



GAS REGISTRY AND SWITCHING PERFORMANCE AUDIT

Vector Gas Trading Limited as Distributor

Audit date: 13 to 15 November 2017

Report date: 1 February 2018

Under the Gas (Switching Arrangements) Rules 2008 the Gas Industry Company has commissioned Langford Consulting to undertake a performance audit of Vector Gas Trading Limited in its role of distributor. The purpose of the audit is to assess compliance with the rules and the systems and processes put in place to enable compliance.

Auditor Julie Langford
julie@langfordconsulting.co.nz

Executive Summary

Under the Gas (Switching Arrangements) Rules 2008 (the rules) the Gas Industry Company commissioned Langford Consulting to undertake a performance audit of Vector Gas Trading Ltd (Vector) as distributor.

The purpose of the audit is to:

- assess compliance with the rules
- assess the systems and processes put in place to enable compliance with the rules

The audit was conducted within the terms of reference supplied by the GIC and within the guideline note *Guideline note for rules 65 to 75: the commissioning and carrying out of performance audits and event audits, version 3.0* (<http://www.gasindustry.co.nz/dmsdocument/2858>).

The summary of report findings shows that the Vector control environment, for the ten areas evaluated, is “effective” for four areas and “adequate” for three areas, two areas were found to be “not adequate” and one was “not applicable”.

Nine breach allegations are made in relation to Vector regarding the non-compliant areas and are summarised in the following table. The following observations and recommendations were also made:

OBSERVATION: Rules 51 and 53 do not reflect the process undertaken by Vector and apply time constraints that have no relevance. If this is true of other distributors there may be a case for a review of the rules to align with the operational process.

RECOMMENDATION: Consider a review of rules 51 and 53 once all the distributors have undergone their first audit.

RECOMMENDATION: That Vector improve its processes for maintaining the load shedding category field. Adding a report of the load shedding category versus allocation group to the routine suite of weekly reporting could assist with this. Vector have already raised the IT request for this report to be built. GIEP1 data provided by retailers to distributors at an ICP-level to support invoicing, could be used to evaluate potential changes in category.

RECOMMENDATION: That Vector review their processes for changes to gas gates to ensure they as distributor make the required notifications. Alternatively, a change to the rule could be considered to make this a transmission system owner responsibility.

RECOMMENDATION: That Vector review, document and publish their loss factor code.

Summary of breach allegations

Section	Summary of issue	Rules potentially breached
4.2	6 ICPs within a sample of 34 new ICPs created since 2013, were not created within 3 business days of request.	r 51.2
4.2	In 2017 5 ICPs were assigned to the wrong gas gate and from a sample of 34 new ICPs 3 additional ICPs had wrong gas gates assigned.	r 58.1
4.2	Within a sample of 34 new ICPs 2 ICPs had an incorrect network pressure entered into the registry.	r 58.1
4.3	A review of ICPs with unusual or incompatible load shedding categories/allocation groups found incorrect load shedding categories entered into the registry for 1,183 ICPs.	r 58.1
4.3	A review of altitude outliers on the registry found 1 ICP with incorrect altitudes.	r 58.1
4.3	A review of the registry for unexpected combinations of network pressures and load shedding category identified incorrect network pressures entered into the registry for 12 ICPs.	r 58.1
4.3	A review of a sample of 77 established ICPs showed 17 instances of incorrect parameters: <ul style="list-style-type: none"> • 4 ICPs had incorrect altitudes • 6 ICPs had incorrect gas gates • 6 ICPs had incorrect load shedding categories • 1 ICP had incorrect price category 	r 58.1
4.5	Vector had not published the current schedule of its network price categories, codes and associated charges.	r 46
4.7	The loss factor was not published and there was no evidence of it being maintained.	r 47.1

Summary of report findings

Issue	Section	Control Rating (refer to appendix 1 for definitions)	Compliance Rating	Comments
Participant registration information	3.1	Effective	Compliant	Vector had up to date participant details on the register
Obligation to act reasonably	3.2	Effective	Compliant	No examples of Vector acting unreasonably were found
Obligation to use registry software competently	3.3	Effective	Compliant	No examples of Vector using software incompetently were found
Assignment of ICPs	4.1	Effective	Compliant	There were no issues found with the Vector process for assigning ICP identifiers
Creation of new ICPs	4.2	Adequate	Not compliant	A review of a sample of 34 new ICPs found 6 were not created within the 3-business day requirement; 3 were assigned to the wrong gas gate and 2 had incorrect network pressures.
Maintenance of ICPs in the registry	4.3	Not adequate	Not compliant	Vector should improve its maintenance of the load shedding category, 1,183 were found to be incorrect
Notices of gas gate creation/decommissioning	4.4	Adequate	Compliant	Notifications for 2 new gas gates had been made by First Gas although it was a Vector obligation.
Publishing of network price category codes	4.5	Adequate	Not compliant	Vector routinely publish network prices on their website, but early in the new pricing year the published prices were out of date.
Disclosure of ICP information	4.6	Not applicable	Not applicable	No instances had occurred
Loss factor codes	4.7	Not adequate	Not compliant	It is recommended Vector review and publish their loss factor.

Table of Contents

Executive Summary.....	1
Summary of breach allegations.....	2
Summary of report findings	0
1. Introduction.....	1
2. General Compliance	1
2.1 Switch Breach Report.....	1
2.2 Summary of previous audit	1
2.3 Provision of Information to the Auditor.....	1
3. General obligations	1
3.1 Participant registration information	1
3.2 Obligation to act reasonably.....	2
3.3 Obligation to use registry software competently	2
4. Obligations as Distributor.....	2
4.1 Assignment of ICPs (rules 5.2, 43.1 and 43.2)	2
4.2 Creation of new ICPs (rule 51 and 53)	3
4.3 Maintenance of ICPs in the registry	6
4.4 Notices of gas gate creation/decommissioning	9
4.5 Publishing of network price category codes	10
4.6 Disclosure of ICP information	11
4.7 Loss factor codes	11
5. Breach Allegations.....	12
6. Conclusion.....	13
Appendix A – Control Rating Definitions.....	14

1. Introduction

Under the Gas (Switching Arrangements) Rules 2008 (the rules) the Gas Industry Company (GIC) commissioned Langford Consulting to undertake a performance audit of Vector as a distributor. The audit was commissioned under rule 88 and was conducted within terms of reference prepared by the GIC and related to the gas registry participant code UNLG.

The engagement commenced on 25 July 2017 and involved a site visit to the Vector offices in Auckland on 13 to 15 November 2017.

The purpose of the audit is to:

- assess compliance with the rules
- assess the systems and processes put in place to enable compliance with the rules

In preparing the report, the auditor used the processes set out in the guideline note issued on 1 June 2013: *Guideline note for rules 65 to 75: the commissioning and carrying out of performance audits and event audits, version 3.0* (<http://www.gasindustry.co.nz/dmsdocument/2858>).

2. General Compliance

2.1 Switch Breach Report

Vector as distributor had 2 alleged breaches recorded by the Market Administrator in the period 1 January 2014 to 31 August 2017. Both were alleged by Veritek Ltd under rule 26.5 of the Gas (Downstream Reconciliation) Rules 2008 and related to inaccurate altitude factors.

2.2 Summary of previous audit

This is the first audit for Vector as distributor under the rules.

2.3 Provision of Information to the Auditor

In conducting this audit, the auditor may request any information from Vector, the industry body and any registry participant.

Information was provided by Vector in a timely manner in accordance with this rule.

3. General obligations

3.1 Participant registration information

Vector's registration details recorded on the registry were reviewed and confirmed as accurate and current.

3.2 Obligation to act reasonably

No examples of Vector acting unreasonably were found.

3.3 Obligation to use registry software competently

No examples of Vector using registry software incompetently were found.

4. Obligations as Distributor

4.1 Assignment of ICPs (rules 5.2, 43.1 and 43.2)

Vector creates and maintains its ICPs in Gentrack. Updates are exported in an overnight "DIS" text file which is sent to the gas registry overnight. The acknowledgement file is received back from the registry and reviewed in the morning for any upload errors.

Vector also receive a notification file from the registry to pick up the status and retailer changes for its Gentrack records.

Vector upgraded its Gentrack system in April 2017 and is now using Gentrack "Velocity" version 4.13. This has created some issues that are still being worked through, particularly with reporting which are referred to in section 4.3.

The creation of the ICP identifier is the first step of the Gentrack ICP creation process. The system generates the unique 15-digit number, which is the unique Vector installation number. The system user selects the Vector gas network option from a drop-down box, which adds in the appropriate Vector code "QT" and then Gentrack generates the check sum using the embedded algorithm. The auditor checked that the operator couldn't generate an identifier with the wrong distributor code but the Gentrack system rejects those as there is no price plan loaded for other codes. No issues were identified with the ICP identifier assignment process.

Rule 43.1 and 43.2

These rules require that a distributor assign an ICP identifier for each consumer installation connected to its system. Each consumer installation must represent a single consumer installation that:

- may be isolated without affecting another consumer installation
- may have a single loss factor and network price category and
- has its gas volume measured directly by a single set of compliant metering equipment or indirectly by a method approved by the industry body

Vector ensure there is a single customer for each installation by waiting on the acceptance of a quote for the connection. They also do an address check and view the address on the GIS system. If there is any doubt they will phone the customer. Occasionally these conversations have identified that two ICPs are required (for example it transpires a residential address also has a granny flat attached).

Vector have only one loss factor that is used for all their ICPs.

Vector as distributor do not do any checks in respect of the metering equipment compliance.

4.2 Creation of new ICPs (rule 51 and 53)

Preliminary data for a new ICP is gathered in Siebel, the CRM/work order system. Call centre staff and contractors all use the Siebel system. The distribution team cannot create a new ICP until there is a customer acceptance in Siebel.

Each day the gas team receives worklists. These are generated from gas enquiries to the call centre, retailer requests (including reconnections and disconnections) address issues and quote acceptances. These have been organised into task oriented worklists including “create ICP” which is the list which requires ICPs to be set up. These are worked daily, and the team has an SLA to create new ICPs within 3 business days. This SLA aligns with the switching rule requirement.

The auditor reviewed a sample of 34 ICPs created from 2013 onwards, to see if Vector had complied with the requirement to assign an ICP within 3 business days of receiving a request. As explained above, Vector considers the acceptance of a quote to be the ‘request’ for an ICP assignment, so this is what was tested in this audit.

Using the job reference for each ICP creation Vector’s records were reviewed and the following 6 ICPs were found to have breached the 3-business day requirement:

1001252450QT800	6 business days
1001285379QTC37	23 business days
1001285446QTB13	22 business days
1001285605QTF71	23 business days
1001285651QT673	21 business days
1001285790QT4DD	16 business days

Five out of the six breaches were in the period December 2015 to January 2016 when the team had experienced a temporary staffing issue.

Prior to the audit the team had not realised that the days between Christmas and New Year (excluding the statutory holidays) were included as business days. This is now understood.

ALLEGED BREACH: 6 ICPs within a sample of 34 new ICPs created since 2013, were not created within 3 business days of request (rule 51.2)

Because the Vector process is to wait for a signed contract before assigning the ICP, they are also able to set up the rest of the distributor parameters at the same time. The process envisaged by rule 51.2 (assigning an ICP), rule 51.3 (entering the ICP identifier, creation date, responsible distributor and the physical address) and rule 53.1 (entering the remaining parameters) are concatenated into one. Consequently, the ICP status moves directly to READY, skipping the NEW status. No further tests were therefore applied by the auditor regarding the 2 business day time requirements for action under rule 51.3 and 53.1.

OBSERVATION Rules 51 and 53 do not reflect the process undertaken by Vector and apply time constraints that have no relevance. If this is true of other distributors there may be a case for a review of the rules to align with the operational process.

RECOMMENDATION: Consider a review of rules 51 and 53 once all the distributors have undergone their first audit.

Gas Gates

The Vector ICP creation process includes a couple of quality control features to help reduce the chances of incorrect gas gates being selected. The ICP creation screen has a tailored drop-down list to ensure only Vector gas gates can be selected during the creation process and Google Earth has had a coloured overlay added to identify which gas gate should be selected within the greater gas gate areas. The coloured overlay has only been developed recently so prior to this the allocation of gas gates within the greater gas gate areas will have been less consistent.

For all new ICPs created in 2017, gas gate accuracy was reviewed by geocoding addresses by gas gate and looking for outliers.

The following issues were identified, which Vector confirmed were all errors to be corrected:

- ICP 1002034273QTB18 was created in KIG16801 instead of one of the Greater Auckland gates.
- ICP 1002036956QTB4C was created in BMC17901 instead of WRK18901
- ICP 1002038991QT9A9 was created in HEN74101 instead of WTK33901
- ICP 1002038972QTFD3 was created in HEN74101 instead of WTK33901
- ICP 1002037439QTFCA was created in HEN74101 instead of WTK33901

During the on-site review of a sample of 34 new ICPs the following ICPs also had their gas gates corrected from Westfield to Waikumete

1001262335QT491
1001262379QT52A
1001262913QT241

ALLEGED BREACH: In 2017 5 ICPs were assigned to the wrong gas gate and from a sample of 34 new ICPs 3 additional ICPs had wrong gas gates assigned (rule 58.1).

Load Shedding

The load shedding category is decided using information from the customer's application in Siebel. This shows the appliances to be fitted and the maximum hourly quantity.

Vector has a spreadsheet which is used to calculate the estimated annual consumption. The spreadsheet has a list of approximate annual loads for the most common connection types such as restaurants, takeaways and laundromats. For the less common business types they have a calculation tool which takes the maximum hourly load from the customer's application and reduces this using a formula to estimate their likely actual load, allowing for minimal night-time use, weekends, leave etc. This formula can be adjusted if the customer has provided more information.

From the review of the sample of 34 new ICPs, no load shedding issues were identified.

Altitude

Vector's process is to determine altitude using their Gasviewer system. This contains data from Land Information New Zealand (LINZ). The LINZ vertical datum file "NZV2016", accurate to +/- 8 metres, is loaded into Gasviewer. Staff also use Google Earth as an additional check, or if there

is no data available in Gasviewer, which can be the case for new subdivisions. However, the team only had access to Gasviewer this year, prior to this they would have used Google Earth.

During the on-site audit a sample of 34 new ICPs was reviewed and although some altitudes were revised because of this review none of the changes exceeded +/-20m, so no alleged breaches have been made.

Network Pressure

The rules governing ICP parameters as maintained by the distributors describes network pressure as “the value of the nominal operating pressure, expressed numerically in kilopascals, of the distribution system or transmission system to which the ICP’s consumer installation is connected”.

The distribution team use the GIS system to determine the network pressure when setting up a new ICP.

During the on-site review of a sample of 34 new ICPs the following incorrect network pressures were identified:

ICP Identifier	Registry Network Pressure	Correct Network Pressure
1001289838QTA59	35	100
1001285605QTF71	35	100

ALLEGED BREACH: Incorrect network pressures entered into the registry for 2 ICPs within a sample of 34 new ICPs (rule 58.1)

Network pricing category

The price category is selected based on the customer connection type and maximum hourly quantity. The maximum hourly quantity is calculated from the customers appliance information provided on their application. See table below for current categories.

Description	Price category	Load size (MHQ)
Residential	GA0R	n/a
Business	GA01	≤ 10
Commercial	GA02	> 10 and ≤ 40
Commercial	GA03	> 40 and ≤ 200
Industrial	GA04	> 200
Industrial	GA05	> 200

The table is published on the Vector website in the distribution pricing section.

4.3 Maintenance of ICPs in the registry

Vector has a suite of reporting to assist in maintaining their registry information. These reports validate data between Siebel, Gentrack and the Gas Registry. The suite covers all the fields that Vector are responsible for as a gas distributor. The reports are run weekly and discrepancies identified by the reports are reviewed and corrected if appropriate.

Not all the reports are currently working correctly, particularly since the Gentrack upgrade earlier in 2017, but the issues are known and are being worked on.

Vector has a process to decommission ICPs. Usually this is initiated by a request from a retailer which is lodged via Siebel. It can also arise from the reviewing of routine reports which identify status discrepancies, suggesting disconnection could be appropriate, which are then discussed with the retailer.

The decommissioning process involves a check list which includes reviewing the site information to ensure there is a connection to disconnect; confirmation of the address; the supplying of a quote to the retailer; arranging the job to be done; changing the status to DI; responding to the retailer action by changing the state to decommissioned.

Gas Gates

The GIC had been working with distributors to review gas gate accuracy by geocoding addresses by gas gate and looking for outliers and providing the distributors with feedback. This work was therefore not repeated for all ICPs, other than that detailed above for new ICPs from 1 January 2017, to see if new outliers had arisen, as discussed above in the new ICP section.

A sample check of established ICPs did however identify some incorrect gas gates not identified by the geocoding exercise. These are detailed on page 9.

Load Shedding

The load shedding category of Vector ICPs on the registry was compared with the allocation group maintained by the retailer. Some were found to have incompatible or unlikely pairings. The following lists (which excluded those with DECR status) were shared with Vector for them to review and confirm if they believed their load shedding category was correct.

- 180 ICPs with a load shedding category of DOM were associated with allocation group 4.
- 516 ICPs with a load shedding category of 6 were associated with allocation group 1, 2 or 4.
- 543 ICPs with a load shedding category of 4 were associated with allocation group 1, 2 or 6.
- 363 ICPs with a load shedding category of 3 were associated with allocation group 4 or 6.

Because of this review Vector updated the load shedding category for the following:

- 1 ICP with a load shedding category of DOM was revised to category 4
- 360 ICPs with a category of 6 were changed to category 4
- 1 ICP with a category 6 was changed to a category 3
- 10 ICPs with a category 4 were changed to category 3
- 445 ICPs with a category 4 were changed to category 6
- 6 ICPs with a category 4 need the revised category to be confirmed
- 38 ICPs with a category 3 were changed to category 4
- 322 ICPs with a category 3 were changed to category 6

The review was not complete at the time of the drafting of this report. Vector were in discussion with the relevant retailer for 178 ICPs to ensure any re-categorisation was accurate (all with a load shedding category of DOM and an allocation group of 4).

ALLEGED BREACH: Incorrect load shedding category entered into the registry for 1,183 ICPs (rule 58.1)

RECOMMENDATION: It is recommended that Vector improve its processes for maintaining the load shedding category field. Adding a report of the load shedding category versus allocation group to the routine suite of weekly reporting could assist with this. Vector have already raised the IT request for this report to be built. GIEP1 data provided by retailers to distributors at an ICP-level to support invoicing, could be used to evaluate potential changes in category.

The GIC list of critical contingency designations was compared against the registry details of Vector ICPs. No discrepancies were found.

Altitude

It is a distributor responsibility to populate the registry with correct altitude information to support compliance with NZS 5259:2015.

NZS 5259 contains the following points, which affect the way altitude information should be managed:

1. The maximum permissible error is $\pm 1.0\%$ where the meter pressure is below 100kPa and $\pm 0.5\%$ where the meter pressure is greater than 100kPa.
2. The following note is also included "To minimise uncertainty due to altitude factor the aim should be to determine the altitude to within 10m where practicable."
3. The altitude factor can be assumed to be 1 where meters are situated at an elevation less than 50m above sea level.

The altitude recorded on the registry for a sample of Vector ICPs was reviewed. The sample was selected by firstly looking for obvious outliers and then increasing the sample size through random selection. Altitude figures that are within approximately 90m of the actual altitude will ensure an accuracy of $\pm 1.0\%$. Point 2 above recommends altitude figures are determined to within 10m where practicable. The margin of error of the "google earth" data appears to be approximately $\pm 10m$, therefore, to allow for this margin, issues have only been raised where the registry data is more than +/- 20m of "google earth" data.

Outliers and a sample of ICPs were reviewed against Google Earth. One ICP was found to be in error

ICP	Altitude on registry	Altitude on Google Earth	Difference
1001267123QT294	64	30	34

ALLEGED BREACH: A review of altitude outliers on the registry found 1 ICP with incorrect altitudes (rule 58.1).

Network pressure

Vector had undergone some reinforcement projects which have resulted in the nominal pressure of some pipelines changing. The team were going through a process of updating the registry, so some of the errors found during the audit relate to ICPs that were correct when they were entered and had not yet been updated for the reinforcement project changes.

Network pressures were reviewed for large users with very low network pressures recorded on the registry and small users with very high pressures. 23 ICPs were found with a network pressure of 3 kPa and a load shedding category of 3 or 4 and 104 ICPs had high network pressures of 1,000kPa or more with load shedding category of 6, 7 or domestic. Vector were asked to review these outliers and to confirm if these network pressures were accurate. Because of this review the following 12 network pressures were revised on the registry.

(Those where the correct pressure has been left blank are undergoing address verification with the retailer before being updated).

ICP Identifier	Network Pressure	Correct Pressure
0000305371QTF9C	3	400
0000229031QT81B	3	400
0000107671QT101	3	400
0000227971QTB77	3	400
0000323991QT321	3	400
0000345001QT257	3	400
0000891001QTF43	1000	-
1001297148QT62C	1000	1900
0000037731QTFE0	1000	-
0000583181QTE0E	1000	400
1001292515QTA5E	1900	400
1001296721QT02B	1900	1000

ALLEGED BREACH: Incorrect network pressures entered into the registry for 12 ICPs (rule 58.1)

Network pricing category

The price category gets reviewed if the retailer requests an upgrade, downgrade or reconnection. These are the scenarios where the customer has likely changed their appliances and therefore their maximum hourly quantity, which is the criteria for the pricing category.

Review of a sample of established ICPs

As well as the review of specific registry fields already detailed in this section and mostly done at an aggregate level using analytical techniques, as a part of the on-site audit a sample of 77 established ICPs were individually reviewed and the accuracy of their registry entries were separately validated back to source for the key fields. The sample included examples of TOU and non-TOU with a range of creation dates. This sample review identified the following additional alleged breaches:

	Altitude	
	Registry	Changed to
0000012041QTB52	62	39
0000081441QT277	60	34
0000126211QTA9D	52	28
1001285730QTCC2	47	74

	Gas Gate	
	Registry	Changed to
0000236685QTC24	Westfield	Waikumete
0000084551QT6FE	Westfield	Waikumete
0000181801QT8B2	Westfield	Waikumete
0000185791QTEDA	Westfield	Waikumete
0000308111QT04B	Westfield	Waikumete
1001158732QT682	Westfield	Waikumete

	Load Shedding	
	Registry	Changed to
0000038371QT824	2	6
0000543681QT5BC	2	3
0000236685QTC24	4	6
0000490601QTA2B	4	6
0001434695QT217	4	6
0000217381QT046	DOM	GCOM

	Price Code	
	Registry	Change to
0000217381QT046	GA0R	GA01

ALLEGED BREACH: A review of a sample of 77 established ICPs showed 17 instances of incorrect parameters (rule 58.1)

4.4 Notices of gas gate creation/decommissioning

Vector were asked, for any gates created or decommissioned in the last 60 months, to provide copies of the notifications to the industry body, allocation agent, registry operator and any relevant retailers.

Vector had made the following changes:

- WRK18901 change in ownership
- WEL18301 change in ownership
- GTW33901 decommissioned
- WTK33902 decommissioned
- WTK33901 change in ownership
- PAP06604 decommissioned
- HAR11802 change in ownership

- WKM17701 allocation started 30/07/2014.
- TUK06502 allocation started 28/10/2014.

Vector were able to provide copies of the relevant notifications for all the above except for WKM17701 and TUK06502. The notifications supplied were all made within the required timeframes.

Further enquiry established that the notifications for WKM17701 and TUK06502 were made but by the Vector Transmission business which had subsequently been sold, which is probably why the current Vector distribution staff could not locate copies. The obligation to notify changes to gas gates is however a distributor responsibility.

RECOMMENDATION: That Vector review their processes for changes to gas gates to ensure they as distributor make the required notifications. Alternatively, a change to the rule could be considered to make this a transmission system owner responsibility.

4.5 Publishing of network price category codes

The auditor went to the Vector website on 6 October 2017 to ensure the price category codes were available publically. The website stated that the prices “applicable from October 2015” were available as can be seen from this screen print.

PRICING

If you use natural gas you will have a contract with your gas retailer for the supply of natural gas. We generally bundle the cost of services, such as the purchase price of wholesale gas, transmission and distribution charges, to provide you with one monthly bill.

Our price plans: [Auckland distribution network](#) (applicable from October 2015)

Previous price plans are available [here](#).

When the hyperlink was clicked the prices from 1 October 2016 could be viewed as shown by the screen print below.

**Price schedule:
Auckland gas distribution network**



Applicable from 1 October 2016

This document describes Vector's standard gas distribution prices which cover the costs of distributing gas to customers connected to the Auckland gas distribution network. Vector offers six price categories for Auckland gas distribution network customers depending on the customer's connection size and their connection type.

Description	Price category	Load size (scm/h)	Fixed (\$/day)		Volume (\$/kWh)	
Residential	GA0R		GA0R-FIXD	0.35	GA0R-24UC	0.0261
Business	GA01	≤ 10	GA01-FIXD	0.63	GA01-24UC	0.0165
Commercial	GA02	> 10 and ≤ 40	GA02-FIXD	1.12	GA02-24UC	0.0133
Commercial	GA03	> 40 and ≤ 200	GA03-FIXD	4.79	GA03-24UC	0.0102
Industrial	GA04	> 200	GA04-FIXD	14.70	GA04-24UC	0.0068
Industrial	GA05	> 200	GA05-FIXD	203.00	GA05-24UC	0.0015

Fixed prices (-FIXD) apply to the number of days each customer is connected to Vector's Auckland gas distribution network. Volume prices (-24UC) apply to all gas distributed to each customer. All prices are exclusive of GST.

Network map

The approximate area covered by the

Price category information

The **GA0R** price category applies to all

However, the prices for 1 October 2017 were not available. This issue was raised with Vector and corrected.

ALLEGED BREACH: Vector had not published the current schedule of its network price categories, codes and associated charges (rule 46)

4.6 Disclosure of ICP information

No instances of information being withheld under rule 50 have occurred.

4.7 Loss factor codes

Vector uses the same loss factor of VEAG1, which is currently set to 1.0127, across the whole of its network. It could be seen from Vector's internal systems that it had last been changed in 2012 using average UFG information provided by the GIC. However, it was not possible to find the loss factor published anywhere or to establish how it was being maintained, although it was still being used.

ALLEGED BREACH: The loss factor was not published and there was no evidence of it being maintained. (rule 47.1)

RECOMMENDATION: That Vector review, document and publish their loss factor code.

5. Breach Allegations

Section	Summary of issue	Rules potentially breached
4.2	6 ICPs within a sample of 34 new ICPs created since 2013, were not created within 3 business days of request.	r 51.2
4.2	In 2017 5 ICPs were assigned to the wrong gas gate and from a sample of 34 new ICPs 3 additional ICPs had wrong gas gates assigned.	r 58.1
4.2	Within a sample of 34 new ICPs 2 ICPs had an incorrect network pressure entered into the registry.	r 58.1
4.3	A review of ICPs with unusual or incompatible load shedding categories/allocation groups found incorrect load shedding categories entered into the registry for 1,183 ICPs.	r 58.1
4.3	A review of altitude outliers on the registry found 1 ICP with incorrect altitudes.	r 58.1
4.3	A review of the registry for unexpected combinations of network pressures and load shedding category identified incorrect network pressures entered into the registry for 12 ICPs.	r 58.1
4.3	A review of a sample of 77 established ICPs showed 17 instances of incorrect parameters: <ul style="list-style-type: none"> • 4 ICPs had incorrect altitudes • 6 ICPs had incorrect gas gates • 6 ICPs had incorrect load shedding categories • 1 ICP had incorrect price category 	r 58.1
4.5	Vector had not published the current schedule of its network price categories, codes and associated charges.	r 46
4.7	The loss factor was not published and there was no evidence of it being maintained.	r 47.1

6. Conclusion

The summary of report findings shows that the Vector control environment, for the ten areas evaluated, is “effective” for four areas and “adequate” for three areas, two areas were found to be “not adequate” and one was “not applicable”.

Nine breach allegations are made in relation to Vector regarding the non-compliant areas and are summarised in the following table. The following observations and recommendations were also made:

OBSERVATION: Rules 51 and 53 do not reflect the process undertaken by Vector and apply time constraints that have no relevance. If this is true of other distributors there may be a case for a review of the rules to align with the operational process.

RECOMMENDATION: Consider a review of rules 51 and 53 once all the distributors have undergone their first audit.

RECOMMENDATION: That Vector improve its processes for maintaining the load shedding category field. Adding a report of the load shedding category versus allocation group to the routine suite of weekly reporting could assist with this. Vector have already raised the IT request for this report to be built. GIEP1 data provided by retailers to distributors at an ICP-level to support invoicing, could be used to evaluate potential changes in category.

RECOMMENDATION: That Vector review their processes for changes to gas gates to ensure they as distributor make the required notifications. Alternatively, a change to the rule could be considered to make this a transmission system owner responsibility.

RECOMMENDATION: That Vector review, document and publish their loss factor code.

Appendix A – Control Rating Definitions

Control Rating	Definition
Control environment is not adequate	<p>Operating controls designed to mitigate key risks are not applied, or are ineffective, or do not exist.</p> <p>Controls designed to ensure compliance are not applied, or are ineffective, or do not exist.</p> <p>Efficiency/effectiveness of many key processes requires improvement.</p>
Control environment is adequate	<p>Operating controls designed to mitigate key risks are not consistently applied, or are not fully effective.</p> <p>Controls designed to ensure compliance are not consistently applied, or are not fully effective.</p> <p>Efficiency/effectiveness of some key processes requires improvement.</p>
Control environment is effective	<p>Isolated exceptions identified when testing the effectiveness of operating controls to mitigate key risks.</p> <p>Isolated exceptions identified when testing the effectiveness of controls to ensure compliance.</p> <p>Isolated exceptions where efficiency/effectiveness of key processes could be enhanced.</p>