were no ICPs transferred to an embedded network.

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

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

Audit commentary

There is no shared unmetered load connected to the Vector network. Vector does not allow new ICPs to have 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

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

Audit commentary

There is no shared unmetered load connected to the Vector network. This clause is not applicable to Vector. 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

This was discussed during the audit. The Guidelines on the calculation and the use of loss factors for reconciliation purposes published on 26/06/2018 are used to calculate loss factors on the Auckland and Northern networks. We reviewed the documentation relating to the loss factor review methodology.

Audit commentary

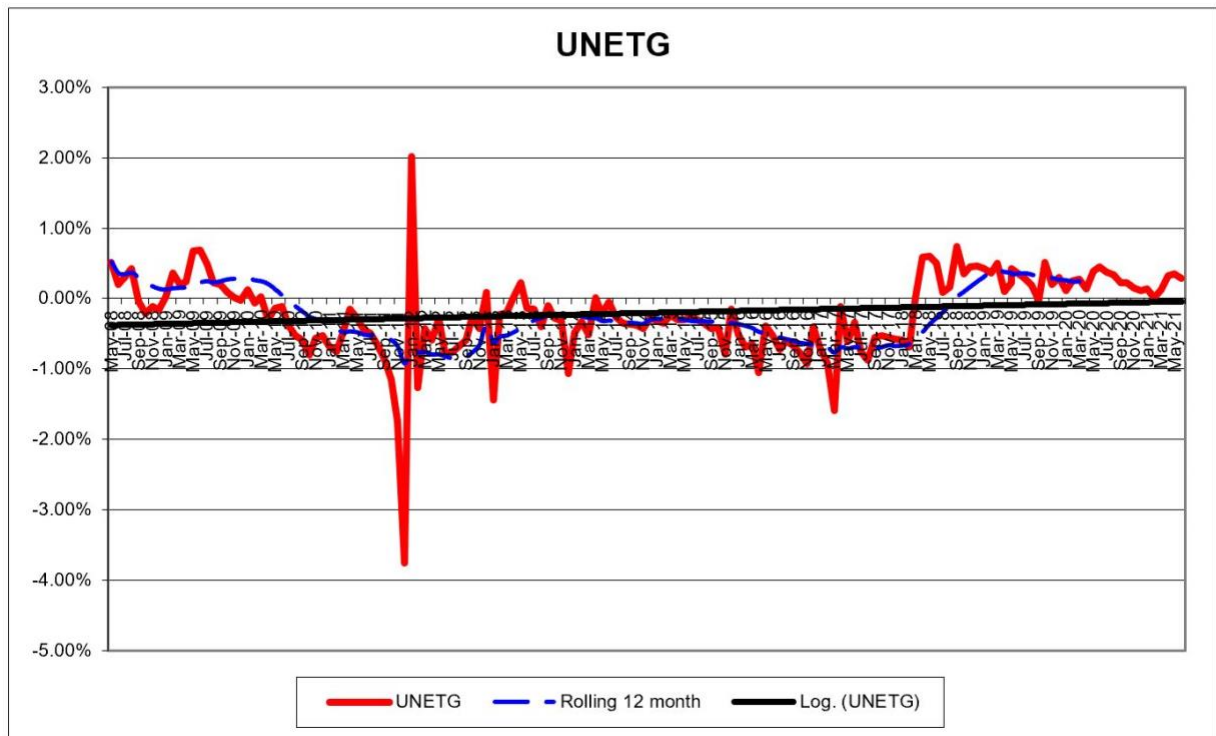
To calculate technical loss, Vector uses DigSILENT PowerFactory for network modelling and power system studies. A load flow analysis is executed in PowerFactory to calculate the line and transformer losses during peak loads. Technical loss is separately calculated for the Auckland network and Northern network. To calculate non-technical loss, Vector uses the “Technical Loss” method which allocates non-technical losses to each level proportional to the technical loss at that level.

Vector recalculated loss factors for both networks last year. New loss factors are published on their website and also were uploaded to the registry.

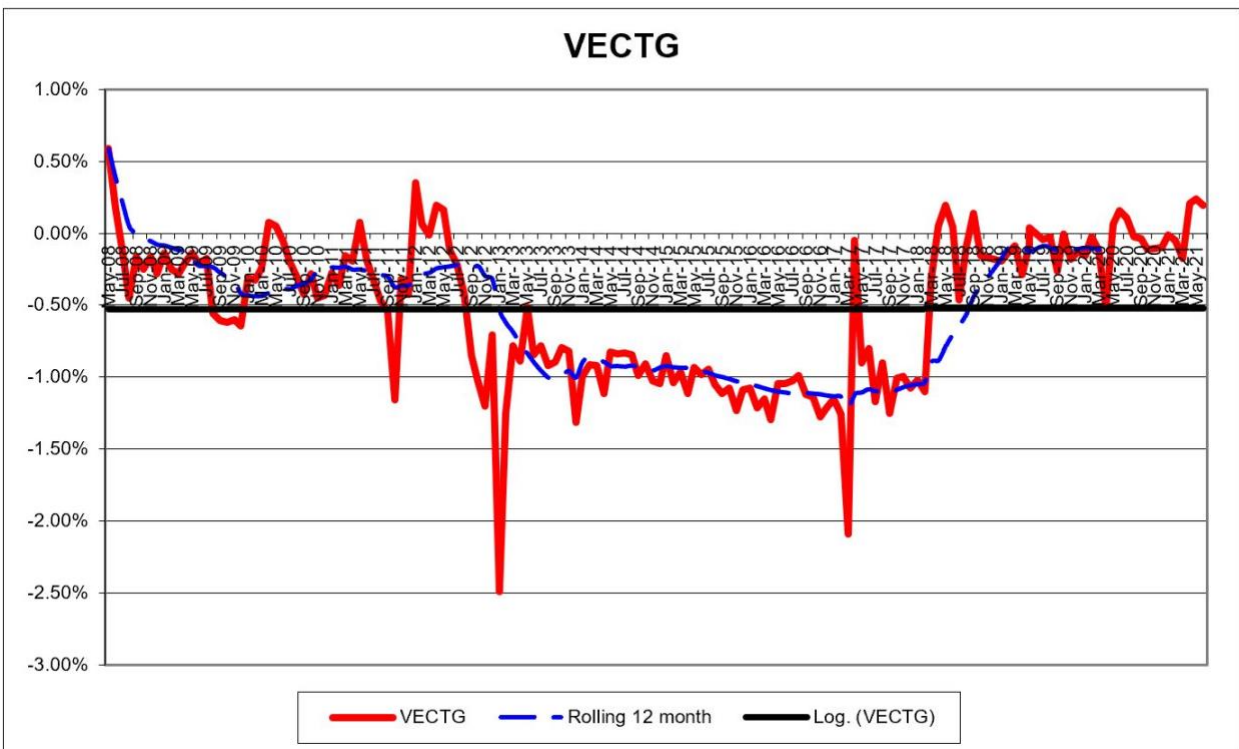
Code	2021	2020
VECA1	1.0383	1.0413
VECA2	1.0276	1.0303
VECA3	1.0276	1.0303
VECA4	1.0140	1.0148
VECW1	1.0518	1.0514
VECW2	1.0410	1.0408
VECW3	1.0410	1.0408
VECW4	1.0213	1.0208

The EA provided the following UFE graphs for the VECT and UNET networks, which showed both were within the $\pm 1\%$ threshold.

UNET G



VECT G



Audit outcome

Compliant

CONCLUSION

PARTICIPANT RESPONSE

Vector thanks Ewa for her assistance with the audit. We are committed to improving our processes and will continue to correct and populate missing information identified.

We believe that the newly implemented changes to the livening process will help reduce the number of non-compliance for the initial electrical connection dates and will enable us to better manage and follow up on missing or incorrect dates.

While we were not able to implement the change of the UML application form noted in our compliance plan from 2020 this is anticipated to be in by June 2022.

Vector are creating a new role within the team which will focus on audit reviews, investigation and correction of errors.