

Gas Distributor and Meter Owner Performance Audit Report

For

Firstgas Limited



Prepared by

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Executive Summary

This Performance Audit was conducted at the request of the Gas Industry Company (GIC) in accordance with Rule 88 of the Gas (Switching Arrangements) Rules 2008 in effect from 14 September 2015.

The purpose of this audit is to assess the systems, processes, and performance of Firstgas Limited (Firstgas) in terms of compliance with these rules.

The audit was conducted in accordance with terms of reference prepared by GIC.

The last audit was performed in 2021 and Firstgas have continued to develop their processes around new connections and registry management. Firstgas continue to have a culture where compliance is an integral part of how they do business.

The summary of report findings in the table below shows that Firstgas's control environment is 'effective' for six of the areas, 'acceptable' for three areas and 'needs improvement' for nine areas evaluated. Two areas were not accessed as no occurrences were identified during the audit period.

Nine of the 20 areas evaluated were found to be compliant. 12 breach allegations are made in relation to:

- accuracy and completeness of address information,
- accuracy of ICP attributes (Gas Gate, altitude, network pressure, load shedding category),
- monitoring of the completed field work paperwork to confirm whether these ICPs can move to decommissioned status,
- meter event updates not performed during the audit period

13 recommendations were made to improve future compliance. The recommendations are listed in **section 6** and the relevant report sections.

Summary of Report Findings

Issue	Section	Control Rating (Refer to Appendix 1 for definitions)	Compliance Rating	Comments
General obligations	2	Acceptable	Not compliant	The participant register information for participant code FGDM did not have a current email address populated.
New connections	3	Needs improvement	Not compliant	<p>Three recommendations made to improve process effectiveness.</p> <ul style="list-style-type: none"> • Implement a step in the ICP creation process to first search the registry for the new connection address to ensure it is unique and that an ICP has not already been created for the same property. • Implement a process to proactively monitor and escalate to the respective retailer the initial new connection addresses populated in the registry so that address attributes such as lot numbers can be updated as soon as possible once an ICP is lived. • Review the process for the initial population of an ICP onto the registry to ensure an address search is undertaken that will prevent duplicate ICPs being created for the same new connection
Network pressure	4.1	Needs improvement	Not compliant	112 NGCD ICPs from a sample of 62 streets where there was more than one network pressure recorded were found to have incorrect network pressures recorded on the registry.

Issue	Section	Control Rating (Refer to Appendix 1 for definitions)	Compliance Rating	Comments
ICP altitude	4.2	Needs improvement	Not compliant	<p>32 NGCD ICPs were found to have incorrect altitudes from a sample of 51.</p> <p>Five errors relating to ICPs (1001305000NG9B7 - 4.3%, 1001305001NG5F2 - 4.3%, 1001305293NG097 - 4.3%, 1001294020NG6EA - -1.9%, 1001294193NG19C - 1.2%) resulted in an altitude factor which was over the maximum permissible error in NZS 5259:2015.</p> <p>One recommendation made to improve process effectiveness</p> <ul style="list-style-type: none"> Review new connection process to include a post livening review of an ICPs altitude to ensure the value is correct prior to use in the conversion of volume to energy.
Gas gate	4.3	Needs improvement	Not compliant	<p>2,029 ICPs had been incorrectly assigned to the wrong gas gate. 2,027 ICPs relate to gas gates that are part of a greater gas gate configuration.</p> <p>For two ICPs the incorrect gas gate allocation has resulted in incorrect submissions by the retailers responsible for these ICPs.</p> <p>The volume to energy conversion for these two ICPs is also incorrect due to the incorrect calorific values and temperature values applied by the retailer.</p> <p>Three recommendations made to improve process effectiveness.</p> <ul style="list-style-type: none"> Review new connection process map street / suburb to gas gate as part of the process to verify addresses with LINZ address information. Implement a project to review all ICP / gas gate assignments and correct all exceptions identified. Implement a process to regularly monitor Maximo to registry gas gate to ICP assignments that complies with the monthly review obligations under rule 62.

Issue	Section	Control Rating (Refer to Appendix 1 for definitions)	Compliance Rating	Comments
Load shedding category	4.4	Acceptable	Not compliant	<p>Data analysis of the load shedding category against other registry fields identified 13 ICPs with incorrect categories.</p> <p>Three ICPs have a designation of 7 (critical care designation) however these ICPs are not currently listed on the GIC website of active critical care designations.</p> <p>The impact has been categorised as insignificant as there has not been a critical contingency curtailment event in any Firstgas network area. Critical Contingencies are rare, but the potential impact of incorrect categories is major should an event occur.</p> <p>Two recommendations made to improve process effectiveness.</p> <ul style="list-style-type: none"> • Check load shedding categories for reasonableness when changes are requested, and also at least annually by comparing to retailers' gas allocation group assignments and also annualised consumption volumes. • Develop a process to monitor the GIC active designations list and expiry dates for load shedding category 7 against the registry and work with the respective retailers to ensure that the registry information is current and up to date.
Maximum hourly quantity	4.5	Effective	Compliant	

Issue	Section	Control Rating (Refer to Appendix 1 for definitions)	Compliance Rating	Comments
Physical address	4.6	Needs improvement	Not compliant	<p>20 ICPs had addresses which were not readily locatable.</p> <p>52 ICPs had duplicate addresses recorded. 14 ICPs are situated in buildings with more than one meter in close proximity, and the meter number is relied upon to determine the correct location.</p> <p>Five new connections had duplicate ICPs created where one of the duplicate address ICPs were then decommissioned.</p>
Decommissioned status	4.7	Needs improvement	Not compliant	<p>16 ICPs with INACP status were found to have had the service pipes disconnection outside the boundary and should have the status DECR.</p>
Connection statuses	4.8	Needs improvement	Not compliant	<p>One ICP (1001303564NG788) was decommissioned in error – this incorrect status was reversed one month later.</p> <p>16 ICPs related to Sullivan Crescent, Hamilton have incorrect status recorded in the registry.</p> <p>Two recommendations made to improve process effectiveness.</p> <ul style="list-style-type: none"> • Review the service pipe permanent disconnection process to ensure end to end monitoring of the service requests so that the registry to updated accurately and in a timely manner on receipt of the field work completed paperwork. • Review the connection statuses for all ICPs within Sullivan Crescent in Hamilton against field service and GIS information and update the registry connection status where the connection can be confirmed as decommissioned via field service or GIS records.

Issue	Section	Control Rating (Refer to Appendix 1 for definitions)	Compliance Rating	Comments
Registry validation and correction - distributor	4.9	Needs improvement	Not compliant	<p>The monthly registry distributor report is not reviewed, and discrepancies are not resolved by 1600 hours on the 15th business day of each month.</p> <p>Four ICPs had an incorrect ICP type (GD not GN).</p> <p>For three ICPs the ICP type that was not initially populated when the ICP was created.</p> <p>For two ICPs the initial network and address event dates did not initially align with the connection date.</p> <p>For five ICPS the network pressure was initially incorrectly populated.</p> <p>One recommendation made to improve process effectiveness</p> <ul style="list-style-type: none"> Implement a process to monitor the accuracy and investigate any exceptions of information between the registry and Maximo and other systems and ensure the registry is updated as soon as an exception is confirmed
Creation and decommissioning of gas gates	5	No examples of changes	No examples of changes	
Management of network price category codes	6	Effective	Compliant	<p>One recommendation made to improve process effectiveness</p> <ul style="list-style-type: none"> Review the network price category codes for ICPs where the load shed category and gas allocation group codes indicate the network capacity for these installations may have changed
Management of loss factor codes	7	Effective	Compliant	

Issue	Section	Control Rating (Refer to Appendix 1 for definitions)	Compliance Rating	Comments
Disclosure on application - distributor	8	Effective	Compliant	
Accuracy of meter information	9	Acceptable	Compliant	One recommendation made to improve process effectiveness <ul style="list-style-type: none"> Complete the review of the process to monitor and notification to retailers of time synchronisation changes greater than 300 seconds
New Connections - metering	10	No examples identified during audit period	No examples identified during audit period	
Registry validation and correction - metering	11	Needs improvement	Not compliant	The monthly registry meter owner report is not reviewed, and discrepancies are not resolved by 1600 hours on the 15th business day of each month. The metering events for ICPs 1001296139NG852 and 1001297339NG3F5 are not correctly populated on the registry.
Metering price codes	12	Effective	Compliant	
Disclosure on application - metering	13	Effective	Compliant	

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1. Pre-Audit and Operational Infrastructure Information

1.1 Scope of Audit

The purpose of this audit is to assess the systems, processes, and performance of Firstgas in terms of compliance with these rules. The audit was conducted in accordance with terms of reference prepared by GIC.

The field audit was carried at the Wellington offices of Firstgas on 28 August 2024.

The scope of the audit includes the distributor responsibilities and meter owner responsibilities that only relate to metering installed on distribution networks.

1.2 Audit Approach

As mentioned in **section 1.1** the purpose of this audit is to assess the performance of Firstgas in terms of compliance with the rules, and the systems and processes that have been put in place to enable compliance with the rules.

This audit has examined the effectiveness of the controls Firstgas has in place to achieve compliance, and where it has been considered appropriate sampling has been undertaken to determine compliance.

Where sampling has occurred, this has been conducted using the Auditing Standard 506 (AS-506) which was published by the Institute of Chartered Accountants of New Zealand. I have used my professional judgement to determine the audit method and to select sample sizes, with an objective of ensuring that the results are statistically significant.¹

Where compliance is reliant on manual processes, manual data entry for example, the sample size has been increased to a magnitude that, in my judgement, ensures the result has statistical significance.

Where errors have been found or processes found not to be compliant the materiality of the error or non-compliance has been evaluated.

1.3 General Compliance

The Market Administrator confirmed that no alleged breaches have been recorded for Firstgas since the last audit in relation to its role as a distributor or meter owner.

1.4 Provision of Information to the Auditor (Rule 91)

In conducting this audit, the auditor may request any information from Firstgas, and any registry participant or operator. Information was provided by Firstgas in a timely manner in accordance with this rule.

¹ In statistics, a result is considered statistically significant if it is unlikely to have occurred by chance. (Wikipedia)

Information was not required from any other participant in relation to this audit. I consider that Firstgas have complied with the requirements of this rule.

1.5 Summary of Previous Audit

Five alleged breaches were recorded in relation to the 2020 distributor and meter owner audit, and the outcomes are recorded in the table below.

Breach Allegation	Breach No.	Rule	Section in this report	Outcome
Participant registry information was out of date for all four participant codes	2021-067	GSAR 10.1.1	2.1	The Market Administrator did not raise any material issues
7 recently created NGCD ICPs had been incorrectly assigned to the wrong gas gate	2021-068	GSAR 58.1	4.3	The Market Administrator did not raise any material issues
<p>A review of recently created NGCD ICPs found:</p> <ul style="list-style-type: none"> 61 were found to have the incorrect load shedding category when compared to their tariff code or allocation group 1 was found to have the wrong tariff code 2 were found to have incorrect altitudes 3 were found to have incorrect network pressures. <p>A review of a sample of established NGCD ICPs identified:</p> <ul style="list-style-type: none"> 2 with incorrect addresses 1 with an incorrect load shedding category 	2021-069 2021-070	GSAR 58.1	4.9	The Market Administrator did not raise any material issues The Market Administrator did not raise any material issues
<p>Out of a sample of 6 established transmission ICPs (all VCTX):</p> <ul style="list-style-type: none"> 5 were found to have inaccurate network pressure 3 had significantly inaccurate altitude entries 	2021-071	GSAR 58.1	4.9	The Market Administrator did not raise any material issues
9 ICPs had been found associated to the Morrinsville dairy factory instead of MRV16302 for Morrinsville town. These were corrected immediately prior to the audit visit.	2021-072	GSAR 58.1	4.3	The Market Administrator did not raise any material issues

Breach Allegation	Breach No.	Rule	Section in this report	Outcome
Incorrect status for VCTX ICP 1001142883VTFC0 OKW23401 (Okaiawa), still shown as active on the registry after decommissioning. The retailer is Nova Gas (GNVG)	2021-073	GSAR 58.1	4.7	The Market Administrator did not raise any material issues
VCTX has the incorrect ICP type code for 1 ICP	2021-074	GSAR 58.1	4.9	The Market Administrator did not raise any material issues

1.6 Draft Audit Report Comments

A draft audit report was provided to the industry body (GIC), the allocation agent, and allocation participants that I considered had an interest in the report. In accordance with rule 92 of the 2015 Amendment Version of the Gas (Switching Arrangements) Rules 2008, those parties were given an opportunity to comment on the draft audit report and indicate whether they would like their comments attached as an appendix to the final audit report. The following response was received.

Party	Response	Comments provided	Attached as appendix
Firstgas	Comments on the draft audit report	23 May 2024 by email	Firstgas's comments have been added to the remedial action and audited party comment sections of the non compliance and recommendation boxes within this report.

1.7 Gas Gate and ICP Data

Firstgas operates across 51 gas gates involving a mix of direct connected gas gates for large industrial consumers and allocated gas gates where a number of retailers trade on these networks.

No gas gates have been created or decommissioned during the audit period.

The table below lists the relevant Gas Gates:

Gas Gate	Description
CAM17201	Cambridge
EGC30702	Edgecumbe
EGC30701	Edgecumbe DF
GIS07810	Gisborne
HTK08301	Hamilton Te Kowhai
HTV11301	Hamilton Temple View
HRU16101	Horotiu

Gas Gate	Description
HTL16601	Huntly
KAW04405	Kawerau
KAW04410	Kawerau (ex Caxton)
KAW04411	Kawerau (ex Tasman)
KIH19101	Kihikihi (Te Awamutu)
KIN02601	Kinleith
KIW34202	Kiwitahi 2
KUK22401	Kuku
MSD01802	Marsden 2
MTG17301	Matangi
MRV16302	Morrinsville
MRV16301	Morrinsville DF
MMU08001	Mt Maunganui
NGW14501	Ngaruawahia
OKS32801	Okoroire Springs
OPO32001	Opotiki
OTA22601	Otaki
OTO14101	Otorohanga
PPA33201	Papamoia
PPA33202	Papamoia 2
PAU20101	Paraparaumu
PIR31101	Pirongia
PTR32601	Putaruru
PYE36601	Pyes Pa
RPR30801	Reporoa
ROT08101	Rotorua
TAU07001	Taupo
TKO39301	Tauriko
TRG07701	Tauranga
TAW31004	Te Awamutu North
THO22701	Te Horo
TKN17001	Te Kuiti North
TKS17401	Te Kuiti South
TPK33301	Te Puke
TTK30601	Te Teko
TIR33502	Tirau

Gas Gate	Description
TIR33501	Tirau DF
TKR19701	Tokoroa
WAK22802	Waikanae 2
WKE19201	Waikeria
WKU16901	Waiuku
WHK32101	Whakatane
WHG07501	Whangarei

1.8 ICP data

A registry list file was reviewed as of 3 April 2024, and a summary of this data by “ICP status” is as follows:

ICP Status	Number of ICPs
New	-
Ready	79
Active Contracted (ACTC)	67,219
Active Vacant (ACTV)	756
Inactive Transitional (INACT)	14,636
Inactive Permanent (INACP)	1,485
Decommissioned (DECR)	3,332

2. General obligations

2.1 Participant registration information (Rules 7 and 10)

All registry participants must supply registration information to the registry operator. Registration information consists of:

- the name of the registry participant, and
- the registry participant’s telephone number, physical address, facsimile number, email address, and postal address, and
- identification as to which class, or classes, of registry participant (retailer, distributor, or meter owner) that the registry participant belongs.

Registration information must be given in the form and manner required by the registry operator as approved by the industry body. Every person who is a registry participant at the commencement date must supply the registration information within 20 business days of the commencement date. A person who becomes a registry participant after the commencement date must supply the registration information within 20 business days of becoming a registry participant.

Firstgas’s participant registration information was reviewed and found:

- the participant information for participant code NGCD (Firstgas distribution) has three email addresses populated, one of which is no longer in use.
- The participant information for participant code FGDM (Firstgas Metering) has an email address which is no longer in use.

Firstgas are aware of the requirement to keep participant register information up to date and have revised this information during the audit.

Participant register accuracy		
Non-compliance	Description	
Report section: 2.1 Rule: 10 From: 3 April 2024 To: 28 August 2024	Audit history: Yes Controls: Acceptable Impact: Insignificant	The participant register information for participant code FGDM did not have a current email address populated.
Remedial action rating	Remedial timeframe	Remedial comment
Completed	Resolved	

Audited party comment	
The circumstances of the matters outlined in the breach notice.	
Whether or not the participant admits or disputes that it is in breach.	
Estimate of the impact of the breaches (where admitted).	
What steps or processes were in place to prevent the breaches?	I made all the necessary updates in gas registry to update the information. At the same time, we documented everything in our internal systems (accessible by the Firstgas Distribution Team).
What steps have been taken to prevent recurrence?	Yearly check between our online internal documentation and gas registry info.

2.2 Obligation to act reasonably (Rule 34)

Every registry participant must act reasonably in relation to its dealings with the registry and, in doing so, must use its reasonable endeavours to co-operate with other registry participants.

Processes for managing queries and complaints about Registry information were reviewed. No examples of Firstgas acting unreasonably were found.

Compliance is confirmed.

2.3 Obligation to use registry software competently (Rule 35)

Each registry participant must ensure that any software for the registry is used in a proper manner by competent employees or by persons under the supervision of those employees.

No registry participant may request, permit, or authorise anyone other than the registry operator to provide support services in respect of any software for the registry.

Each registry participant must appoint a nominated manager to be responsible for all that registry participant's communications with the registry.

No examples of Firstgas using Registry software incompetently were found. Access to modify registry information is restricted, and staff are appropriately trained. Firstgas only uses Jade for Registry support services.

Compliance is confirmed.

3. New connections

Firstgas described their process for creating new ICPs and there had been no significant change since the last audit.

A request to investigate the availability and cost of a new connection as received via:

- online under the "get connected" section of the Firstgas website

- e-mail using a standardised template,
- a call to the 0800 Firstgas call centre,

The request could come from the consumer, retailer, builder or gas fitter.

The initial process is managed using a CRM system and involves investigating the feasibility of the gas connection and can involve phone calls with the customer and Omexom as the service provider, for nonstandard requests.

When the customer accepts the quote a status change in Maximo occurs which in turn generates a work order electronically via a Job Flow App to Omexom and adds the case to a worklist for ICP creation. This customer agreement also triggers the billing system to create the bill for the capital contribution. The creation of an ICP then enables the retailer to request a meter.

The creation of a new ICP starts with the address being verified with the customer, Google Earth and the GIS system. “As builds” for addresses which don’t already exist in GIS are hand drawn, as the Firstgas GIS system doesn’t currently have “greenfield” functionality. The registry is also searched to ensure there is no existing ICP and the NZ Post website is used to confirm the accuracy of the detail of the address.

For big projects, such as major sub-divisions, the ICP creation process can be more complex. These are managed outside of the usual CRM / Maximo systems. Developers usually initiate the development projects such as shopping malls and multi-residentials, and retailers usually initiate the industrial connections. One of the parties involved may request that the ICP creation be done before there is an agreement to connect, because of the lead time for requesting the meter and the meter owners need for an ICP number as a part of the request. Firstgas create the ICP as soon as it is requested and even encourage this, to ensure the supply of metering does not delay a new connection project. Pinpointing the exact time of these requests is difficult after the fact, as they could have occurred via a phone call, can be prior to the contract being signed and are managed outside of the CRM system.

3.1 ICP creation (Rules 5.2, 43.1 and 43.2)

When creating ICPs, Firstgas validates addresses by checking the application details against their GIS system, which contains LINZ data. This check confirms that gas is available in the street outside the proposed new connection and also verifies the address details with the LINZ address. Firstgas does not currently search the registry for the new connection address to ensure that there is not already an ICP with the same address.

Recommendation	Audited party comment
<p>Implement a step in the ICP creation process to first search the registry for the new connection address to ensure it is unique and that an ICP has not already been created for the same property.</p>	<p>Response: Agree with further referencing to registry data.</p> <p>Comments: We will check our mapping system, GIS, for this information as the ICP comes up under the displayed connection and if anything pops up we then go through to the registry for clarification and use the registry data as source data.</p>

Where the new connection is part of a new subdivision or development, the GIS system may not be updated to enable both the gas availability or the address verification check. In these cases, Firstgas request site plans from the builder or developer to enable these checks to be performed manually.

Firstgas contractors then confirm that this address is correct as part of the new connection livening process and if there are any discrepancies, they can then be corrected on the registry once the new connection completion paperwork is received by Firstgas.

If there are further changes to address information such as replacing lot numbers with full street address, then Firstgas is reliant on the retailer to notify Firstgas of this change.

Recommendation	Audited party comment
Implement a process to proactively monitor and escalate to the respective retailer the initial new connection addresses populated in the registry so that address attributes such as lot numbers can be updated as soon as possible once an ICP is livened.	<p>Response: Disagree with responsibility falling to Firstgas.</p> <p>Comments: Generally, retailers will advise us of these changes as its up to them to correctly identify the address when customer signs up.</p>

Distributors must assign an ICP within three business days of receiving a request for an ICP from a retailer or advise the retailer or the reason why it is unable to assign an ICP.

Once confirmation is received that the consumer installation is connected, the following information must be updated on the registry within two business days:

- ICP identifier,
- ICP creation date,
- responsible distributor code, and
- physical address of the consumer installation.

The registry is populated manually by the field connections team using the address information provided on the new connection application. The address is not searched in the registry prior to the population of the new ICP which has led to duplicate ICPs being created for the same address where new connection applications have been received from different sources. Non conformance is recorded in **section 4.6**.

Recommendation	Audited party comment
Review the process for the initial population of an ICP onto the registry to ensure an address search is undertaken that will prevent duplicate ICPs being created for the same new connection.	<p>Response: Agree to searching for duplicates</p> <p>Comments: Use registry data as source data</p>

ICP requirements

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

Firstgas as a distributor have a new connections (Distribution connections) team split across Hamilton and Wellington.

Firstgas ensure there is a single consumer for each installation by waiting on the acceptance of a quote for the connection, so ensuring there is a single entity accepting responsibility for paying for the connection.

Isolation is designed into every new service by the inclusion of a network valve and in any case all pipelines under 100 millimetres can be readily isolated by squeezing the polyethylene service pipe.

Firstgas distribution does not provide any metering services, it is only responsible for two ICP meters and does not plan to expand its portfolio. It accepts confirmation from the meter owner in the registry that metering has been connected to be confirmation that there is a single set of metering equipment complying with **NZS 5259**. No additional verification is done as a part of the ICP creation process.

Because the Firstgas process is to wait for a quote acceptance / signed contract before assigning the ICP, it is also able to set up the rest of the distributor parameters at the same time without waiting for the physical connection. 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 where possible. Consequently, the ICP status moves directly to READY, skipping the NEW status in most cases.

A review of the registry LIS file confirmed that there were no ICPs with a status of NEW for the NGCD network code confirming that Firstgas follow the process described above and comply with the two business day time requirements for action under **rule 51.3** and **53.1**.

For the MAUI and VCTX network codes, no new ICPs have been created during the audit period.

Requirement	Commentary
Isolation of ICPs	<p>Firstgas does not allow ICPs to be connected downstream of other ICPs.</p> <p>As part of the application process Firstgas checks the requested address in an address website to get the full address and then check the Firstgas GIS system to determine if a connection already exists or an address may be incorrect.</p> <p>273 ICPs had duplicate addresses recorded on the registry list relating to 128 unique addresses. Firstgas confirmed that all were separate connections. The duplicate addresses are discussed further in section 4.6.</p>
Single loss factor and network price category	<p>All ICPs have loss factor NA. and a network price category specific to the connection request information provided by the customer or their gasfitter. This ensures there is a single loss factor and network price category for each ICP.</p>
Metering installed	<p>Firstgas accepts confirmation from the meter owner in the registry that metering has been connected to be confirmation that there is a single set of metering equipment complying with NZS 5259. No additional verification is done as a part of the ICP creation process</p>

ICP Format

ICPs should be created as a unique 15-character identifier assigned to each ICP, having the format xxxxxxxxxxxxxxccc, where:

- xxxxxxxxxx is the gas connection number specified by the distributor and unique to that connection in the distributor's records
- xx is an alphabetic combination, determined by the industry body, for use by the distributor when creating the ICP identifier
- ccc is an alphanumeric checksum generated by an algorithm specified by the industry body

Firstgas uses their Gas Registry ICP generator spreadsheet to create ICP numbers. Firstgas's retail team provides a unique premises number for each requested ICP, which is entered into Gas Registry

ICP generator spreadsheet and combined with Firstgas’s distributor code, a checksum generated by the spreadsheet, and leading zeros to make a total of 15 characters.

Review of the registry list confirmed all ICPs are in the correct format.

3.2 ICP assignment (Rule 51.1, 51.2, 51.3, 53.1 and 53.4)

When the customer accepts the quote a status change in Maximo occurs which in turn generates a work order electronically via a Job Flow App to Omexom and adds the case to a worklist for ICP creation. This customer agreement also triggers the billing system to create the bill for the capital contribution. The creation of an ICP then enables the retailer to request a meter.

Distributors must assign an ICP within three business days of receiving a request for an ICP from a retailer or advise the retailer why they are unable to assign an ICP.

Once confirmation is received that the consumer installation is connected, the following information must be updated on the registry within two business days:

- ICP identifier,
- ICP creation date,
- responsible distributor code, and
- physical address of the consumer installation.

All remaining distributor ICP parameters (apart from ICP and connection status) must be entered on the registry within two business days of confirming those values. The distributor may change the ICP status to new at any time before the retailer changes the ICP status.

Installation work is scheduled and completed by Firstgas’s technicians and contractors. Work request and completion paperwork is sent and received electronically via the Job Flow App which requires a number of mandatory as-built fields to be populated by the onsite technicians. All information required is populated on the registry manually as soon as possible after connection. This electronic transfer of information has reduced the historical delays in the provision of completion paperwork and the update of the status to Active.

A review of all 5,263 ICPs which were created since December 2020 was undertaken and found.

Rule	Commentary
51.2 The distributor must create an ICP or advise of the reasons if an ICP cannot be created with three business days of receiving a request.	19 ICPs were not created within three business days of receiving an acceptance of a new connection quote / request for ICP creation from Firstgas’s retail team. 11 ICPs were created more than 30 business days. Two ICPs were created more than 500 business days
51.3 The distributor must update the ICP, creation date, distributor, and address on the registry within two business days of receiving confirmation the ICP is connected.	All ICPs had the required information populated prior to the ICP being connected.
53.1 The distributor must update the registry parameters within two business days of identifying the parameters, so that the registry can change the ICP status to READY-GIR status.	All ICPs had the required information populated prior to the ICP being connected.

A review of ICPs that where the DECR status was applied as of the ICP creation dates found that five new connections had duplicate ICPs created by Firstgas during the audit period and one ICP for each

duplicate address was subsequently decommissioned as it was not required. Non conformance is recorded in **section 4.6**

New connection timeliness		
Non-compliance	Description	
Report section: 3.2 Rule: 51.2 From: 26 January 2021 To: 3 April 2024	Audit history: No Controls: Needs improvement Impact: Insignificant	19 ICPs were not created within three business days of receiving an acceptance of a new connection quote / request for ICP creation from Firstgas.
Remedial action rating	Remedial timeframe	Remedial comment
In Progress	Based on other parties input	Based on other parties input
Audited party comment		
The circumstances of the matters outlined in the breach notice.	Could be delays incurred by other participants in the process i.e providing further information such as landowner consent.	
Whether or not the participant admits or disputes that it is in breach.	Admit but insignificant and not able to remediate over and above ongoing customer reminders.	
Estimate of the impact of the breaches (where admitted).	Insignificant	
What steps or processes were in place to prevent the breaches?	Continued customer contact.	
What steps have been taken to prevent recurrence?	Not necessary, falls with other parties.	

4. Registry information management (Rule 58.1 and 58.2)

The distributor must use its reasonable endeavours to maintain current and accurate information in the registry in relation to the ICPs and the ICP parameters for which it has responsibility.

New connections and installation changes are completed by Firstgas's technicians and contractors. Work requests and completion paperwork is sent and received electronically via the Job Flow App which requires a number of mandatory as-built fields to be populated by the onsite technicians. All information required is populated on the registry as soon as possible.

4.1 Network pressure

The rules governing ICP parameters as maintained by the distributors describe 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".

During the on-site audit the process for deciding the network pressure was reviewed, it was unchanged since the last audit. This is done by finding the address on the GIS system, identifying which pipeline supplies the ICP and reviewing the associated asset information. The most common rating is MP4 pipeline, which has a nominal pressure of 400 kPa. The trend was to move to more 100 and 200 kPa pipelines.

Firstgas conduct regular maintenance of District Regulator Stations (DRS) on a 6 monthly frequency as per the internal standard "Maintenance of district regulator Stations". As part of these maintenance activities the DRS set pressures are recorded as "as found pressure". Where the pressure is outside the set pressure, the District Regulator station is reset to the set pressure, and this is also recorded as "as left pressure". Firstgas also have a number of pressure recorders on each network which return pressure values daily. This system also has alarms so that if the pressure falls outside the normal operating pressure an alarm is triggered requiring a site investigation. The DRS maintenance schedule was reviewed to confirm that all DRS's have had the network pressures checked in the last six months.

Network pressure accuracy

A review of the accuracy of network pressures was undertaken by identifying streets where one or more ICPs on a particular street had one pressure and the remaining ICPs had a different pressure. 62 streets were identified, and 644 connected ICPs were checked and found:

- For 12 Streets the network pressures were confirmed as being correct,
- 112 ICPs were found to have an incorrect network pressure recorded on the registry. The difference in network pressure resulted in an impact less than 0.9% if a retailer was to have applied the Joule Thomson effect to the temperature factor,

Firstgas have now completed a project to review and the updated the network pressures for a further 416 ICPs found to be incorrect for the affected streets.

A list of the affected streets is in **Appendix 1**.

Network pressure accuracy		
Non-compliance	Description	
Report section: 4.1 Rule: 58.1 From: 26 January 2021 To: 3 April 2024	Audit history: Yes Controls: Needs improvement Impact: Minor	112 NGCD ICPs from a sample of 62 streets where there was more than one network pressure recorded were found to have incorrect network pressures recorded on the registry.
Remedial action rating	Remedial timeframe	Remedial comment
In progress	Waiting on business tool to be created. 12 months	Report to identify errors being created. Will be run regularly.
Audited party comment		
The circumstances of the matters outlined in the breach notice.	Input error	
Whether or not the participant admits or disputes that it is in breach.	Admitted	
Estimate of the impact of the breaches (where admitted).	Minor	
What steps or processes were in place to prevent the breaches?	None – business tool will remedy based on review.	
What steps have been taken to prevent recurrence?	Internally we created Continuous Improvement ideas – Business Tools - for monitoring and updating between our systems (databases) and the source of truth (Engineering Team and Asset Management Team)	

4.2 ICP altitude

Firstgas use evaluation finder websites such as Elevationmap.net to determine the correct altitude for the registry, after first taking care to confirm the address details. Google Earth is used to verify the altitude.

Once the altitude value has been determined and assigned on the registry, there is no process to verify that the correct altitude value has been entered into the registry manually.

ICP altitude accuracy

It is a distributor responsibility to populate the registry with correct altitude information to support compliance with **NZS 5259**. **NZS 5259 Amendment No1** 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, and

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.”

A sample of 51 ACTC or ACTV ICPs was selected from the registry list as of 22 April 2024 where the standard deviation of altitude minimum and maximum values by street was more than 10 standard deviations.

This sample of ICPs was checked against ‘google earth’ data. The ‘google earth’ data is based on the “Shuttle Radar Topography Mission” (SRTM) results and a number of recent studies indicate an accuracy of $\pm 10\text{m}$ for altitude. An evaluation against this data is considered an appropriate test for “reasonableness”. Altitude figures that are within approximately 90m of the actual altitude will ensure an accuracy of $\pm 1.0\%$.

32 ICP were found to have incorrect altitude values that were outside 20 metres from the google earth altitude value.

- Five ICPs² had differences greater than 90 metres resulting in altitude factor differences greater than $\pm 1.0\%$.
- 27 ICPs had differences less than 90 metres.

All 32 ICPs were identified by Firstgas as being domestic supplies therefore any impacted volumes were considered by Firstgas to be low. Firstgas also considered that as there were both under and overs so the ultimate effect on the UFG on the gate would have been insignificant. Firstgas have now updated the altitude values in the registry effective 20 September 2024 based on their assessment of market impact. As no corrections have been backdated the affected retailers are not able to provide revised consumption volumes for any customer invoices affected or for any subsequent revisions.

Recommendation	Audited party comment
Review new connection process to include a post livening review of an ICPs altitude to ensure the value is correct prior to use in the conversion of volume to energy by the respective retailer.	<p>Response: Agree to check full database on annual basis.</p> <p>Comments: Concern was around historical errors that have been rectified – confident in current process.</p>

Distributor	Total ACTC and ACTV non TOU ICPs	ICPs checked	Quantity outside 20m	Quantity outside 90m
UNLG	7,314	30	2	-
NGCD	6,637	30	1	-
POCO	18,657	30	4	-
GNET	695	30	-	-
Total	33,300	120	7	-

² 1001305000NG9B7 - 4.3%, 1001305001NG5F2 - 4.3%, 1001305293NG097 - 4.3%, 1001294020NG6EA - -1.9%, 1001294193NG19C - 1.2%

ICP altitude accuracy		
Non-compliance	Description	
Report section: 4.2 Rule: 58.1 From: 26 January 2021 To: 3 April 2024	Audit history: Yes Controls: Needs improvement Impact: Minor	32 NGCD ICPs were found to have incorrect altitudes from a sample of 51. Five errors relating to ICPs (1001305000NG9B7 - 4.3%, 1001305001NG5F2 - 4.3%, 1001305293NG097 - 4.3%, 1001294020NG6EA - -1.9%, 1001294193NG19C - 1.2%) resulted in an altitude factor which was over the maximum permissible error in NZS 5259:2015.
Remedial action rating	Remedial timeframe	Remedial comment
In progress	Waiting on business tool to be created. 12 months	Report to identify errors being created. Will be run regularly.
Audited party comment		
The circumstances of the matters outlined in the breach notice.	Input error.	
Whether or not the participant admits or disputes that it is in breach.	Admitted	
Estimate of the impact of the breaches (where admitted).	Minor	
What steps or processes were in place to prevent the breaches?	Before updating the gas registry, we check if the ICP is duplicated. In the future, we will also check if the address is unique, to make sure that we do not have any kind of breach, any kind of wrong information.	
What steps have been taken to prevent recurrence?	Internally we created Continuous Improvement ideas – Business Tools - for monitoring and updating between our systems (databases) and the source of truth (potential LINZ).	

4.3 Gas gate

The process for determining gas gates had not changed significantly since the last audit. The first step is to look up the relevant town on a spreadsheet list to identify the expected gas gate code or codes for that town or city. The relevant address is then looked up in GIS to identify the new connection and that connection is then followed upstream to identify the source gas gate.

Firstgas operate a number of networks where a physical gas gates have been grouped into a notional delivery point (greater gas gate) for reconciliation purposes. While it is possible for gas to be sourced from more than one gate within a network and the gas type used for the conversion of volume to energy is the same for all gas gates comprising the greater gas gate, accuracy of the gas gate assignment to individual ICPs is required to ensure the temperature data used to calculate the temperature factor relates to the vicinity of the ICP.

In October 2019 the Gas Industry Company published a table of average ground temperatures by gas gate to ensure the consistent application of the temperature factor by retailers for both reconciliation and billing purposes. Where the gas gate is incorrectly assigned to an ICP the flow on affect is on the correct calculation of the temperature factor by retailers.

Firstgas has done some mapping to define areas more clearly. The new connections team look to check which specific gate the ICP address is closer to when determining gas gate. There are still some areas where it is not always clear which gas gate should be selected.

Recommendation	Audited party comment
Review new connection process map street / suburb to gas gate as part of the process to verify addresses with LINZ address information .	<p>Response: Agree</p> <p>Comments: We will implement a definitive map for dual fed networks to avoid issues in the future</p>

Gas gate accuracy

A review of gas gate allocations by street name for each distinct network area was undertaken to identify streets where more than one gas gate is assigned and found:

- 545 streets in the Waikato region with 1,806 ICPs with incorrect gas gate assignments
 - Most exceptions relate to gas gates that make up a greater gas gate grouping and were due to human error when manually assigning the gas gate to the ICP on the registry. The impact is limited to temperature factor inaccuracies.
- Two streets in Kapiti with two ICPs with incorrect gas gate assignments
 - one ICP (1001301467NG10C) was incorrectly assigned to the Papamoa (PPA33201) gas gate within the Bay of Plenty network due to human error,
 - one ICP (1001301117NG154) was incorrectly assigned to the Temple View (HTV11301) gas gate within the Waikato network due to human error,
 - Both errors resulted in incorrect submissions by retailers for gas gate volumes as well as incorrect Calorific Value and temperature factors being applied. For both affected ICPs the gas gate assignments have been corrected back to the ICP creation date to enable the affected retailers to provide revised volumes using the correct Calorific Value and temperature factors.
- 111 street in Bay of Plenty with 221 ICPs with incorrect gas gate assignments
 - Most exceptions relate to gas gates that make up a greater gas gate grouping and were due to human error when manually assigning the gas gate to the ICP on the registry. The impact is limited to temperature factor inaccuracies.

Firstgas have implemented a data cleaning project to review and update gas gate assignments found to be incorrect for the affected streets. Firstgas have, since the audit, implemented a check of gas gate assignment for all new connections three months after the new connection has been livened.

A list of the affected streets is in **Appendix 2**.

Some of these gas gate discrepancies occurred prior to Firstgas taking responsibility for these network areas. However, the responsibility for ensuring that the correct gas gate is assigned to all active ICPs is with the distributor recorded on the registry for each reconciliation period.

Recommendation	Audited party comment
Implement a project to review all ICP / gas gate assignments and correct all exceptions identified.	Response: Agree Comments: Will work through existing data to identify discrepancies at street level on all networks.
Implement a process to regularly monitor Maximo to registry gas gate to ICP assignments that complies with the monthly review obligations under rule 62 .	Response: Agree Comments: Audit tools in development. Once this tool is live we can match Linz data to each ICP physical address. We will implement a monthly process to monitor and correct the discrepancies.

The impact of incorrect temperature factor calculation due to the incorrect gas gate assignment is minor and within the accuracy thresholds set in **NZS 5259**.

Gas gate accuracy		
Non-compliance	Description	
Report section: 4.3 Rule: 58.1 From: From: 26 January 2021 To: 3 April 2024	Audit history: Yes Controls: Needs improvement Impact: Minor	2,029 ICPs had been incorrectly assigned to the wrong gas gate. 2,027 ICPs relate to gas gates that are part of a greater gas gate configuration. For two ICPs the incorrect gas gate allocation has resulted in incorrect submissions by the retailers responsible for these ICPs. The volume to energy conversion for these two ICPs is also incorrect due to the incorrect calorific values and temperature values applied by the retailer.
Remedial action rating	Remedial timeframe	Remedial comment
In progress	12 months	Input process identified to ensure consistency, initiated with one month. Remedial/historical updates to occur over 12-month period.

Audited party comment	
The circumstances of the matters outlined in the breach notice.	Historical inconsistencies on dual feed networks.
Whether or not the participant admits or disputes that it is in breach.	Admitted
Estimate of the impact of the breaches (where admitted).	Minor
What steps or processes were in place to prevent the breaches?	I started to update our database based on ICP & suburbs. Suburbs are easier to assimilate with each Gasgate. That's why once the ICP & Suburbs pair is identified, we will be able to do the exact implementation for each ICP & Gasgate.
What steps have been taken to prevent recurrence?	Internally we created Continuous Improvement ideas for monitoring and updating between our systems (databases) and the source of truth (potential LINZ). We check ICP creation in 2 steps - 1 step is to see that the ICP number is unique, the second step is to check if there is already an ICP at the address for which we want to create the new Customer.

4.4 Load shedding category

The on-site review of processes included the process for deciding the load shedding category. Load shedding categories are determined by Firstgas as part of the ICP application process, and requests for changes to load shedding categories are provided by email from the relevant retailers. Firstgas's distribution team validates the requested categories against information that they hold, such as the details of the customers appliances and proposed load from the initial connection information, ANZSIC code, and metering type, to determine whether they appear valid. This is done at the same time as deciding the pricing category and the two should be aligned. Firstgas had developed an Excel based tool to assist with this process.

Load shedding category accuracy

The load shedding category identifies the position of the ICP's consumer installation in the hierarchy for emergency curtailment of gas. Load shedding categories and codes are determined and published by the industry body from time to time and are consistent with the curtailment bands under Schedule 3 of the Gas Governance (Critical Contingency Management) Regulations 2008.

The categories are shown below.

Category Code	Consumption in Gigajoules (GJ) or Terajoules (TJ)	Load Shedding Category (ie Curtailment Band) Description
0	N/A	Any consumer installation, to the extent that gas is used for injection into gas storage
1	More than 15 TJ per day	Any consumer installation supplied directly from the transmission system and that has an alternative fuel capability
2	More than 15 TJ per day	Any consumer installation supplied directly from the transmission system and that does not have an alternative fuel capability
3	More than 10 TJ per annum and up to 15 TJ per day	Large industrial or commercial consumer installation
4	More than 250 GJ per annum and up to 10 TJ per annum	Medium-sized industrial or commercial consumer installation
5	More than 2 TJ per annum	Any consumer installation (whether or not in bands 0 to 4), to the extent that an essential services designation applies to the installation
6	250 GJ or less per annum	Small commercial consumer installation
7	Any	Any consumer installation (whether or not in any of curtailment bands 0 to 4), to the extent that a critical care designation applies to the consumer installation
DOM	Any	Domestic consumers

A review of the registry list as of 3 April 2024 was undertaken of load shedding categories against gas allocation group codes did identify 23 ICPs (**Appendix 3**) with an incorrect load shed category code:

- Three ICPs with DOM load shed category assigned were found to be commercial consumers with a gas allocation code 4 assigned by the retailer.
- Ten ICPs with a load shed category of 4 assigned but the gas allocation code assigned by the retailer was 6
- Ten ICPs with a load shed category of 6 assigned but the gas allocation code assigned by the retailer was 4.

I recommend Firstgas implements further monitoring of consumption and allocation groups to identify potential load shedding category discrepancies.

Recommendation	Audited party comment
Check load shedding categories for reasonableness when changes are requested, and also at least annually by comparing to retailers' gas allocation group assignments and also annualised consumption volumes.	Response: Disagree Comments: Rely on GIC to monitor and update. Only on their instruction do we make any alterations to the load shedding category.

A further review of the registry list as of 3 April 2024 was undertaken to ensure that all ICPs with a load shedding category code of 7 (Critical care designation) were also present on the most recent

GIC list of active critical care designations (27 June 2024). Three ICPs³ did not appear to be present in the active designations list at the time of the field audit.

Recommendation	Audited party comment
Develop a process to monitor the GIC active designations list and expiry dates for load shedding category 7 against the registry and work with the respective retailers to ensure that the registry information is current and up to date.	<p>Response: Agree with recommendation</p> <p>Comments: Audit tool in development to cross reference gas allocation group with load shedding category.</p>

The load shedding category of all active Firstgas ICPs created since the last audit were compared with tariff codes to look for unlikely pairings. No unlikely pairings were identified.

I rechecked discrepancies identified during the previous audit and found all had been resolved, or the connection status had been updated to GPM (inactive permanent).

Load Shedding Categories		
Non-compliance	Description	
<p>Report section: 4.4</p> <p>Rule: 58.1</p> <p>From: From: 26 January 2021</p> <p>To: 3 April 2024</p>	<p>Audit history: Yes</p> <p>Controls: Needs Acceptable</p> <p>Impact: Insignificant</p>	<p>Data analysis of the load shedding category against other registry fields identified 13 ICPs with incorrect categories.</p> <p>Three ICPs have a designation of 7 (Critical care designation) however these ICPs are not currently listed on the GIC website of active critical care designations.</p> <p>The impact has been categorised as insignificant as there has not been a Critical Contingency curtailment event in any Firstgas network area. Critical Contingencies are rare, but the potential impact of incorrect categories is major should an event occur.</p>
Remedial action rating	Remedial timeframe	Remedial comment
In progress	One month	Check individual status with retailers.

³ Appendix 3 - load shedding category code of 7 (Critical care designation) not on GIC list

Audited party comment	
The circumstances of the matters outlined in the breach notice.	Unknown
Whether or not the participant admits or disputes that it is in breach.	Admitted
Estimate of the impact of the breaches (where admitted).	Insignificant
What steps or processes were in place to prevent the breaches?	We will be implementing a tool in the future to monitor any duplicated addresses and updating accordingly. A lot of these could be historical issues we had not picked up on.
What steps have been taken to prevent recurrence?	We have created a consumption monitoring process. It must be identified after how many months of consumption (to avoid seasonal consumption) one can switch to another Tariff Rate.

4.5 Maximum hourly quantity

MHQ accuracy

The maximum hourly quantity is the maximum quantity of gas, in cubic metres, that the gas consuming equipment at the consumer installation is capable of drawing per hour. The value is distinct from the capacity of the gas service pipe or metering equipment serving the consumer installation.

This field is mandatory only where MHQ is used to determine the distributor's network charges, and it may be conveyed by means of a 'disclosure on application' code in accordance with rule 50. Tariff categories are determined by ICP MHQ. Standard tariffs are applied based on ICP capacity bands. ICP MHQ is one of the factors to evaluate if nonstandard pricing should be applied. A review of the registry list as of 3 April 2024 identified 442 ICPs with nonstandard pricing that require either a maximum hourly quantity (MHQ) or maximum daily quantity (MDQ) as an input to determine the individual pricing calculation. Firstgas uses the tariff code of NG60 to identify these nonstandard individually priced ICPs and only four of the 442 ICPs on the nonstandard individually priced tariff have the MHQ value populated on the registry. Firstgas does not use the 'disclosure on application' network prices category code therefore the population of the MHQ field is not mandatory. MHQ is recorded on the registry for 76 active ICPs of which 72 are non TOU on standard tariffs.

4.6 Physical address

Physical address information is recorded in Maximo and the registry. There is no current process to monitor for discrepancies between these two systems.

Physical address accuracy

The physical address assigned by the distributor to the ICP's consumer installation, so that the ICP can be unambiguously identified with the consumer installation, in the registry.

I checked the registry list as of 3 April 2024 for incomplete addresses for ACTC and ACTV ICPs and identified 270 ICPs. A sample of 40 were reviewed and found:

- All 20 ACTC ICPs (**Appendix 4**) had addresses which were not readily locatable and did sufficient address information to be able to ensure the Address could be readily located.
 - 35 ICPs were created prior to the audit period.
 - Five ICPs were created during the audit period.

I checked the registry list as of 3 April 2024 for duplicate addresses for ACTC and ACTV ICPs and identified 128 ICPs. A sample of 24 duplicate addresses relating to 52 ICPs were reviewed and found:

- All 52 ACTC ICPs had duplicate addresses, and four were created during the audit period. 14 ICPs are situated in buildings with more than one meter in close proximity, and the meter number is relied upon to determine the correct location.

As discussed in **section 3.1**, the address is not searched in the registry prior to the population of the new ICP which has led to duplicate ICPs being created for the same address where new connection applications have been received from different sources

Physical address accuracy		
Non-compliance	Description	
Report section: 4.6 Rule: 58.1 From: From: 26 January 2021 To: 3 April 2024	Audit history: Yes Controls: Needs improvement Impact: Insignificant	20 ICPs had addresses which were not readily locatable. 52 ICPs had duplicate addresses recorded. 14 ICPs are situated in buildings with more than one meter in close proximity, and the meter number is relied upon to determine the correct location. Five new connections had duplicate ICPs created where one of the duplicate address ICPs were then decommissioned.
Remedial action rating	Remedial timeframe	Remedial comment
In progress	Remedy immediately, new business tool in 12 months.	
Audited party comment		
The circumstances of the matters outlined in the breach notice.	Input error. Most likely applications received from multiple sources.	
Whether or not the participant admits or disputes that it is in breach.	Admitted	
Estimate of the impact of the breaches (where admitted).	Insignificant	
What steps or processes were in place to prevent the breaches?	Once 5 tools are finalized and implemented in Prod we can actively update gas registry database information's	
What steps have been taken to prevent recurrence?	We will be implementing a tool in the future to monitor any duplicated addresses and updating accordingly. A lot of these could be historical issues we had not picked up on . We created the Plans for new verification and monitoring business tools.	

4.7 Decommissioned status (Rules 59.11 and 59.12)

Decommissioned status (DECR) may only be assigned where:

- the ICP is removed from future switching and reconciliation processes, and
- any associated consumer installation is no longer connected to the distribution system.

The decommissioned ICP status may only be changed to inactive-permanent (INACP).

Firstgas's policy is to ascertain that the disconnection has been made outside the boundary of the property. This is done by verifying with contractors and/or As Built documents. Firstgas then request the retailer to alter status to INACP to enable the ICP to be decommissioned (DECR). The event date is recorded as per date of the service pipe disconnection.

Firstgas does not actively monitor for follow up with retailers, ICPs that have moved to INACTP (GPC or GPM) that may require decommissioning.

Review of the event detail report for 1 December 2020 to 29 February 2024 and found:

- 559 ICPs were updated to DECR status during the period.
- The average time to update registry was 137 days.
- 449 updates to DECR status were greater than 30 business days.
- 141 updates to DECR status were less than five business days

A sample of ten ICPs updated to DECR status where the registry updates were more than 300 days were reviewed and found that the current process to monitor completed fieldwork paperwork is only performed on an annual basis.

A review of ICPs that where the DECR status was applied as of the ICP creation dates identified ten ICPs and found:

- For five ICPs the customer requested to cancel the gas new connection.
- For five ICPs⁴ it was identified that a second ICP had been created for the duplicate address that subsequently required the duplicate ICP for be decommissioned as it was not required.

Non conformance is recorded in section

A review of a registry LIS file for 3 April 2024 was undertaken of ICPs with an inactive permanent status and connection status of GPM - Gas permanent disconnect ready for decommissioning GMS removed supply capped or plugged to ensure monitoring is in place to transition these ICPs to DECR status once the decommissioning criteria has been met. A sample of 20 ICPs from a population of 1477 ICPs with INACP status were reviewed and found:

- 16 ICP's (**Appendix 5**) where no review of the completed field work paperwork has been undertaken for these ICPs to confirm whether these ICPs can move to decommissioned status has been undertaken by Firstgas.

⁴ 1001304767NG52F - 29/06/2023, 1001304810NG2B7 - 17/07/2023, 1001303940NG7DB - 28/09/2022, 1001304265NG0AF - 20/12/2022, 1001301333NG70C - 4/06/2021.

Decommissioned status accuracy		
Non-compliance	Description	
Report section: 4.7 Rule: 59.11 From: From: 26 January 2021 To: 3 April 2024	Audit history: Yes Controls: Needs improvement Impact: Insignificant	16 ICPs with INACP status were found to have had the service pipes disconnection outside the boundary and should have the status DECR.
Remedial action rating	Remedial timeframe	Remedial comment
Completed	Corrected	Quarterly review cycle implemented.
Audited party comment		
The circumstances of the matters outlined in the breach notice.	Inconsistency between input and onsite contractor data.	
Whether or not the participant admits or disputes that it is in breach.	Admitted	
Estimate of the impact of the breaches (where admitted).	Insignificant	
What steps or processes were in place to prevent the breaches?	I think we can exchange information with our Retailers once every 3 months. The period in which to check if what we have in the database vs the information that needs to be updated.	
What steps have been taken to prevent recurrence?	Under implementation.	

4.8 Connection statuses (Rule 60)

Connection status accuracy

The distributor must ensure the correct status change date is recorded in the registry. The process to create service line disconnection field service requests and monitor completion paperwork is currently split across two teams. The distribution connections team liaise with the retailer and once a quotation for the service pipe disconnection is accepted, a field work request is created and allocated to the contractor. Field work completion paperwork from the contractor is provided to the operations team who update the GIS system and notify the accounts team to invoice the respective retailer.

The field connections team perform an annual reconciliation of requested service pipe disconnections and where a copy of the completed field work paperwork is found in the GIS system then the status is updated to decommissioned (DECR).

This process does not ensure that all ICPs are updated when they meet the criteria for being assigned to the DECR status or updated as soon as practicable.

Recommendation	Audited party comment
Review the service pipe permanent disconnection process to ensure end to end monitoring of the service requests so that the registry to updated accurately and in a timely manner on receipt of the field work completed paperwork.	<p>Response: Agree</p> <p>Comments: Would need list of completed disconnections from our contractors so we could get this completed monthly in terms of setting ICPs to DECOM. This will have a month lag to ensure we are decommissioning only ones that meet requirements.</p>

The registry snapshot LIS file as of 3 April 2024 was reviewed and found:

- 1,477 ICPs were at INACP-GPM status. A sample of 20 were reviewed and found:
 - for one ICP (1001295378NGE55) the decommissioned request was cancelled by the customer,
 - for three ICPs (0009001343NG77C, 0009001532NG862, 1001246804NG5A9), Firstgas have no record of a request to permanently disconnect the service pipe outside the boundary that would enable the status to be updated to decommissioned,
 - for 16 ICP's, no review of the field work completed paperwork has been undertaken for these ICPs to confirm whether these ICPs can move to decommissioned status has been undertaken by Firstgas. Non conformance is recorded in **section 4.7**.
- five ICPs were decommissioned as of the ICP creation date due to these ICPs being duplicates for new connections during the audit period as discussed in **section 4.6**.
- One ICP (1001303564NG788) was decommissioned in error – this incorrect status was reversed one month later.
- no ICPs were at NEW status, and
- 79 ICPs at READY status

The connection statuses for ICPs located in Sullivan Crescent in Hamilton was reviewed as multiple ICPs with different connection statuses for duplicate addresses were found in the registry LIS report for 3 April 2024 (**Appendix 6**). The properties within this crescent have been redeveloped and new residential ICPs created and connected. The review found seven ICPs with either inactive temporary (GNM) and 16 ICPs inactive permanent (GPM) status still present and only seven ICPs decommissioned.

Recommendation	Audited party comment
Review the connection statuses for all ICPs within Sullivan Crescent in Hamilton against field service and GIS information and update the registry connection status where the connection can be confirmed as decommissioned via field service or GIS records.	<p>Response: Agree</p> <p>Comments: Review post audit</p>

Connection Status		
Non-compliance	Description	
Report section: 4.8 Rule: 60 From: From: 26 January 2021 To: 3 April 2024	Audit history: Yes Controls: Needs improvement Impact: Insignificant	One ICP (1001303564NG788) was decommissioned in error – this incorrect status was reversed one month later. 16 ICPs related to Sullivan Crescent, Hamilton have incorrect status recorded in the registry.
Remedial action rating	Remedial timeframe	Remedial comment
In progress	Two months for immediate ICP's identified	Request information of status from retailers.
Audited party comment		
The circumstances of the matters outlined in the breach notice.	Duplicate ICP's due to redevelopment of site.	
Whether or not the participant admits or disputes that it is in breach.	Admitted	
Estimate of the impact of the breaches (where admitted).	Insignificant	
What steps or processes were in place to prevent the breaches?	We are in a process to create 5 business tools in Prod. We can actively monitor and update gas registry database information's. 1. A business tool that allows us to verify the status for each ICPs	
What steps have been taken to prevent recurrence?	We will be implementing a tool in the future to monitor any discrepancies and updating accordingly.	

4.9 Registry validation and correction (Rules 61.1 and 62)

If the distributor becomes aware that registry information is incorrect or requires updating, the responsible distributor must update or correct the registry as soon as practicable.

The distributor registry report should be reviewed, and any corrections required should be entered on the registry by 4pm on the 15th business day of the month.

Registry information is populated and maintained into the registry manually in initial population of the ICPs and when requested by a retailer or another participant. As Firstgas do not operate an automated mechanism to populate or update the registry, there is no process to monitor registry acknowledgement files to confirm whether an update was successful or requires investigation.

During the previous two audits it was found that Firstgas did not have routine processes for checking data quality in the registry or for maintaining data that could change. Changes were only made in response to a retailer request or as a result of an annual review of network price codes.

Recommendation	Audited party comment
Implement a process to monitor the accuracy and investigate any exceptions of information between the registry and Maximo and other systems and ensure the registry is updated as soon as an exception is confirmed.	<p>Response: Agree.</p> <p>Comments: Audit tools in development.</p>

A review of the registry information was undertaken using a snapshot LIS file from the registry dated 3 April 2024 and found four ICPs⁵ had an incorrect ICP type (GD not GN). These have now been corrected on the registry going forward.

The timeliness of registry updates was also reviewed and a sample of 17 ICPs from a population of 70 ICP with updates between 28 and 819 days and found:

- three updates⁶ related to the back population of the ICP type that was not initially populated when the ICP was created.
- seven updates were up to update the load shedding code, and these were backdated to the event date requested by the retailer.
- two updates⁷ was to update the initial network and address event dates to align with the connection date.
- five updates⁸ were to correct the network pressure after identifying the ICPs were initially assigned to the incorrect pressure area (400 kPa instead of 5 kPa).

Firstgas have developed a Power BI tool which collects and compares data from a variety of systems including the registry, OATIS, and the finance system. The tool is able to review altitude, allocation group, load shedding, network pressure and gas gate. Firstgas plan to undertake a comparison of the exceptions identified using this tool and complete the required updates to the registry, GIS and the asset management system once this tool has been fully tested and implemented.

⁵ 1001303565NGBCD – GD, 1001300634NGE63 – GD, 1001299158NG287 – GD, 1001299068NGC7B – GD.

⁶ 1001301716NGB17 – 49 days, 1001302169NG572 – 28 days, 1001302183NGD59 – 595 days.

⁷ 1001300853NGA52 – from 24/02/2021 to 24/02/2021, 1001304218NGAA9 – from 29/11/2022 to 18/10/2022.

⁸ 1001303792NGC17, 1001303793NG052, 1001303794NGD98, 1001303795NG1DD, 1001303796NGD1D.

Registry validation and correction		
Non-compliance	Description	
<p>Report section: 4.9</p> <p>Rule: 62.2</p> <p>From: From: 26 January 2021</p> <p>To: 3 April 2024</p>	<p>Audit history: Yes</p> <p>Controls: Needs improvement</p> <p>Impact: Minor</p>	<p>The monthly registry distributor report is not reviewed, and discrepancies are not resolved by 1600 hours on the 15th business day of each month.</p> <p>Four ICPs had an incorrect ICP type (GD not GN).</p> <p>For three ICPs the ICP type that was not initially populated when the ICP was created.</p> <p>For two ICPs the initial network and address event dates did not initially align with the connection date.</p> <p>For five ICPS the network pressure was initially incorrectly populated.</p>
Remedial action rating	Remedial timeframe	Remedial comment
In progress	Remediate identified errors within one month.	Business tools will allow us ability to review on a timely basis.
Audited party comment		
The circumstances of the matters outlined in the breach notice.	Input error	
Whether or not the participant admits or disputes that it is in breach.	Admitted	
Estimate of the impact of the breaches (where admitted).	Minor	
What steps or processes were in place to prevent the breaches?	<p>We are in a process to create 5 business tools in Prod. We can actively monitor and update gas registry database information's.</p> <ol style="list-style-type: none"> 1. A business tool that allows us to verify the physical address for each ICPs 2. A business tool that allows us to verify altitude for ICPs 3. A business tool that allows us to verify all ICPs Network Pressure 4. A business tool that allows us to verify all ICPs Allocated GasGate 	
What steps have been taken to prevent recurrence?	We will be implementing a tool in the future to monitor any discrepancies and updating accordingly.	

5. Creation and decommissioning of a gas gate (Rule 45.1 and 45.2)

If a distributor intends to create or decommission a gas gate, the distributor must, at least 20 business days before the creation or decommissioning takes effect, give notice of that gas gate creation or decommissioning. The notice must contain the gas gate codes, the creation or decommissioning date, the parent gas gate if applicable and the ICP identifiers affected.

No gas gates were created or decommissioned during the audit period, and Firstgas are aware of the notification requirements.

6. Management of network price category codes (Rule 46)

Network Pricing Category

The process for determining the network pricing category is performed as part of the new connection process and also when a request is received from a retailer for a tariff change / review of the network price category.

A review of new ICP load shedding categories against pricing categories did identify six ICP with the pricing code exceptions and found:

- ICP 0001029298NGCF5 with load shed category of 3 assigned and with a gas allocation group of 2 assigned by the retailer but has a network price category of GN02 (Medium Commercial - between 10 and 40 scm/hr) assigned.
- five ICPs⁹ with a load shed category of 6 assigned and the gas allocation code assigned by the retailer was 6 but has a network price category of GN03 (Large Commercial - between 40 and 200 scm/hr) assigned.

Recommendation	Audited party comment
Review the network price category codes for ICPs where the load shed category and gas allocation group codes indicate the network capacity for these installations may have changed.	Response: Comments: We have created a consumption monitoring process. It must be identified after how many months of consumption (to avoid seasonal consumption) one can switch to another Network Price Categories

Publishing of network price category codes

It was confirmed that the NGCD price category codes are published on the Firstgas website. This was viewed on 25 August 2024 and the prices from 1 October 2023 were available.

This check was not relevant for Vector transmission (VCTX) and Maui Transmission (MAUI) networks.

⁹ 0003001149NG74E, 0009001289NGB06, 0009000994NGC5E, 0009000860NG447, 0009000700NG4B8

7. Management of loss factor codes

Firstgas monitor unaccounted for gas (UFG) on their networks and liaises with the Gas Industry Company where the rolling 12 month UFG exceeds $\pm 2\%$.

Firstgas are also developing a validation to compare the daily gas TOU volumes from allocation group 1 and 2 ICPs to the daily gas gate volumes to proactively identify any potential data corruption of either the downstream allocation group 1 and 2 ICP daily volumes or the gas gate daily volumes.

7.1 Distributors to determine loss factor codes (Rule 47.1 and 47.2)

Each distributor must publish and maintain a schedule of all the loss factors (if any) which apply to gas gates on the distributor's distribution system; and maintain the respective codes for those loss factors.

Firstgas do not currently operate any loss factors.

All ICPs which are not decommissioned have loss factor code NA (not applicable) applied. The loss factor codes were examined on the gas registry. No loss factor codes have been changed, added, or removed since NA was last updated in 2013.

7.2 The addition or deletion of loss factor codes (Rule 48)

If a distributor intends to add or delete any loss factor codes, the distributor must give at least 20 business days' notice to the registry operator, the allocation agent, and all retailers that will be affected by the change.

Firstgas are aware of the notification requirements. The loss factor codes were examined on the Gas Registry. No loss factor codes have been changed, added, or removed since NA was populated in 2008.

8. Disclosure on application (Rule 50)

Disclosure on application may only be used where the participant does not have a reasonably practicable alternative method of protecting its commercial interest in that information, and to the extent necessary to reasonably protect that interest.

Requests for disclosure on application must be responded to within one business day, to confirm whether the information will be provided. The information must be provided within a further business day.

Firstgas's policy is to provide information requested on application as soon as possible.

Firstgas did not receive any Disclosure on application requests during the audit period.

9. Accuracy of meter information

The focus of this audit is metering installed on distribution networks. Gas gate metering and metering installed on the transmission pipelines (VCTX and MAUI) is not within the scope of this audit and will be covered as part of the transmission system audit.

9.1 TOU downloads (GDRR r26.5)

Firstgas as under the participant code FGDM, is the meter owner for two active ICPs and have no plans to increase its portfolio.

Firstgas as FGDM meter owner receive data directly from their meters via telemetry.

Firstgas perform a suite of validations of the data prior to providing the monthly data file to retailers:

- High / low changes to temperature or pressure.
- Battery voltage
- Event log exceptions relating to any reported alarms.

The current high / low validations of do not include checks of recorded volume compared to the meter design flow rate Q_{min} and Q_{max} values. During the audit a recommendation was suggested to include a comparison of measured volumes to the meter design flow rate Q_{min} and Q_{max} values to ensure the meters are operating within their design parameters and therefore achieving the accuracy requirement of **NZS 5259**. Firstgas have implemented this check and have incorporated it into a process where the metrology lab will be notified twice a month where a meter exceeds either Q_{min} or Q_{max} that cannot be explained.

Daily data is provided unvalidated to the retailers' gas TOU data agent for D+1 reporting. The gas TOU agent performs a check of the TOU data prior to submission and alerts Firstgas if there may be an issue with this data.

Monthly TOU data is sent directly to the retailer as a CSV file without any conversion or other manipulation. Event log information is not provided to either the gas TOU agent for D+1 or the retailer.

A process to monitor for time synchronisation changes greater than 300 seconds has been drafted but not yet implemented.

Recommendation	Audited party comment
<p>Complete the review of the process to monitor and notification to retailers of time synchronisation changes greater than 300 seconds</p>	<p>Response: The FTP server time is correct at the moment, we believe the PC-RTU(Point Colour Orange RTU is the Time of use device) is synchronised to the FTP-Server and we are not aware of any issues at this time (all according with NZ5259 – Appendix B)</p> <p>Comments: In the case of the FTP Point Orange data though the PC-RTU is time synchronised by the FTP Server we would hope that the data is never out and doesn't / didn't require adjustment. Correctors on the other hand can wander out and should be adjusted every time the corrector is maintained. This is now being checked every 6 months. No informal notifications were issued as we have not encountered any issues with these meters. We are considering implementing a response procedure for retailers in this regard.</p>

Compliance is confirmed.

9.2 Meter accuracy (GDRR r26.5 and 27)

Compliance with NZS 5259

It was noted that for the transmission part of the business, compliance with the transmission metering requirements was the focus, rather than **NZS 5259**. However, as the overall objectives of the metering requirements and **NZS 5259** are materially aligned where these are applied to the two metering installations with Firstgas metering on distribution networks.

A review of documentation was undertaken for both ICPs covering recent meter maintenance programme activity and copies of recent 'as found' test results to establish that Firstgas as meter owner was compliant with the requirements of **NZS 5259** with respect to its GMS operation, maintenance, testing and accuracy.

Documentation

NZS 5259 requires documentation be kept demonstrating conformance with the requirements of the standard. The documentation requirements can be summarised as follows:

NZS 5259 section 2 sets out performance requirements.

- Records shall be kept of the suitability of the GMS components for the life of the asset (**NZS 5259 2.8.2**)
- Documentation shall be kept of the acceptance testing, installation, operating conditions, and maintenance of the GMS components for the duration of its service (**NZS 5259 2.8.3**)

NZS 5259 section 3 provides a means of compliance. Alternative methods for establishing compliance with the **section 2** requirements may be used provided they are tested and documented.

- Records shall be kept monitoring the performance and maintenance of each GMS component, for at least the life of each component and shall include the results of all acceptance and as-found tests and the date and details of all maintenance. (**NZS 5259 3.7.1**)
- Records shall be kept for each complete GMS detailing all inspections, maintenance and changes to the components and shall include the identity, location and date of installation of each installed component, maintenance test results and the scheduled dates for the next maintenance, test or replacement. (**NZS 5259 3.7.2**)
- Procedures for selection, installation and maintenance of GMSs shall be documented. (**NZS 5259 3.7.3**)

Firstgas as FGDM demonstrated that their selected metering equipment for both their two ICPs was effective within the maximum permissible errors (MPE) of **NZS 5259** for the flow conditions of the site and provided evidence of testing and maintenance.

Operation and maintenance

Firstgas as FGDM meter owner have a preventative maintenance plan, managed through the asset management system Maximo, which involves a field team visit to site every six months.

Firstgas have a routine maintenance programme. Meters are routinely rotated every two years, more often if a problem arises. Sites with correctors have the corrector checked every six months and flow computers are checked annually.

Firstgas provided their log of the last six months of maintenance activity as evidence of their maintenance programme.

Testing

Firstgas provided details of all testing done in the last six months as evidence of routine testing activity. They also provided the most recent measurement laboratory certificate of calibration for the sample of ICPs selected for review.

Firstgas also provided a copy of their metering volume conversion accuracy verification procedure. This includes periodic testing of gas measurement equipment at the point of measurement by direct comparison with reference equipment and processes which indirectly measure the equipment performance. This include ensuring that the pressure and temperature transducers are tested as part of the as found tests undertaken prior to any maintenance activity performed on these sites.

The procedure covers the taking of meter readings (the frequency, the information to be included and the recording of the information); BVI verification; CFI verification; primary flow signal integrity verification; verification of pressure and temperature transmitters.

No issues arose with regard to the suitability, maintenance or testing of the Firstgas meters.

10. New connections (GSAR r56)

Firstgas as FGDM is the meter owner for two active ICPs and has no plans to increase its portfolio, both are TOU. Both ICPs had been created prior to the previous audit therefore were no new connections to review for this audit period.

11. Registry information management (GDRR r26.5 and GSAR r58)

The registry metering event information for the two Firstgas metered ICPs was reviewed and found for both ICPs (1001297339NG3F5 and 1001296139NG852) the last metering event update was 14 October 2019.

The metering maintenance records reviewed in **section 9.2** found that for ICP 1001296139NG852 the meter had been changed six times since October 2019 and for ICP 1001297339NG3F5 the meter had been changed three times. The change in meter identifier was not reflected on the registry for any of these meter changes.

The process to populate the asset management system Maximo has a current SLA of 30 days to ensure the records are updated. However, the process is designed around transmission metering requirements and does not include a step to ensure the registry is updated. Firstgas have now updated the gas registry to reflect the correct metering details. Firstgas have implemented a process to ensure that whenever a distribution meter is replaced, that the Firstgas distribution team is notified and will complete the update on the registry.

Registry information accuracy		
Non-compliance	Description	
Report section: 11 Rule: 58.1 From: From: 26 January 2021 To: 3 April 2024	Audit history: No Controls: Needs improvement Impact: Insignificant	The metering events for ICPs 1001296139NG852 and 1001297339NG3F5 are not correctly populated on the registry.
Remedial action rating	Remedial timeframe	Remedial comment
Completed	Corrected	Corrected
Audited party comment		
The circumstances of the matters outlined in the breach notice.		
Whether or not the participant admits or disputes that it is in breach.		
Estimate of the impact of the breaches (where admitted).	Insignificant	
What steps or processes were in place to prevent the breaches?	I made all the necessary updates in gasregistry to update the information about the 2 meters. At the same time, we documented everything in our internal systems (accessible by the Firstgas Distribution Team and by the Metrology Laboratory).	
What steps have been taken to prevent recurrence?	Monthly email exchanges with the Metrology Lab and with the field technicians.	

11.1 Registry validation and correction (GSAR r61.1, 61.2 and 62)

If the Meter Owner becomes aware that Registry information is incorrect or requires updating, the responsible Meter Owner must update or correct the Registry as soon as practicable.

The Meter Owner Registry report should be reviewed, and any corrections required should be entered on the Registry by 4pm on the 15th business day of the month.

As recorded in **section 2.1** the participant registry information for Firstgas meter owner participant code was out of date and Firstgas were unsure which team was responsible to maintain and monitoring meter event information each month. The monitoring of meter event information has not been performed during the audit period.

Registry validation and correction		
Non-compliance	Description	
Report section: 11.1 Rule: 62.2 From: From: 26 January 2021 To: 3 April 2024	Audit history: No Controls: Needs improvement Impact: Insignificant	The monthly registry meter owner report is not reviewed, and discrepancies are not resolved by 1600 hours on the 15th business day of each month.
Remedial action rating	Remedial timeframe	Remedial comment
In progress		
Audited party comment		
The circumstances of the matters outlined in the breach notice.		
Whether or not the participant admits or disputes that it is in breach.		
Estimate of the impact of the breaches (where admitted).	Insignificant	
What steps or processes were in place to prevent the breaches?	I made all the necessary updates in gas registry to update the information about the 2 meters. At the same time, we documented everything in our internal systems (accessible by the Firstgas Distribution Team and by the Metrology Laboratory).	
What steps have been taken to prevent recurrence?	Monthly email exchanges with the Metrology Lab and with the field technicians.	

12. Metering Price Codes (GSAR r49)

Firstgas does not have any metering price codes loaded into the gas registry they are both marked as 'DOA'. Firstgas does charge for their two meters, but the charges are determined individually for each ICP and are disclosed to the relevant retailers.

Compliance is confirmed.

13. Disclosure on application (GSAR r50)

Disclosure on application may only be used where the participant does not have a reasonably practicable alternative method of protecting its commercial interest in that information, and to the extent necessary to reasonably protect that interest.

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

Recommendations

As a result of this performance audit, I recommend Firstgas:

- Implement a step in the ICP creation process to first search the registry for the new connection address to ensure it is unique and that an ICP has not already been created for the same property.,
- Implement a process to proactively monitor and escalate to the respective retailer the initial new connection addresses populated in the registry so that address attributes such as lot numbers can be updated as soon as possible once an ICP is livened.,
- Review the process for the initial population of an ICP onto the registry to ensure an address search is undertaken that will prevent duplicate ICPs being created for the same new connection,
- Review new connection process map street / suburb to gas gate as part of the process to verify addresses with LINZ address information,
- Review new connection process to include a post livening review of an ICPs altitude to ensure the value is correct prior to use in the conversion of volume to energy,
- Implement a project to review all ICP / gas gate assignments and correct all exceptions identified,
- Implement a process to regularly monitor Maximo to registry gas gate to ICP assignments that complies with the monthly review obligations under **rule 62**,
- Check load shedding categories for reasonableness when changes are requested, and also at least annually by comparing to retailers' gas allocation group assignments and also annualised consumption volumes,
- Develop a process to monitor the GIC active designations list and expiry dates for load shedding category 7 against the registry and work with the respective retailers to ensure that the registry information is current and up to date,
- Review the service pipe permanent disconnection process to ensure end to end monitoring of the service requests so that the registry is updated accurately and in a timely manner on receipt of the field work completed paperwork,
- Review the connection statuses for all ICPs within Sullivan Crescent in Hamilton against field service and GIS information and update the registry connection status where the connection can be confirmed as decommissioned via field service or GIS records,
- Implement a process to monitor the accuracy and investigate any exceptions of information between the registry and Maximo and other systems and ensure the registry is updated as soon as an exception is confirmed,
- Review the network price category codes for ICPs where the load shed category and gas allocation group codes indicate the network capacity for these installations may have changed, and
- Complete the review of the process to monitor and notification to retailers of time synchronisation changes greater than 300 seconds.

Appendix 1 – Network pressure discrepancies – list of affected streets

Physical Address Street	Physical Address Town	Network Pressure (kPa)													Correct network pressures for street
		3	4	5	7	40	80	100	110	200	210	380	400	420	
ALBERT STREET	HAMILTON			5									13		LP 0-7 kPa & MP4 210-420 kPa
AWATERE AVENUE	HAMILTON						3	1							MP1 7-110 kPa
Beaumont Street	HAMILTON			2	4										LP 0-7 kPa & MP4 210-420 kPa
Beehive Lane	HAMILTON									3			3		MP2 110-210 kPa
Beerescourt Road	HAMILTON						11	2					5		MP1 7-110 kPa
Boundary Road	HAMILTON			4									8		LP 0-7 kPa & MP4 210-420 kPa
Cameron Road	HAMILTON	8		15	6								11		LP 0-7 kPa & MP4 210-420 kPa
Casey Avenue	HAMILTON			2									1		LP 0-7 kPa
Cecil Street	HAMILTON						2	1							MP1 7-110 kPa
Churchill Avenue	HAMILTON			1									1		LP 0-7 kPa & MP4 210-420 kPa
Clyde Street	HAMILTON				6								6		LP 0-7 kPa & MP4 210-420 kPa
COOK STREET	HAMILTON	1	3	13	3								5		LP 0-7 kPa & MP4 210-420 kPa
COWLEY DRIVE	HAMILTON									1			1		MP2 110-210 kPa
Deseret Road	HAMILTON									2			3		MP2 110-210 kPa
DEY STREET	HAMILTON			1	1								8		LP 0-7 kPa & MP4 210-420 kPa
English Street	HAMILTON						3	1							MP1 7-110 kPa
FAIRFIELD ROAD	HAMILTON			4									1		LP 0-7 kPa
Firth Street	HAMILTON				1								5		LP 0-7 kPa & MP4 210-420 kPa
FOREST LAKE ROAD	HAMILTON						13						9		LP 0-7 kPa & MP4 210-420 kPa
Foster Road	HAMILTON									1			1		MP2 110-210 kPa & MP4 210-420 kPa
FOX STREET	HAMILTON		1	3									5		LP 0-7 kPa & MP4 210-420 kPa
Galbraith Avenue	HAMILTON					3	1								MP1 7-110 kPa
Galloway Street	HAMILTON			5	4								6		LP 0-7 kPa & MP4 210-420 kPa
Goodwin Terrace	HAMILTON									2			1		MP2 110-210 kPa

Physical Address Street	Physical Address Town	Network Pressure (kPa)														Correct network pressures for street
		3	4	5	7	40	80	100	110	200	210	380	400	420		
GREENSBORO STREET	HAMILTON	2		3										5		LP 0-7 kPa
Heaphy Terrace	HAMILTON				1									27		LP 0-7 kPa & MP4 210-420 kPa
Hogan Street	HAMILTON	4			5									7		LP 0-7 kPa
Inverness Avenue	HAMILTON			14	3											LP 0-7 kPa
Levers Road	Tauranga												1	6		MP4 210-420 kPa
Mahutonga Terrace	Ngaruawahia										6			1		MP2 110-210 kPa
Matai Street	HAMILTON			2										1		LP 0-7 kPa & MP4 210-420 kPa
Matariki Terrace	Ngaruawahia										1			1		MP2 110-210 kPa
Matua Street	HAMILTON		1											5		MP2 110-210 kPa
May Street	HAMILTON			19	10											LP 0-7 kPa & MP4 210-420 kPa
McKay Drive	HAMILTON											38		5		MP2 110-210 kPa
Mears Road	HAMILTON							3						1		MP1 7-110 kPa
Minchin Crescent	HAMILTON										1			3		MP1 7-110 kPa
Nixon Street	HAMILTON			1	10									3		LP 0-7 kPa & MP4 210-420 kPa
Oxford Street	HAMILTON			3										1		LP 0-7 kPa & MP4 210-420 kPa
Paterson Street	HAMILTON						1							18		MP4 210-420 kPa
Portal Crescent	HAMILTON							1	3					5		MP1 7-110 kPa
Probert Crescent	HAMILTON													21	1	MP4 210-420 kPa
Rangawhenua Street	Ngaruawahia										3			2		MP2 110-210 kPa
Rimu Street	HAMILTON			3										7		LP 0-7 kPa & MP4 210-420 kPa
River Road	HAMILTON			1										5		LP 0-7 kPa & MP4 210-420 kPa
Riverview Terrace	HAMILTON		1	1												LP 0-7 kPa
SANDWICH ROAD	HAMILTON							2						19		MP1 7-110 kPa & MP4 210-420 kPa
SEARANCKE PLACE	HAMILTON			1										1		MP4 210-420 kPa
SEDDON ROAD	HAMILTON			1										6		LP 0-7 kPa & MP4 210-420 kPa
STOREY AVENUE	HAMILTON							3						8		MP1 7-110 kPa & MP4 210-420 kPa
TAMIHANA AVENUE	HAMILTON			1	1											LP 0-7 kPa
Tanekaha Place	HAMILTON			1										3		MP4 210-420 kPa

Physical Address Street	Physical Address Town	Network Pressure (kPa)													Correct network pressures for street
		3	4	5	7	40	80	100	110	200	210	380	400	420	
Te Rapa Road	HAMILTON					1		6					2		MP1 7-110 kPa & MP4 210-420 kPa
Te Wiata Lane	Ngaruawahia									6			1		MP2 110-210 kPa
Temepara Drive	HAMILTON									4			4		MP2 110-210 kPa
TUHIKARAMEA ROAD	HAMILTON		2										1		MP1 7-110 kPa & MP2 110-210 kPa & MP4 210-420 kPa
VICTORIA STREET	HAMILTON					2		6					31		MP1 7-110 kPa & MP4 210-420 kPa
WADE LANE	HAMILTON									1	1		6		MP2 110-210 kPa
Wellington Street	HAMILTON			4	4								5		LP 0-7 kPa & MP4 210-420 kPa
Whakatipu Street	HAMILTON									1			5		MP2 110-210 kPa
WILFRED STREET	HAMILTON						1			1					MP1 7-110 kPa
York Street	HAMILTON		1	11	6								1		MP4 210-420 kPa

Appendix 2 – Gas Gate discrepancies – list of streets affected

Waikato – 545 streets

Street Suburb Town	Physical Address Region	Gas Gate Code											
		CAM17201	HRU16101	HTK08301	HTL16601	HTV11301	KIH19101	MTG17301	TAW31004	TIR33501	TIR33502	TKN17001	TKS17401
ABBOTSFORD STREET HAMILTON	Waikato			1		43							
Abbotsford Street Whitiora Hamilton	Waikato			1		13							
AINTREE STREET HAMILTON	Waikato			1		2							
Akakura Terrace Peacocke Hamilton	Waikato			4		9							
ALANBROOKE PLACE BEERESCOURT HAMILTON	Waikato			1		4							
ALDERSON ROAD FAIRVIEW DOWNS HAMILTON	Waikato			1		1							
ALEXANDRA STREET HAMILTON	Waikato			3		8							
ALEXANDRA STREET TE AWAMUTU	Waikato						11		36				
Alfred Street Fairfield Hamilton	Waikato			5		2							
ALISON STREET HAMILTON	Waikato			5		41							
Alker Road Chartwell Hamilton	Waikato			1		7							
ALMA STREET HAMILTON	Waikato			1		6							
ANGLESEA STREET HAMILTON	Waikato			15		22							
ANGLESEA STREET HAMILTON CENTRAL HAMILTON	Waikato			3		6							
Ann Street Beerescourt Hamilton	Waikato			1		1							
ANTRIM PLACE HAMILTON	Waikato			1		22							
ARGYLE STREET HAMILTON	Waikato			1		27							
ARKLE PLACE HAMILTON	Waikato			4		6							
ARMAGH STREET HAMILTON EAST HAMILTON	Waikato			1		1							
ARMSTRONG AVENUE TE AWAMUTU	Waikato						1		7				
ARUNDEL PLACE HAMILTON	Waikato			4		5							
ASCOT PLACE TE AWAMUTU	Waikato						1		6				
ASH GROVE TE AWAMUTU	Waikato						2		4				
ASHLEY STREET St Andrews HAMILTON	Waikato			1		1							
ASHURST AVENUE PUKETE HAMILTON	Waikato			3		1							
ASPEN COURT HAMILTON	Waikato			1		8							
ASTOR AVENUE DINSDALE HAMILTON	Waikato			1		7							
AUDREY PLACE FLAGSTAFF HAMILTON	Waikato			11		1							
AVALON DRIVE HAMILTON	Waikato			3		13							
AYRSHIRE DRIVE HAMILTON	Waikato			7		66							
AZURE PLACE HAMILTON	Waikato			1		10							
BAILEY AVENUE HAMILTON	Waikato			8		21							
Banbury Crescent Fairfield Hamilton	Waikato			1		4							
BANDON STREET FRANKTON HAMILTON	Waikato			1		8							
BANK STREET TE AWAMUTU	Waikato						2		40				
Bankwood Road Chartwell Hamilton	Waikato			4		4							
BARTHOLOMEW DRIVE HAMILTON	Waikato			1		31							

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BARTHOLOMEW DRIVE NAWTON HAMILTON	Waikato			1		1							
BARTON STREET HAMILTON	Waikato			1		4							
BAVERSTOCK ROAD HAMILTON	Waikato			9		30							
Baverstock Road Grandview Heights Hamilton	Waikato			11		15							
Baverstock Road Rotokauri Hamilton	Waikato			2		1							
BEAUFORT PLACE FLAGSTAFF HAMILTON	Waikato			14		6							
BEERESCOURT ROAD BEERESCOURT HAMILTON	Waikato			2		16							
Bellmont Avenue Chartwell Hamilton	Waikato			1		2							
BENTLEY RISE FLAGSTAFF HAMILTON	Waikato			23		1							
BERNARD STREET CHEDWORTH HAMILTON	Waikato			1		2							
BISHOPS LANE HAMILTON	Waikato			6		2							
BLACKBURN STREET FRANKTON HAMILTON	Waikato			4		1							
BLOMFIELD STREET HAMILTON	Waikato			5		14							
BLUE CEDAR LANE HAMILTON	Waikato			9		1							
BOLMUIR ROAD FOREST LAKE HAMILTON	Waikato			1		5							
BOND ROAD TE AWAMUTU	Waikato						11		6				
BORMAN ROAD HAMILTON	Waikato			36		1							
Borman Road Flagstaff HAMILTON	Waikato			75		1							
BOUNDARY ROAD HAMILTON	Waikato			35	1	57							
BOUNDARY ROAD CLAUDELANDS HAMILTON	Waikato			1		11							
BRADLEY PLACE HAMILTON	Waikato			1		2							
BRAID ROAD HAMILTON	Waikato			1		59							
Braid Road Saint Andrews Hamilton	Waikato			14		9							
Braid Road St Andrews Hamilton	Waikato			1		4							
BRAMLEY DRIVE HAMILTON	Waikato			82		1							
BRECKONS AVENUE HAMILTON	Waikato			2		19							
BRIDGMAN ROAD TE AWAMUTU	Waikato						1		17				
BRIGHTWELL PLACE HAMILTON	Waikato			3		2							
BROOKLYN ROAD HAMILTON	Waikato			14		11							
BRYANT ROAD SAINT ANDREWS HAMILTON	Waikato			2		2							
BRYANT ROAD TE RAPA HAMILTON	Waikato			1		1							
BRYCE STREET HAMILTON CENTRAL HAMILTON	Waikato			3		4							
BRYMER ROAD HAMILTON	Waikato			10		26							
Buckley Way Flagstaff Hamilton	Waikato			2		1							
BURNS COURT HAMILTON	Waikato			1		2							
Cabourne Drive Glenview Hamilton	Waikato			1		26							
CAISTOR STREET FAIRVIEW DOWNS HAMILTON	Waikato			2		1							
CAMBRIDGE ROAD HAMILTON	Waikato			2		115							
CAMBRIDGE ROAD TE AWAMUTU	Waikato						6		23				
CAMBRIDGE ROAD HILLCREST HAMILTON	Waikato			1		14							
Capper Crescent Chartwell Hamilton	Waikato			1		6							
CARDRONA ROAD BEERESCOURT HAMILTON	Waikato			1		1							
CAREW STREET HAMILTON	Waikato			1		11							

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CAREW STREET NAWTON HAMILTON	Waikato			2		1							
Carlingford Rise Dinsdale Hamilton	Waikato			6		17							
CARLTON STREET TE AWAMUTU	Waikato						1		13				
CARRINGTON AVENUE HILLCREST HAMILTON	Waikato			1		13							
Carrington Avenue Silverdale Hamilton	Waikato			2		35							
Carrs Road Chartwell Hamilton	Waikato			16		3							
CASEY AVENUE HAMILTON	Waikato			1		51							
CASEY AVENUE FAIRFIELD HAMILTON	Waikato			1		2							
CAULFIELD GREEN HAMILTON	Waikato			1		2							
CECIL STREET HAMILTON	Waikato			1		25							
CECIL STREET SAINT ANDREWS HAMILTON	Waikato			1		2							
CHALLINOR STREET PUKETE HAMILTON	Waikato			8		1							
CHEDWORTH AVENUE HAMILTON	Waikato			3		38							
CHESHAM STREET ROTOTUNA NORTH HAMILTON	Waikato			33		1							
CHRISTIE AVENUE TE AWAMUTU	Waikato						2		10				
CHURCHILL AVENUE MAEROA HAMILTON	Waikato			1		1							
CLANCY PLACE HAMILTON	Waikato			2		2							
CLARKIN ROAD HAMILTON	Waikato			2		108							
CLARKIN ROAD FAIRFIELD HAMILTON	Waikato			3		10							
CLARKIN ROAD HAMILTON HAMILTON	Waikato			1		5							
CLAUDE STREET HAMILTON	Waikato			31		33							
Claude Street Fairfield Hamilton	Waikato			3		10							
CLAUDELANDS ROAD HAMILTON	Waikato			1		16							
CLIFTON ROAD HAMILTON CENTRAL HAMILTON	Waikato			1		5							
Clyde Street Hamilton East Hamilton	Waikato			1		11							
COBHAM DRIVE HAMILTON	Waikato			1		34							
COLERIDGE DRIVE HAMILTON	Waikato			5		11							
COLLEGE STREET TE AWAMUTU	Waikato						3		23				
COLMAN STREET HAMILTON	Waikato			1		5							
COMRIES ROAD CHARTWELL HAMILTON	Waikato			10		7							
CONNOR COURT HAMILTON	Waikato			13		2							
COOK STREET HAMILTON EAST HAMILTON	Waikato			2		23							
CORDELIA COURT FLAGSTAFF HAMILTON	Waikato			7		2							
COTTON STREET SAINT ANDREWS HAMILTON	Waikato			3		1							
Cotton Street St Andrews Hamilton	Waikato			2		5							
CRAWSHAW DRIVE HAMILTON	Waikato			1		7							
CROSBY ROAD HAMILTON	Waikato			1		54							
CROSBY ROAD CHARTWELL HAMILTON	Waikato			2		6							
CUCKSEY CRESCENT TE AWAMUTU	Waikato						1		3				
CULLIMORE STREET HAMILTON	Waikato			20		1							
Cussen Street Chartwell Hamilton	Waikato			1		2							
DAISY STREET HAMILTON	Waikato			4		1							
Daisy Street Claudelands Hamilton	Waikato			2		3							

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DARJON DRIVE HAMILTON	Waikato			38		6							
DARJON DRIVE HUNTINGTON HAMILTON	Waikato			2		1							
DAVID STREET HAMILTON	Waikato			2		3							
DELAMARE ROAD HAMILTON	Waikato			40		35							
DERBY STREET HAMILTON	Waikato			4		17							
DEY STREET HAMILTON	Waikato			1		34							
DEY STREET HAMILTON EAST HAMILTON	Waikato			1		9							
DINSDALE ROAD DINSDALE HAMILTON	Waikato			1		10							
DISCOVERY DRIVE FLAGSTAFF HAMILTON	Waikato			74		3							
DOMINION ROAD HAMILTON	Waikato			6		31							
Dominion Road Nawton Hamilton	Waikato			2		6							
Donny Avenue Chartwell Hamilton	Waikato			1		1							
DOVER ROAD SAINT ANDREWS HAMILTON	Waikato			9		1							
DUNCAN ROAD HAMILTON	Waikato			1		12							
DURHAM HEIGHTS HAMILTON	Waikato			4		1							
DURHAM STREET HAMILTON	Waikato			6		9							
EAST STREET HAMILTON	Waikato			25		38							
East Street Claudelands Hamilton	Waikato			1		1							
East Street Enderley Hamilton	Waikato			4		4							
EAST STREET HAMILTON HAMILTON	Waikato			1		1							
EDEN AVENUE TE AWAMUTU	Waikato						1		4				
EDINBURGH ROAD HILLCREST HAMILTON	Waikato			2		8							
ELENORA CLOSE HAMILTON	Waikato			7		2							
ELIZA PLACE HAMILTON	Waikato			6		2							
ELIZABETH AVENUE TE AWAMUTU	Waikato						2		17				
ELLCOTT ROAD HAMILTON	Waikato			6		102							
ELLCOTT ROAD Nawton HAMILTON	Waikato			7		5							
ENDERLEY AVENUE HAMILTON	Waikato			48		22							
ENFIELD STREET HAMILTON	Waikato			3		10							
ENGLISH STREET SAINT ANDREWS HAMILTON	Waikato			1		3							
EPPING PLACE DINSDALE HAMILTON	Waikato			3		3							
ERNEST ROAD FAIRVIEW DOWNS HAMILTON	Waikato			2		2							
EUCLID AVENUE HAMILTON	Waikato			1		4							
EVERGREEN RISE HAMILTON	Waikato			1		3							
EVERGREEN RISE GRANDVIEW HEIGHTS HAMILTON	Waikato			1		6							
FACTORY ROAD TE AWAMUTU	Waikato						2		2				
FAIRFIELD ROAD FAIRFIELD HAMILTON	Waikato			1		4							
FAIRVIEW ROAD TE AWAMUTU	Waikato						2		48				
FAIRVIEW STREET HAMILTON	Waikato			2		60							
FAIRVIEW STREET FAIRVIEW DOWNS HAMILTON	Waikato			1		3							
FARNBOROUGH DRIVE HAMILTON	Waikato			16		25							
FARNBOROUGH DRIVE GRANDVIEW HEIGHTS HAMILTON	Waikato			1		9							
FIFTH AVENUE HAMILTON	Waikato			33		31							

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FIFTH AVENUE ENDERLEY HAMILTON	Waikato			27		21							
FINCH STREET TE AWAMUTU	Waikato						1		4				
FOREST LAKE ROAD FOREST LAKE HAMILTON	Waikato			2		12							
Forsyth Street Saint Andrews Hamilton	Waikato			1		1							
FOW STREET HAMILTON CENTRAL HAMILTON	Waikato			5		1							
FRASER STREET TE AWAMUTU	Waikato						1		25				
FRIESIAN PLACE HAMILTON	Waikato			2		25							
Galbraith Avenue Beerescourt Hamilton	Waikato			1		3							
Galloway Street Hamilton East Hamilton	Waikato			1		15							
GARNETT AVENUE HAMILTON	Waikato			2		23							
Garnett Avenue Forest Lake Hamilton	Waikato			4		1							
GEORGE STREET TE AWAMUTU	Waikato						1		7				
GIBBSTON CLOSE HAMILTON	Waikato			14		5							
GILBASS AVENUE HAMILTON	Waikato			14		15							
GILBERT COURT HAMILTON	Waikato			12		1							
GILLIES AVENUE HAMILTON	Waikato			14		20							
GILLIES AVENUE CLAUDELANDS HAMILTON	Waikato			1		2							
GLAISDALE CRESCENT FLAGSTAFF HAMILTON	Waikato			20		5							
GLENEAGLES DRIVE TE AWAMUTU	Waikato						2		6				
Glenview Terrace Glenview Hamilton	Waikato			1		14							
GORDONTON ROAD CHARTWELL HAMILTON	Waikato			4		3							
GRACE AVENUE ROTOTUNA NORTH HAMILTON	Waikato			28		1							
GRAHAM STREET HAMILTON EAST HAMILTON	Waikato			1		3							
GRANDVIEW ROAD HAMILTON	Waikato			12		96							
Grandview Road Nawton Hamilton	Waikato			3		2							
GRANGE AVENUE HAMILTON	Waikato			8		6							
GRANTHAM STREET HAMILTON CENTRAL HAMILTON	Waikato			11		9							
GREENHILL DRIVE TE AWAMUTU	Waikato						3		9				
GREENSBORO STREET HAMILTON EAST HAMILTON	Waikato			2		8							
GREY STREET HAMILTON	Waikato			1		141							
GREY STREET HAMILTON EAST HAMILTON	Waikato			2		22							
GRIFFITHS PLACE HAMILTON	Waikato			1		1							
GUILDFORD PLACE ROTOTUNA NORTH HAMILTON	Waikato			12		1							
HADRIANS WAY HAMILTON	Waikato			6		5							
Hailwood Road Chartwell Hamilton	Waikato			1		1							
HALCIONE CLOSE FLAGSTAFF HAMILTON	Waikato			23		1							
Halo Green Peacocke Hamilton	Waikato			1		2							
HAMBLYN CRESCENT HAMILTON	Waikato			4		12							
Hamblyn Crescent Nawton Hamilton	Waikato			1		1							
HAMMOND STREET HAMILTON	Waikato			2		19							
Hapori Avenue Baverstock Hamilton	Waikato			3		2							
Hapu Avenue Rotokauri Rise Hamilton	Waikato			1		1							
HARROGATE PLACE HAMILTON	Waikato			1		5							

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HASTINGS PLACE HAMILTON	Waikato			1		29							
Hatric Road Chartwell Hamilton	Waikato			2		8							
HAULTAIN STREET HAMILTON	Waikato			4		19							
HAULTAIN STREET FAIRFIELD HAMILTON	Waikato			1		2							
HAZELMERE CRESCENT TE AWAMUTU	Waikato						6		20				
HEAPHY TERRACE HAMILTON	Waikato			6		58							
HEAPHY TERRACE CLAUDELANDS HAMILTON	Waikato			1		1							
Heaphy Terrace Fairfield Hamilton	Waikato			21		8							
HEATH STREET HAMILTON	Waikato			5		47							
HEATH STREET SAINT ANDREWS HAMILTON	Waikato			3		5							
HELEN JUNE AVENUE FLAGSTAFF HAMILTON	Waikato			34		8							
HELENA ROAD HILLCREST HAMILTON	Waikato			1		19							
HERBERT ROAD QUEENWOOD HAMILTON	Waikato			11		9							
Hibiscus Avenue Hamilton Lake Hamilton	Waikato			2		4							
HIGHBURY PLACE HAMILTON	Waikato			1		9							
HILLCREST ROAD Hillcrest HAMILTON	Waikato			1		13							
HILLSBOROUGH TERRACE HAMILTON CENTRAL HAMILTON	Waikato			1		2							
Hinton Avenue Forest Lake Hamilton	Waikato			1		2							
HOLLAND ROAD HAMILTON	Waikato			5		17							
Holland Road Fairfield Hamilton	Waikato			10		1							
HOLMES STREET HAMILTON	Waikato			4		5							
HOME STRAIGHT TE RAPA HAMILTON	Waikato			6		1							
HOMESTEAD PLACE GLENVIEW HAMILTON	Waikato			1		1							
HOOD STREET HAMILTON	Waikato			3		8							
HOOD STREET HAMILTON CENTRAL HAMILTON	Waikato			1		4							
HOOKER AVENUE CHEDWORTH HAMILTON	Waikato			5		3							
HORNE STREET HAMILTON	Waikato			2		34							
HORSHAM DOWNS ROAD HAMILTON	Waikato			19		1							
HUIA AVENUE FOREST LAKE HAMILTON	Waikato			1		1							
HUKANUI ROAD HAMILTON	Waikato			49		99							
HUKANUI ROAD CHARTWELL HAMILTON	Waikato			15		10							
HUKANUI ROAD HAMILTON HAMILTON	Waikato			2		3							
Huntington Drive Huntington Hamilton	Waikato			2		3							
HYDE AVENUE HAMILTON	Waikato			7		14							
HYDE AVENUE NAWTON HAMILTON	Waikato			1		4							
INSOLL AVENUE HAMILTON	Waikato			22		22							
Insoll Avenue Enderley Hamilton	Waikato			9		10							
IRIS PLACE GRANDVIEW HEIGHTS HAMILTON	Waikato			1		5							
Iwi Road Baverstock Hamilton	Waikato			6		1							
JACKSON STREET TE AWAMUTU	Waikato						2		5				
JEANETTE STREET GLENVIEW HAMILTON	Waikato			1		1							
JERSEY PLACE HAMILTON	Waikato			1		7							
Jobe Road Chartwell Hamilton	Waikato			1		7							

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Joffre Street Frankton HAMILTON	Waikato			1		1							
JOHANNES COURT HAMILTON	Waikato			4		3							
JOHN STREET HAMILTON	Waikato			1		1							
JONES CRESCENT MELVILLE HAMILTON	Waikato			4		4							
JUDENA PLACE HAMILTON	Waikato			8		1							
KARAKA STREET HAMILTON	Waikato			12		20							
Karaka Street Nawton Hamilton	Waikato			1		12							
KAWARIKI DRIVE BAVERSTOCK HAMILTON	Waikato			1		1							
KENNEDY LANE HAMILTON EAST HAMILTON	Waikato			6		1							
KENNEY CRESCENT HAMILTON	Waikato			4		16							
KENSINGTON PLACE FAIRFIELD HAMILTON	Waikato			1		20							
KENTWOOD PLACE FLAGSTAFF HAMILTON	Waikato			9		1							
KESTON CRESCENT FLAGSTAFF HAMILTON	Waikato			13		2							
KESWICK CRESCENT HUNTINGTON HAMILTON	Waikato			1		1							
KIHIKIHI ROAD TE AWAMUTU	Waikato							9		15			
KITCHENER STREET HAMILTON	Waikato			1		13							
KNIGHTON ROAD HILLCREST HAMILTON	Waikato			6		39							
Kourataki Road Baverstock Hamilton	Waikato			5		7							
LAKE CRESCENT HAMILTON	Waikato			17		73							
Lake Crescent Hamilton Lake Hamilton	Waikato			1		10							
LANGDALE COURT HAMILTON	Waikato			1		26							
Lavinias Way Chartwell Hamilton	Waikato			3		7							
Le Quesne Place Fairfield Hamilton	Waikato			1		1							
Lewis Street Glenview Hamilton	Waikato			1		2							
LEYTON PLACE HAMILTON	Waikato			3		18							
LIMOUSIN PLACE HAMILTON	Waikato			3		24							
LINDSAY CRESCENT HAMILTON	Waikato			9		4							
LIVERPOOL STREET HAMILTON	Waikato			5		12							
LIVINGSTONE AVENUE HAMILTON	Waikato			14		15							
Lloyd Drive Nawton Hamilton	Waikato			2		2							
Loftus Place Flagstaff Hamilton	Waikato			9		2							
LONDON STREET HAMILTON CENTRAL HAMILTON	Waikato			32		5							
LUGTON STREET HAMILTON	Waikato			3		5							
LULU AVENUE CHARTWELL HAMILTON	Waikato			3		22							
LYON STREET FRANKTON HAMILTON	Waikato			1		43							
MAAHANGA DRIVE NORTHGATE HAMILTON	Waikato			12		1							
Maggie Place Chartwell Hamilton	Waikato			11		36							
MAGNOLIA CRESCENT HAMILTON	Waikato			5		2							
MAHANA ROAD TE RAPA HAMILTON	Waikato			2		2							
MAHOE STREET TE AWAMUTU	Waikato							2		26			
MAHOE STREET MELVILLE HAMILTON	Waikato			1		30							
MAIN ROAD TIRAU	Waikato									1	10		
Mana Drive Baverstock Hamilton	Waikato			4		1							

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MANCHESTER PLACE HAMILTON	Waikato			2		1							
MANDENO STREET TE AWAMUTU	Waikato						9		30				
MANGAPIKO STREET TE AWAMUTU	Waikato						1		31				
MANNING STREET HAMILTON	Waikato			7		15							
MANNING STREET HAMILTON CENTRAL HAMILTON	Waikato			9		16							
MANSEL AVENUE HILLCREST HAMILTON	Waikato			1		15							
MAPLE AVENUE HAMILTON	Waikato			1		11							
MARDON ROAD ENDERLEY Hamilton	Waikato			4		23							
MARSHALL STREET HAMILTON	Waikato			4		15							
MARSHALL STREET FAIRFIELD HAMILTON	Waikato			9		2							
MASEFIELD DRIVE HAMILTON	Waikato			7		12							
MASTERS AVENUE SILVERDALE HAMILTON	Waikato			1		3							
MATAI STREET MAEROA HAMILTON	Waikato			1		2							
MATANGI ROAD MATANGI	Waikato					4		44					
MATAROA CRESCENT FLAGSTAFF HAMILTON	Waikato			59		1							
May Street Hamilton East Hamilton	Waikato			1		88							
MCDOWALL PLACE QUEENWOOD HAMILTON	Waikato			1		1							
McHaffie Way Greenhill Park Hamilton	Waikato			1		1							
MCKINLEY PLACE HAMILTON	Waikato			1		3							
MEACHAM ROAD CHARTWELL HAMILTON	Waikato			1		1							
MEACHEM ROAD CHARTWELL HAMILTON	Waikato			2		17							
Mears Road Saint Andrews Hamilton	Waikato			1		3							
Medland Place Chartwell Hamilton	Waikato			1		2							
Medway Place Chartwell Hamilton	Waikato			1		7							
MERIDIAN PLACE HAMILTON	Waikato			16		1							
MILL LANE HAMILTON	Waikato			1		10							
MILLAR PLACE HAMILTON	Waikato			2		3							
MILLENNIUM HEIGHTS HAMILTON	Waikato			16		1							
MILLTHORPE CRESCENT HAMILTON	Waikato			16		1							
MINCHIN CRESCENT SAINT ANDREWS HAMILTON	Waikato			3		1							
Moncrieff Avenue Fairfield Hamilton	Waikato			1		2							
Montana Place Dinsdale Hamilton	Waikato			1		1							
MUTU STREET TE AWAMUTU	Waikato						1		10				
Naimsmith Street Chartwell Hamilton	Waikato			6		4							
NAYLOR STREET HAMILTON EAST HAMILTON	Waikato			1		4							
NEWCASTLE ROAD HAMILTON	Waikato			7		78							
Newfield Drive Fairview Downs Hamilton	Waikato			1		2							
NIXON STREET HAMILTON EAST HAMILTON	Waikato			1		13							
NORFOLK PLACE HAMILTON	Waikato			5		1							
NORMAN STREET HAMILTON	Waikato			5		7							
NORMANDY AVENUE MELVILLE HAMILTON	Waikato			1		6							
NORTH STREET TE AWAMUTU	Waikato						1		5				
NORTHBROOK GLEN FLAGSTAFF HAMILTON	Waikato			12		2							

Street Suburb Town	Physical Address Region	Gas Gate Code											
		CAM17201	HRU16101	HTK08301	HTL16601	HTV11301	KIH19101	MTG17301	TAW31004	TIR33501	TIR33502	TKN17001	TKS17401
NORTHOLT ROAD FAIRVIEW DOWNS HAMILTON	Waikato			2		2							
NORTHVIEW LANE HAMILTON	Waikato			4		6							
NORTHWAY STREET TE RAPA HAMILTON	Waikato			1		1							
NORTON ROAD FRANKTON HAMILTON	Waikato			1		12							
OAK AVENUE HAMILTON	Waikato			3		2							
OAKLEY AVENUE HAMILTON	Waikato			2		15							
ODLIN CRESCENT HAMILTON	Waikato			4		11							
OHAUPO ROAD HAMILTON	Waikato			2		108							
OHAUPO ROAD TE AWAMUTU	Waikato						38		17				
OHAUPO ROAD TE AWAMUTU TE AWAMUTU	Waikato						1		2				
OKOROIRE ROAD TIRAU	Waikato									1	8		
OLD FARM ROAD HAMILTON EAST HAMILTON	Waikato			1		39							
OLIVE PLACE HAMILTON	Waikato			1		2							
ORCHARD AVENUE HAMILTON	Waikato			10		10							
OXFORD STREET FAIRFIELD HAMILTON	Waikato			2		2							
PAKURA STREET TE AWAMUTU	Waikato						8		46				
PAKURA STREET TE AWAMUTU TE AWAMUTU	Waikato						1		2				
PALMERSTON STREET HAMILTON	Waikato			1		15							
PALMERSTON STREET HAMILTON CENTRAL HAMILTON	Waikato			21		4							
PARK ROAD TE AWAMUTU	Waikato						3		18				
PATATEE TERRACE BAVERSTOCK HAMILTON	Waikato			3		2							
PATERSON STREET FRANKTON HAMILTON	Waikato			3		16							
PEACHGROVE ROAD HAMILTON	Waikato			40		130							
PEACHGROVE ROAD CLAUDELANDS HAMILTON	Waikato			1		4							
PEACHGROVE ROAD FAIRFIELD HAMILTON	Waikato		1	7		5							
PEACHGROVE ROAD HAMILTON HAMILTON	Waikato			1		5							
PEACOCKES ROAD FITZROY HAMILTON	Waikato			2		11							
PEARSONS AVENUE HAMILTON	Waikato			10		14							
PEARSONS AVENUE CLAUDELANDS HAMILTON	Waikato			1		1							
PEMBROKE STREET HAMILTON	Waikato			10		83							
PICQUET HILL ROAD TE AWAMUTU	Waikato						3		29				
PIRONGIA ROAD TE AWAMUTU	Waikato						1		5				
PLATINA PLACE FLAGSTAFF HAMILTON	Waikato			12		1							
POINTON GLADE HAMILTON	Waikato			6		3							
Pointon Glade Grandview Heights Hamilton	Waikato			1		1							
Popham Road Chartwell Hamilton	Waikato			2		1							
Portal Crescent Beerescourt Hamilton	Waikato			1		8							
Powells Road Fairview Downs Hamilton	Waikato			2		3							
PRINGLE PLACE HAMILTON	Waikato			1		5							
PRINGLE PLACE NAWTON HAMILTON	Waikato			1		1							
PRIOR PLACE HAMILTON	Waikato			6		5							
Probert Crescent Chartwell Hamilton	Waikato			7		15							
PUKETE ROAD HAMILTON	Waikato			48		1							

Street Suburb Town	Physical Address Region	Gas Gate Code											
		CAM17201	HRU16101	HTK08301	HTL16601	HTV11301	KIH19101	MTG17301	TAW31004	TIR33501	TIR33502	TKN17001	TKS17401
PUKETE ROAD HAMILTON HAMILTON	Waikato			2		1							
PUKETE ROAD PUKETE HAMILTON	Waikato			9		1							
PULHAM CRESCENT QUEENWOOD HAMILTON	Waikato			1		1							
PUNIU ROAD TE AWAMUTU	Waikato						2		25				
PURIRI STREET HAMILTON	Waikato			6		7							
QUEENS AVENUE HAMILTON	Waikato			1		52							
QUEENS AVENUE FRANKTON HAMILTON	Waikato			1		25							
QUEENWOOD AVENUE QUEENWOOD HAMILTON	Waikato			14		1							
RADNOR STREET HAMILTON	Waikato			3		19							
RANUI STREET HAMILTON	Waikato			2		54							
RAUNGAWARI DRIVE HAMILTON	Waikato			1		18							
RAWENE STREET HAMILTON	Waikato			3		5							
REWI STREET TE AWAMUTU	Waikato						3		32				
RHYS AVENUE HAMILTON	Waikato			25		31							
RICHMOND STREET HAMILTON	Waikato			2		14							
Richmond Street Whitiora Hamilton	Waikato			1		9							
RIDOUT STREET MAEROA HAMILTON	Waikato			2		7							
RIFLE RANGE ROAD DINSDALE HAMILTON	Waikato			1		35							
RIGG PLACE FLAGSTAFF HAMILTON	Waikato			13		1							
RIMMINGTON DRIVE HAMILTON	Waikato			1		13							
Rimu Street Maeroa Hamilton	Waikato			1		9							
RIVER ELM HAMILTON	Waikato			7		1							
RIVER ROAD HAMILTON	Waikato			110		322							
RIVER ROAD CHARTWELL HAMILTON	Waikato			3		10							
RIVER ROAD FLAGSTAFF HAMILTON	Waikato			36		2							
RIVER ROAD HAMILTON HAMILTON	Waikato			7		2							
RIVER ROAD QUEENWOOD HAMILTON	Waikato			5		2							
ROCHESTER PLACE HAMILTON	Waikato			4		8							
RODNEY STREET HAMILTON	Waikato			8		14							
RODNEY STREET NAWTON HAMILTON	Waikato			3		3							
Rogers Place Fairview Downs Hamilton	Waikato			1		1							
ROSALIND STREET DEANWELL HAMILTON	Waikato			1		3							
ROSE STREET MAEROA HAMILTON	Waikato			3		3							
ROSS CRESCENT FAIRFIELD HAMILTON	Waikato			9		1							
ROSTREVOR STREET HAMILTON	Waikato			2		10							
ROKOKAURI ROAD HAMILTON	Waikato			11		13							
Rotokauri Road Nawton Hamilton	Waikato			4		13							
ROTOTUNA ROAD HAMILTON	Waikato			123		2							
ROY HILTON DRIVE FLAGSTAFF HAMILTON	Waikato			55		1							
ROY STREET HAMILTON	Waikato			4		2							
RUAKIWI ROAD HAMILTON	Waikato			1		31							
RUAKURA ROAD HAMILTON	Waikato			2		2							
RUTHERFORD STREET HAMILTON	Waikato			1		32							

Street Suburb Town	Physical Address Region	Gas Gate Code											
		CAM17201	HRU16101	HTK08301	HTL16601	HTV11301	KIH19101	MTG17301	TAW31004	TIR33501	TIR33502	TKN17001	TKS17401
RUTHERFORD STREET TE AWAMUTU	Waikato						1		14				
RYEDALE ROAD FLAGSTAFF HAMILTON	Waikato			10		1							
SANDLEIGH ROAD HAMILTON	Waikato			1		9							
SANDWICH ROAD HAMILTON	Waikato			1		128							
SANDWICH ROAD SAINT ANDREWS HAMILTON	Waikato			12		6							
Sapphire Place Chartwell Hamilton	Waikato			1		1							
SARE CRESCENT FAIRFIELD HAMILTON	Waikato			2		1							
SAXBYS ROAD HAMILTON HAMILTON	Waikato			1		4							
SEARANCKE PLACE FAIRFIELD HAMILTON	Waikato			1		1							
SEDDON ROAD HAMILTON	Waikato			2		32							
SEDDON ROAD FRANKTON HAMILTON	Waikato			1		8							
SEFTON CRESCENT CHARTWELL HAMILTON	Waikato			1		3							
SELBY MEWS HAMILTON	Waikato			10		1							
SHANEL PLACE TE AWAMUTU	Waikato						1		2				
Sharaleigh Place Grandview Heights Hamilton	Waikato			1		1							
SILVERDALE ROAD SILVERDALE HAMILTON	Waikato			1		17							
SIMON PLACE HAMILTON	Waikato			7		6							
SLOANE STREET TE AWAMUTU	Waikato						2		4				
SOMERSET STREET HAMILTON HAMILTON	Waikato			1		1							
SOUTHWORTH PLACE HAMILTON	Waikato			1		10							
SPINLEY STREET TE AWAMUTU	Waikato						1		11				
SPRINGFIELD CRESCENT HAMILTON	Waikato			10		13							
Springfield Crescent Enderley Hamilton	Waikato			1		1							
Springside Court North Huntington Hamilton	Waikato			12		1							
ST ANDREWS TERRACE HAMILTON	Waikato			1		46							
ST JAMES DRIVE HAMILTON	Waikato			89		1							
ST PAULS ROAD CHARTWELL HAMILTON	Waikato			8		1							
STANLEY STREET HAMILTON	Waikato			2		18							
STEWART PLACE HAMILTON	Waikato			1		4							
Sunline Drive Leamington Cambridge	Waikato	10		1									
SUNNYSIDE ROAD HAMILTON	Waikato			8		12							
SUNSHINE AVENUE HAMILTON	Waikato			1		5							
Sunshine Avenue Te Rapa Hamilton	Waikato			1		4							
SUSAN PLACE HAMILTON	Waikato			1		5							
SWARBRICK DRIVE TE AWAMUTU	Waikato						7		10				
SYLVESTER CRESCENT FLAGSTAFF HAMILTON	Waikato			43		1							
Taiatea Drive Baverstock Hamilton	Waikato			4		1							
TAMIHANA AVENUE FAIRFIELD HAMILTON	Waikato			1		1							
TANIWHA STREET FRANKTON HAMILTON	Waikato			1		1							
TAUPIRI STREET TE KUITI	Waikato											10	1
TAWA STREET MELVILLE HAMILTON	Waikato			1		7							
TAYLOR AVENUE TE AWAMUTU	Waikato						1		5				
Taylor Terrace Saint Andrews Hamilton	Waikato			2		4							

Street Suburb Town	Physical Address Region	Gas Gate Code											
		CAM17201	HRU16101	HTK08301	HTL16601	HTV11301	KIH19101	MTG17301	TAW31004	TIR33501	TIR33502	TKN17001	TKS17401
TE AROHA STREET HAMILTON	Waikato			1		68							
TE PUROA PLACE HAMILTON	Waikato			1		10							
TE RAHU ROAD TE AWAMUTU	Waikato						2		29				
TE RAPA ROAD HAMILTON	Waikato			5		61							
TE RAPA ROAD BEERESCOURT HAMILTON	Waikato			7		2							
TE RAPA ROAD TE RAPA HAMILTON	Waikato			10		2							
TE TOMO STREET TE AWAMUTU	Waikato						2		14				
TEASDALE STREET TE AWAMUTU	Waikato						4		17				
Tekapo Road Baverstock Hamilton	Waikato			4		16							
TENNYSON ROAD HAMILTON	Waikato			2		3							
THACKERAY STREET HAMILTON	Waikato			1		17							
THE DALES DINSDALE HAMILTON	Waikato			1		15							
THE ESPLANADE Huntington HAMILTON	Waikato			1		1							
THE LINK FLAGSTAFF HAMILTON	Waikato			5		1							
THOMAS ROAD HAMILTON	Waikato			73		2							
Tiireke Drive Glenview Hamilton	Waikato			1		1							
TISDALL STREET HAMILTON HAMILTON	Waikato			2		1							
Tongariro Street Chartwell Hamilton	Waikato			2		2							
TOTARA DRIVE HAMILTON	Waikato			59		8							
TOTARA STREET TE AWAMUTU	Waikato						4		6				
TRAMWAY ROAD HAMILTON	Waikato			30		64							
Tramway Road Enderley Hamilton	Waikato			7		9							
Trewern Avenue Chartwell Hamilton	Waikato			23		4							
Trewern Avenue Greenhill Park Hamilton	Waikato			4		2							
TRISTRAM STREET HAMILTON	Waikato			2		14							
TUHIKARAMEA ROAD DINSDALE HAMILTON	Waikato			1		15							
TUI CRESCENT TE AWAMUTU	Waikato						1		15				
TURERE LANE TE AWAMUTU	Waikato						1		33				
TURNBURY COURT HAMILTON	Waikato			5		1							
TWICKENHAM PLACE HAMILTON	Waikato			13		12							
ULSTER STREET HAMILTON	Waikato			1		70							
VARDON ROAD SAINT ANDREWS HAMILTON	Waikato			5		2							
VEDA LANE TE AWAMUTU	Waikato						1		3				
VELMA CRESCENT HAMILTON	Waikato			3		15							
VERNALL STREET HAMILTON	Waikato			6		8							
VICKERY STREET HAMILTON	Waikato			1		3							
VICTORIA STREET HAMILTON	Waikato			4		135							
Victoria Street Beerescourt Hamilton	Waikato			1		6							
VICTORIA STREET HAMILTON CENTRAL HAMILTON	Waikato			12		24							
Voight Avenue Greenhill Park Hamilton	Waikato			1		2							
WAIMARIE STREET HAMILTON	Waikato			4		28							
WAINUI AVENUE TE AWAMUTU	Waikato						1		1				
Waireka Road Rototuna North Hamilton	Waikato			21		1							

Street Suburb Town	Physical Address Region	Gas Gate Code											
		CAM17201	HRU16101	HTK08301	HTL16601	HTV11301	KIH19101	MTG17301	TAW31004	TIR33501	TIR33502	TKN17001	TKS17401
Wairua Avenue Baverstock Hamilton	Waikato			2		1							
Wairua Avenue Rotokauri Hamilton	Waikato			1		1							
WAIWHEROWHERO DRIVE SAINT ANDREWS HAMILTON	Waikato			3		1							
WALL STREET HAMILTON	Waikato			7		9							
WALLACE TERRACE TE AWAMUTU	Waikato						2		27				
Walsh Street Forest Lake Hamilton	Waikato			3		5							
WARBURTON CRESCENT TE AWAMUTU	Waikato						7		14				
WARD STREET HAMILTON	Waikato			1		4							
WARD STREET HAMILTON CENTRAL HAMILTON	Waikato			2		5							
WARD STREET HAMILTON HAMILTON	Waikato			1		4							
WARWICK AVENUE HAMILTON	Waikato			1		3							
WARWICK AVENUE SAINT ANDREWS HAMILTON	Waikato			5		1							
Webb Drive Chartwell Hamilton	Waikato			3		11							
Westney Place Forest Lake Hamilton	Waikato			1		2							
Whakapono Avenue Baverstock Hamilton	Waikato			11		2							
Whanau Avenue Baverstock Hamilton	Waikato			7		2							
WHITNEY PLACE ROTOTUNA NORTH HAMILTON	Waikato			31		1							
WILLIAMS PLACE HAMILTON	Waikato			1		1							
WILLIAMS STREET TE AWAMUTU	Waikato						1		20				
WILLIS STREET BADER HAMILTON	Waikato			1		1							
WILLOUGHBY STREET HAMILTON	Waikato			3		32							
WILSON STREET TE AWAMUTU	Waikato						1		7				
WIMBLEDON CLOSE HAMILTON	Waikato			9		3							
Windermere Drive Te Awamutu	Waikato	1					6		1				
WINSTONE AVENUE CHARTWELL HAMILTON	Waikato			1		3							
WISTERIA PLACE FLAGSTAFF HAMILTON	Waikato			15		2							
WORDSWORTH CRESCENT HAMILTON	Waikato			1		2							
WORLEY PLACE HAMILTON CENTRAL HAMILTON	Waikato			1		2							
WYNYARD STREET TE AWAMUTU	Waikato						1		6				
YEATS CRESCENT HAMILTON	Waikato			6		7							
Yeats Crescent Fairfield Hamilton	Waikato			2		1							
YOUNG STREET HAMILTON	Waikato			12		11							
YOUNG STREET TE AWAMUTU	Waikato						2		12				
YOUNG STREET CLAUDELANDS HAMILTON	Waikato			1		4							
YUMELODY LANE TAMAHERE HAMILTON	Waikato			1		5							

Kapiti - two Streets

Gas Gate Code

Street Suburb Town	Physical Address Region	HTK08301	PAU20101	PPA33201
RAUMATI ROAD RAUMATI BEACH PARAPARAUMU	Wellington		7	1
Takahe Drive Paraparaumu Beach PARAPARAUMU	Wellington	1	6	

Bay of Plenty - 111 Streets

Street Suburb Town	Physical Address Region	Gas Gate Code					
		KAW04405	KAW04410	MMU08001	PPA33201	PYE36601	TRG07701
Alice Lane Papamoa Beach Papamoa	Bay of Plenty			1	2		
AMY PLACE PYES PA TAURANGA	Bay of Plenty					2	6
Aneta way Pyes Pa Tauranga	Bay of Plenty					1	1
ARABIAN DRIVE PAPAMOA	Bay of Plenty			9	1		
ARANUI DRIVE PAPAMOA MT MAUNGANUI	Bay of Plenty			20	1		
ARAROA PLACE PAPAMOA MT MAUNGANUI	Bay of Plenty			9	1		
BALBOA KEY PAPAMOA BEACH PAPAMOA	Bay of Plenty			3	5		
BATHURST CRESCENT PYES PA TAURANGA	Bay of Plenty					1	7
BEACHWATER DRIVE PAPAMOA	Bay of Plenty			36	1		
BENMORE CRESCENT PYES PA TAURANGA	Bay of Plenty					3	8
BERNIES WAY OHAUITI TAURANGA	Bay of Plenty					1	3
Boulder Lane Pyes Pa Tauranga	Bay of Plenty					3	1
BROADWATER CLOSE PYES PA TAURANGA	Bay of Plenty					1	7
CARRIBEAN PLACE MT MAUNGANUI	Bay of Plenty			6	1		
CHEYNE ROAD PYES PA TAURANGA	Bay of Plenty					2	2
CONDOR DRIVE PYES PA TAURANGA	Bay of Plenty					2	1
DAYNA AVENUE OHAUITI TAURANGA	Bay of Plenty					1	8
DICKSON ROAD PAPAMOA BEACH PAPAMOA	Bay of Plenty			1	17		
DONCASTER DRIVE PAPAMOA	Bay of Plenty			3	1		
ELLA PLACE PAPAMOA	Bay of Plenty			2	1		
ELLESMERE CLOSE PYES PA TAURANGA	Bay of Plenty					2	2
EMMA PLACE PAPAMOA	Bay of Plenty			5	1		
EXCELSA PLACE PAPAMOA	Bay of Plenty			7	2		
FAIRFAX CRESCENT PYES PA TAURANGA	Bay of Plenty					3	5
FURL CLOSE PYES PA TAURANGA	Bay of Plenty					1	2
GALLOWAY CRESCENT PYES PA TAURANGA	Bay of Plenty					1	1
GIBSON PLACE PAPAMOA	Bay of Plenty			19	3		
GLOUCESTER ROAD MT MAUNGANUI	Bay of Plenty			66	6		
GLOUCESTER ROAD MT MAUNGANUI MT MAUNGANUI	Bay of Plenty			1	1		
Gloucester Road Papamoa Beach PAPAMOA	Bay of Plenty			6	14		
GOLDEN SANDS DRIVE PAPAMOA	Bay of Plenty			4	1		
GRANT PLACE PAPAMOA BEACH PAPAMOA	Bay of Plenty			1	1		
Gravatt Road Papamoa Beach Papamoa	Bay of Plenty			1	11		
GRENADA STREET MT MAUNGANUI	Bay of Plenty			114	3		
GRENADA STREET MT MAUNGANUI MT MAUNGANUI	Bay of Plenty			7	1		
Hastings Road Pyes Pa Tauranga	Bay of Plenty					1	1
HAVENBROOK WAY PYES PA TAURANGA	Bay of Plenty					2	9
HINEMARAMA CLOSE PAPAMOA	Bay of Plenty			4	5		
HORSLEY GROVE PYES PA TAURANGA	Bay of Plenty					1	6

Huria Vista Pyes Pa Tauranga	Bay of Plenty					2	3
KAHIRA CRESCENT MT MAUNGANUI	Bay of Plenty			28	2		
KAREWA PARADE PAPAMOA BEACH PAPAMOA	Bay of Plenty			3	29		
KEEPA CLOSE PAPAMOA	Bay of Plenty			23	2		
Kiritiana Close Pyes Pa Tauranga	Bay of Plenty					2	3
Kissling Terrace Pyes Pa Tauranga	Bay of Plenty					1	1
KOKOMO KEY PAPAMOA MT MAUNGANUI	Bay of Plenty			24	1		
KORO MEWS PAPAMOA	Bay of Plenty			3	2		
LAKES BOULEVARD PYES PA TAURANGA	Bay of Plenty					12	14
LANDING DRIVE PYES PA TAURANGA	Bay of Plenty					4	25
LENNON WAY PAPAMOA BEACH PAPAMOA	Bay of Plenty			3	3		
MALEME STREET TAURANGA	Bay of Plenty					1	14
MATEMURI DRIVE PAPAMOA	Bay of Plenty			21	2		
MATENE PLACE PAPAMOA	Bay of Plenty			23	3		
Materawaho Way Pyes Pa Tauranga	Bay of Plenty					5	1
MAURITIUS KEY PAPAMOA	Bay of Plenty			27	3		
MCLEOD PLACE PAPAMOA MT MAUNGANUI	Bay of Plenty			26	1		
MERVYN PLACE OHAUITI TAURANGA	Bay of Plenty					1	3
MONTICELLO KEY PAPAMOA	Bay of Plenty			16	1		
MORTLAKE HEIGHTS PYES PA TAURANGA	Bay of Plenty					2	10
MOTITI ROAD PAPAMOA MT MAUNGANUI	Bay of Plenty			16	1		
Oceanbeach Road Mount Maunganui Tauranga	Bay of Plenty			4			1
ORETI CRESCENT PAPAMOA	Bay of Plenty			22	1		
ORIENTAL PARADE PAPAMOA BEACH PAPAMOA	Bay of Plenty			1	6		
ORIENTAL PARADE PAPAMOA PAPAMOA	Bay of Plenty			1	8		
PACIFIC PARK WAY PAPAMOA BEACH PAPAMOA	Bay of Plenty			1	5		
Pakanga Grove Pyes Pa Tauranga	Bay of Plenty					11	2
PALAZZO DRIVE PAPAMOA	Bay of Plenty			14	2		
PALM SPRINGS BOULEVARD PAPAMOA PAPAMOA	Bay of Plenty			1	3		
PAPAMOA BEACH ROAD PAPAMOA	Bay of Plenty			152	10		
PAPAMOA BEACH ROAD PAPAMOA BEACH PAPAMOA	Bay of Plenty			4	46		
PAT BISHOP PLACE PAPAMOA	Bay of Plenty			3	2		
PENETAKA HEIGHTS PYES PA TAURANGA	Bay of Plenty					14	6
POMPANO KEY PAPAMOA	Bay of Plenty			14	1		
POPATA CLOSE PAPAMOA	Bay of Plenty			13	5		
POTURI STREET TAURIKO TAURANGA	Bay of Plenty					1	2
Puhirake Crescent The Lakes Tauranga	Bay of Plenty					1	3
PUMICE GLADE PYES PA TAURANGA	Bay of Plenty					2	1
PYES PA ROAD PYES PA TAURANGA	Bay of Plenty					5	10
RANGE ROAD PAPAMOA	Bay of Plenty			1	1		
REXFORD HEIGHTS PYES PA TAURANGA	Bay of Plenty					1	7
RIRE HAU LANE PYES PA TAURANGA	Bay of Plenty					1	2
Rita Street Mount Maunganui Tauranga	Bay of Plenty			1			1
ROCHFORD CRESCENT PYES PA TAURANGA	Bay of Plenty					3	2
ROTA CLOSE PAPAMOA	Bay of Plenty			9	2		
ROTA CLOSE PAPAMOA PAPAMOA	Bay of Plenty			2	1		

ROXBURY PLACE PAPAMOA	Bay of Plenty			6	1		
Santa Cruz Drive Papamoa Beach Papamoa	Bay of Plenty			2	6		
SANTA CRUZ DRIVE PAPAMOA MT MAUNGANUI	Bay of Plenty			23	6		
SANTA FE KEY PAPAMOA	Bay of Plenty			6	1		
SANTA MARIA KEY PAPAMOA	Bay of Plenty			12	1		
SATORI KEY PAPAMOA	Bay of Plenty			7	1		
SEABREEZE PLACE PAPAMOA	Bay of Plenty			10	1		
Sorrento Key Papamoa Beach Papamoa	Bay of Plenty			1	1		
SOVEREIGN DRIVE PAPAMOA	Bay of Plenty			29	1		
SPENCER AVENUE KAWERAU	Bay of Plenty	1	1				
STONEBRIDGE WAY PYES PA TAURANGA	Bay of Plenty					3	2
TE OTINGA PLACE PYES PA TAURANGA	Bay of Plenty					1	1
Te Ranga Memorial Drive Pyes Pa Tauranga	Bay of Plenty					9	10
Te Ranga Memorial Drive The Lakes Tauranga	Bay of Plenty					1	2
TEAL PLACE PYES PA TAURANGA	Bay of Plenty					1	2
TOMIKA CRESCENT PAPAMOA	Bay of Plenty			15	1		
TUAIA STREET PYES PA TAURANGA	Bay of Plenty					4	1
TUIHANA DRIVE PAPAMOA	Bay of Plenty			52	3		
TUIHANA DRIVE PAPAMOA PAPAMOA	Bay of Plenty			6	1		
TWIN OAK AVENUE PAPAMOA BEACH PAPAMOA	Bay of Plenty			1	2		
VENTURA KEY PAPAMOA BEACH PAPAMOA	Bay of Plenty			1	2		
WAIRAKEI AVENUE PAPAMOA	Bay of Plenty			31	3		
WATERSIDE DRIVE PYES PA TAURANGA	Bay of Plenty					3	3
Whakaturou Crescent Pyes Pa Tauranga	Bay of Plenty					4	3
WHITSUNDAY KEY PAPAMOA	Bay of Plenty			17	1		
YALE STREET MT MAUNGANUI MT MAUNGANUI	Bay of Plenty			1	1		

Appendix 3 – Load shedding category discrepancies

Load shedding category exceptions compared to gas allocation group code

ICP Identifier	Meter Identifier	Gas Gate Code	Load Shedding Category Code	Maximum Hourly Quantity	Network Price Category Code	Allocation Group Code	ICP Status Code
1001300566NG5ED	20P412348	TKR19701	DOM	6	GN02	4	ACTC
1001302629NG8D5	21T148250	TAU07001	DOM	5	GN02	4	ACTC
1001302803NG11A	21T219480	PAU20101	DOM	6	GN02	4	ACTC
1001299817NG6F5	R000044930	HTV11301	6	105	GN03	4	ACTC
1001297713NG030	R000044925	HTK08301	6	76	GN03	4	ACTC
1001298002NG0BA	R000044926	CAM17201	6	75	GN03	4	ACTC
1001294859NGDEB	94S6460129	HRU16101	6	60	GN03	4	ACTC
1001299768NG379	20M801781	KIH19101	6	60	GN03	4	ACTC
1001268228NG0E5	05E902656	TAU07001	6	85	GN02	4	ACTC
0001036055NGFC7	09K911386	OTA22601	6	42	GN02	4	ACTC
1001296914NGA51	11R054548	TRG07701	6	40	GN02	4	ACTC
1001245441NG4AF	11N987928	HTV11301	6	39	GN02	4	ACTC
1001297228NGC19	05F016727	TRG07701	6	38	GN02	4	ACTC
1001300519NGF6E	600677613	TKR19701	4	6	GN01	6	ACTC
1001304409NGA47	600669707	HTK08301	4	6	GN01	6	ACTC
1001246120NGOFF	12EG3443	OTA22601	4	5	GN01	6	ACTC
0001031747NGE8D	19EG3561	OTA22601	4	1	GN01	6	ACTV
0001000480NG727	21T005784	WHG07501	4	0	GN01	6	ACTC
0001006971NGBBD	03EW11978	HTV11301	4	0	GN01	6	ACTC
0001008360NGF9F	03AG0120	PAU20101	4	0	GN01	6	ACTC
0001008816NG843	01B305600	WHG07501	4	0	GN01	6	ACTC
0001015768NG34B	05EG4873	OPO32001	4	0	GN01	6	ACTC
0001016966NG43B	05EG6011	HTV11301	4	0	GN01	6	ACTC

load shedding category code of 7 (Critical care designation) not on GIC list

ICP Identifier	Responsible Distributor Code	Gas Gate Code	ICP Type Code	Load Shedding Category Code	Responsible Retailer Code	Allocation Group Code	ICP Status Code	ICP Connection Status Code
0001017911NGD0C	NGCD	WHG07501	GN	7	GENG	6	ACTC	GAS
0009000575NG6AD	NGCD	TAU07001	GN	7	CTCT	4	ACTC	GAS
0009000767NG682	NGCD	HTV11301	GN	7	GENG	6	ACTC	GAS

Appendix 4 – Physical address discrepancies

Addresses which were not readily locatable

Metered ICPs with ambiguous street number or property name

ICP Identifier	ICP Creation Date	ICP Status Code	Meter Identifier	Physical Address Property Name	Physical Address Unit	Physical Address Number / RAPID Number	Physical Address Street	Physical Address Suburb	Physical Address Town	Physical Address Region	Physical Address Post Code
0001002141NGAC8	1/07/2008	ACTC	01EW4916		UNIT 2	LOT48	VAUGHAN ROAD		ROTORUA	Bay of Plenty	
0001012610NG966	1/07/2008	ACTC	600577877			LOT 69-70	BRAMLEY DRIVE		HAMILTON	Waikato	
0001030922NGB99	9/04/2009	ACTC	18EG0013	The Food Cube	F		C/o Avalon Drive & Te Rapa Rd	The Base	Hamilton	Waikato	3200
0002007625NG7DB	1/07/2008	ACTC	95E2644				PENDENNIS CRESCENT	BETHLEHEM HEIGHTS	TAURANGA	Bay of Plenty	
0003028799NG967	1/07/2008	ACTC	1015737	DP10975	LOT 30		BALMORAL DRIVE	TOKOROAO	TOKOROAO	Waikato	3420
0003031182NGF59	1/07/2008	ACTC	600589733		LOT 161		LAKE ROAD	FRANKTON	HAMILTON	Waikato	3204
0003065480NGF2D	1/07/2008	ACTC	94E2263			LOT 41	THOMAS ROAD		HAMILTON	Waikato	
0003066106NGC0D	1/07/2008	ACTC	600699209			LOT 27	ARNOLD STREET		CAMBRIDGE	Waikato	
0008000011NGBEB	1/07/2008	ACTC	5235082				MAIN METER PEMBROKE STREET		HAMILTON	Waikato	
1001296106NG074	18/06/2018	ACTC	18EG0382			Lot 3	Sylvester Road	Flagstaff	Hamilton	Waikato	3210
1001296108NG3EF	18/06/2018	ACTC	18EG0384			Lot 5	Sylvester Road	Flagstaff	Hamilton	Waikato	3210
1001296496NGA96	17/09/2018	ACTC	18EG3651			Lot 558	Pakanga Grove	Pyes Pa	Tauranga	Bay of Plenty	3173
1001298445NG3D4	6/12/2019	ACTC	600585829		Lot 78a		Cabourne Drive	Glenview	Hamilton	Waikato	3206
1001300255NG1D7	4/12/2020	ACTC	20EG3451	Lot 92	Lot 92		Kahikatea Crescent	Tamahere	Hamilton	Waikato	3283
1001301092NG055	23/04/2021	ACTC	600586686			Lot 7	Oderings Place	Huntington	Hamilton	Waikato	3210
1001301637NG303	16/07/2021	ACTC	600577659			Lot 14	Haultain Estate	Kihikihi	Te Awamutu	Waikato	3800
1001303652NG2FC	20/07/2022	ACTC	600590469			Lot 30	Jacks Landing Drive	Hamilton Lake	Hamilton	Waikato	3204
1001303113NG31E	27/04/2022	ACTC	600583725			Lot 31	Jacks Landing	Hamilton Lake	Hamilton	Waikato	3204
1001303472NG5AE	22/06/2022	ACTC	600581869			Lot 4a	Oderings Place		Hamilton	Waikato	3210
1001303096NG21F	20/04/2022	ACTC	600662202		Lot 27		Karira Street	Lockerbie Estate	Morrinsville	Waikato	3300

Metered ICPs with no street number or property name

ICP Identifier	Meter Identifier	ICP Status Code	ICP Connection Status Code	Physical Address Property Name	Physical Address Unit	Physical Address Number/RAPID Number	Physical Address Street	Physical Address Suburb	Physical Address Town	Physical Address Region
0007000432NGA89	M905475	ACTC	GAS				ABERDEEN ROAD		GISBORNE	Gisborne
0007001073NG9C8	M907059	ACTC	GAS				ATKINSON STREET		GISBORNE	Gisborne
0008000249NGBF0	5350056	ACTC	GAS				AWAKERE ROAD		EDGEKUMBE	Bay of Plenty
0001027974NGE9F	12924	ACTC	GAS				BAINBRIDGE ROAD		TE PUKE	Bay of Plenty
0002004058NG93B	1-021109	ACTC	GAS				BELLEVUE ROAD		TAURANGA	Bay of Plenty
0003030334NG7C3	600580407	ACTC	GAS				BELLMONT AVENUE		HAMILTON	Waikato
0002028374NG63E	600585837	ACTC	GAS				BERMUDA DRIVE		PAPAMOA	Bay of Plenty
0001016373NG9D3	05EG6009	ACTC	GAS				BRAMLEY DRIVE		HAMILTON	Waikato
0007000705NG3B8	95E2724	INACT	GVC				CARNARVON STREET		GISBORNE	Gisborne
0002029218NG274	20P412333	ACTC	GAS				CLARKE STREET		TAURANGA	Bay of Plenty
0009000740NG61D	98Z187580	ACTC	GAS				COBHAM DRIVE		HAMILTON	Waikato
0001004275NGAF9	600650090	ACTC	GAS				CROWN MEWS		PARAPARAUMU	Wellington
0009000892NG4D5	05F403138	ACTC	GAS				DOMAIN DRIVE		OTOROHANGA	Waikato
0004008902NGEB2	03D677171	ACTC	GAS				DOMAIN ROAD		OTAKI	Wellington
0003067483NG0AD	20P498425	ACTC	GAS				ELLCOTT ROAD		HAMILTON	Waikato
0001027566NG8BB	08EG4337	INACT	GVC				EMPIRE STREET		HAMILTON	Waikato
0002005718NG53C	600685381	ACTC	GAS				FROMOW ROAD		OPOTIKI	Bay of Plenty
0003018294NG215	6483	ACTC	GAS				GALLOWAY STREET		HAMILTON	Waikato
0001019341NG7CE	04E414770	ACTC	GAS				GARNETT AVENUE		HAMILTON	Waikato
0002027455NG14C	15D447172	ACTC	GAS				GRENADA STREET		MT MAUNGANUI	Bay of Plenty

Metered ICPs with duplicate addresses

ICP Identifier	ICP creation date	Meter Identifier	ICP Status Code	ICP Connection Status Code	address combo
0009001143NGD7B	1/07/2008	20501736	ACTC	GAS	POPE TERRACE LEAMINGTON CAMBRIDGE WAIKATO
0003064753NGC0C	1/07/2008	99EW1812	INACT	GVC	POPE TERRACE LEAMINGTON CAMBRIDGE WAIKATO
0009000228NGEFC	1/07/2008	06H450910	ACTC	GAS	1 ADAMS AVENUE MT MAUNGANUI BAY OF PLENTY
0009000229NG2B9	1/07/2008	1-021139	ACTC	GAS	1 ADAMS AVENUE MT MAUNGANUI BAY OF PLENTY
0001014989NG21F	1/07/2008	05EG4121	ACTC	GAS	102 CHURCH STREET OPOTIKI BAY OF PLENTY
0001015768NG34B	1/07/2008	05EG4873	ACTC	GAS	102 CHURCH STREET OPOTIKI BAY OF PLENTY
1001300608NGA85	16/02/2021	20EG4323	ACTC	GAS	104 CHURCH STREET OPOTIKI BAY OF PLENTY
1001304065NGAA8	1/11/2022	21T220235	ACTC	GAS	104 CHURCH STREET OPOTIKI BAY OF PLENTY
0001004016NG3CE	1/07/2008	02EW8056	ACTC	GAS	112 TAMAMUTU STREET TAUPO WAIKATO
0001004165NG357	1/07/2008	21P919027	ACTC	GAS	112 TAMAMUTU STREET TAUPO WAIKATO
0003039378NGAD8	1/07/2008	21EG2782	ACTC	GAS	113 TAYLOR STREET CAMBRIDGE WAIKATO
1001303364NG18E	15/06/2022	600585524	ACTC	GAS	113 TAYLOR STREET CAMBRIDGE WAIKATO
0001025197NGBA8	1/07/2008	06H669965	ACTC	GAS	1135 TUTANEKAI STREET ROTORUA BAY OF PLENTY
0001024603NGBE7	1/07/2008	07EG1380	ACTC	GAS	1135 TUTANEKAI STREET ROTORUA BAY OF PLENTY
0001025474NG8D7	1/07/2008	06EG3375	INACT	GVC	1151 HINEMOA STREET ROTORUA BAY OF PLENTY
0001025843NGEE9	1/07/2008	07EG1386	ACTC	GAS	1151 HINEMOA STREET ROTORUA BAY OF PLENTY
0002028070NG437	1/07/2008	600665891	ACTC	GAS	1170 AMOHOU STREET ROTORUA BAY OF PLENTY
0002028067NG350	1/07/2008	600665897	ACTC	GAS	1170 AMOHOU STREET ROTORUA BAY OF PLENTY
0002029164NG734	1/07/2008	99EW3491	ACTC	GAS	1170 AMOHOU STREET ROTORUA BAY OF PLENTY
0002028068NGC8E	1/07/2008	99EW3507	INACT	GVC	1170 AMOHOU STREET ROTORUA BAY OF PLENTY
0002028069NG0CB	1/07/2008	99EW3523	ACTC	GAS	1170 AMOHOU STREET ROTORUA BAY OF PLENTY
0002028071NG872	1/07/2008	99EW4139	ACTC	GAS	1170 AMOHOU STREET ROTORUA BAY OF PLENTY
1001295877NG285	2/05/2018	18EG2486	ACTC	GAS	13 WHERETIA STREET TAUPO WAIKATO
0006001284NG8AB	1/07/2008	243693	ACTC	GAS	13 WHERETIA STREET TAUPO WAIKATO
1001303352NG7F9	14/06/2022	600585773	ACTC	GAS	14 GUILLAUME STREET CHARTWELL HAMILTON WAIKATO
1001300514NG035		600751756	ACTC	GAS	14 GUILLAUME STREET CHARTWELL HAMILTON WAIKATO
0001019713NG342		19EG1703	ACTC	GAS	14 HAULTAIN STREET KHIKIHI WAIKATO
0003040379NG084		98EW1423	ACTC	GAS	14 HAULTAIN STREET KHIKIHI WAIKATO

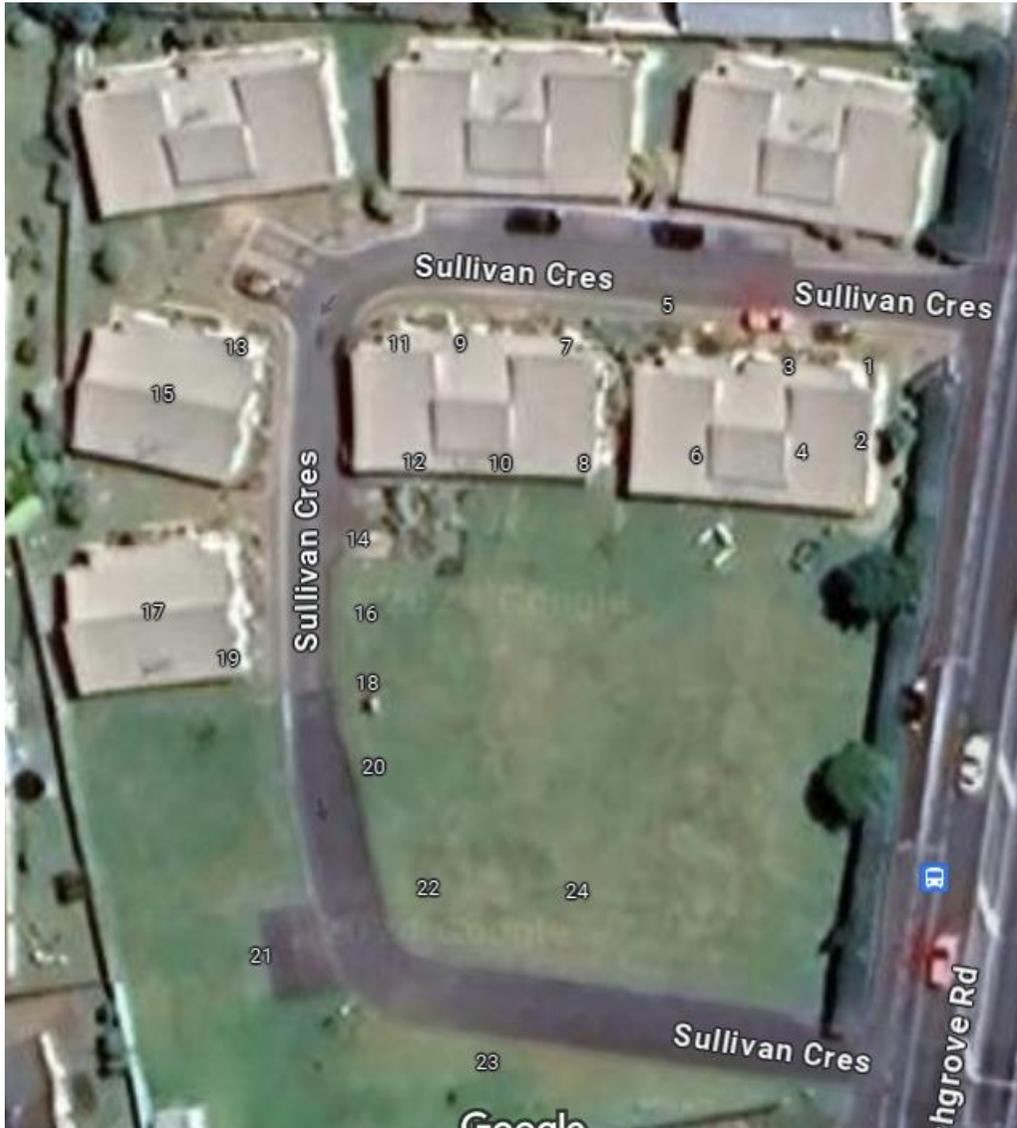
ICP Identifier	ICP creation date	Meter Identifier	ICP Status Code	ICP Connection Status Code	address combo
0001023861NG6F9		06EG0276	ACTC	GAS	15 HEUHEU STREET TAUPO WAIKATO
0006004737NG4FC		2000EW00301	INACT	GVC	15 HEUHEU STREET TAUPO WAIKATO
0001020712NG28B		06EG1881	ACTC	GAS	17 MAHANA ROAD PARAPARAUMU WELLINGTON
0001023402NG9C5		600649897	ACTC	GAS	17 MAHANA ROAD PARAPARAUMU WELLINGTON
0001012952NG449		05EG4650	ACTC	GAS	177 OCEANBEACH ROAD MT MAUNGANUI BAY OF PLENTY
0002011250NGEE9		05EG4674	ACTC	GAS	177 OCEANBEACH ROAD MT MAUNGANUI BAY OF PLENTY
0001014963NGA34		600579260	ACTC	GAS	18 BRAMLEY DRIVE HAMILTON WAIKATO
0003033889NGBC4		600755944	ACTC	GAS	18 BRAMLEY DRIVE HAMILTON WAIKATO
1001296570NG8A7		18EG3969	ACTC	GAS	18 CARRUTH STREET WHANGAREI NORTHLAND
1001298719NGBC1		19M198015	ACTC	GAS	18 CARRUTH STREET WHANGAREI NORTHLAND
0001017505NGAA7		05EG5721	ACTC	GAS	18 STAFFORD RISE ROTORUA BAY OF PLENTY
0001015895NG308		600686721	ACTC	GAS	18 STAFFORD RISE ROTORUA BAY OF PLENTY
0009000819NGF4B		20512142	ACTC	GAS	19A MARAMA STREET HAMILTON WAIKATO
0003024982NG095		600589055	ACTC	GAS	19A MARAMA STREET HAMILTON WAIKATO
0009000158NG8A2		12T868394	ACTC	GAS	2 BANK STREET WHANGAREI NORTHLAND
0001027997NG8E5		21P975475	ACTC	GAS	2 BANK STREET WHANGAREI NORTHLAND
0001018492NG8EE		06EG0575	INACT	GVC	2 GRACE AVENUE CAMBRIDGE WAIKATO
0001022153NG92D		06EG3801	ACTC	GAS	2 GRACE AVENUE CAMBRIDGE WAIKATO
0001019596NG140		06EG1402	ACTC	GAS	2 LINDIS LANE TAURANGA BAY OF PLENTY
0001031849NG219		08EG6941	ACTC	GAS	2 LINDIS LANE TAURANGA BAY OF PLENTY
1001294799NG50B		16F443124	ACTC	GAS	210 MARANUI STREET PAPAMOA BEACH PAPAMOA BAY OF PLENTY
1001304413NG27B		21P975461	ACTC	GAS	210 MARANUI STREET PAPAMOA BEACH PAPAMOA BAY OF PLENTY
0001013885NGC65		600702411	ACTC	GAS	21A HENRY HILL ROAD TAUPO WAIKATO
0001013884NG020		600747164	ACTC	GAS	21A HENRY HILL ROAD TAUPO WAIKATO

Appendix 5 – Decommissioned status exceptions

Permanent disconnection requested – status not reviewed once paperwork returned

ICP Identifier	ICP Creation Date	Responsible Distributor Code	Gas Gate Code	Meter Identifier	ICP Status Code	ICP Connection Status Code	Physical Address Unit	Physical Address Number/RAPID Number	Physical Address Street	Physical Address Suburb	Physical Address Town
0009001270NG540	1/07/2008	NGCD	HTV11301	REMOVED	INACP	GPM		198	VICTORIA STREET		HAMILTON
0009001277NG88A	1/07/2008	NGCD	WHG07501	REMOVED	INACP	GPM		66	JAMES STREET		WHANGAREI
0009001343NG77C	1/07/2008	NGCD	WHG07501	REMOVED	INACP	GPM		16	REYBURN STREET		WHANGAREI
0009001532NG862	1/07/2008	NGCD	TRG07701	REMOVED	INACP	GPM		881	CAMERON ROAD		TAURANGA
1001246804NG5A9	22/05/2012	NGCD	HTV11301	REMOVED	INACP	GPM		13	PUKETE ROAD	SAINT ANDREWS	HAMILTON
1001256410NGAE3	6/06/2013	NGCD	HTV11301	REMOVED	INACP	GPM		1115	HEAPHY TERRACE	FAIRFIELD	HAMILTON
1001257718NGA54	16/07/2013	NGCD	HTV11301	REMOVED	INACP	GPM	3	12	CAMPBELL STREET	FRANKTON	HAMILTON
1001257719NG611	23/07/2013	NGCD	HTV11301	REMOVED	INACP	GPM	4	12	CAMPBELL STREET	FRANKTON	HAMILTON
1001258426NG454	14/08/2013	NGCD	PPA33201	REMOVED	INACP	GPM		77	KAREWA PARADE	PAPAMOA BEACH	PAPAMOA
1001265359NGAD9	15/04/2014	NGCD	HTV11301	REMOVED	INACP	GPM	2	18	CAMPBELL STREET	FRANKTON	HAMILTON
1001265361NGF35	15/04/2014	NGCD	HTV11301	REMOVED	INACP	GPM	4	18	CAMPBELL STREET	FRANKTON	HAMILTON
1001274370NG09C	4/02/2015	NGCD	TRG07701	REMOVED	INACP	GPM		69	SPRING STREET	TAURANGA	TAURANGA
1001287114NG31D	13/02/2016	NGCD	HTV11301	REMOVED	INACP	GPM		426	VICTORIA STREET	HAMILTON CENTRAL	HAMILTON
1001291985NGD93	3/06/2016	NGCD	HTV11301	REMOVED	INACP	GPM		226	VICTORIA STREET	HAMILTON CENTRAL	HAMILTON
1001295378NGE55	5/12/2017	NGCD	OTO14101	REMOVED	INACP	GPM		81	Maniapoto Street		Otorohanga
1001295466NG861	18/01/2018	NGCD	PPA33201	REMOVED	INACP	GPM		12	Evelyn Place	Papamoa Beach	Papamoa
1001297473NGCC3	28/05/2019	NGCD	GIS07810	REMOVED	INACP	GPM		27	Fergusson Drive	Te Hapara	Gisborne
1001304257NG7D2	19/12/2022	NGCD	HTV11301	REMOVED	INACP	GPM	1	24-26	Rotokauri Road	Nawton	Hamilton
1001304258NG80C	19/12/2022	NGCD	HTV11301	REMOVED	INACP	GPM	2	24-26	Rotokauri Road	Nawton	Hamilton
1001304259NG449	19/12/2022	NGCD	HTV11301	REMOVED	INACP	GPM	3	24-26	Rotokauri Road	Nawton	Hamilton

Appendix 6 – Sullivan Crescent



ICP Identifier	Physical Address Unit	Physical Address Number / RAPID Number	Physical Address Street	Physical Address Town	Gas Gate Code	ICP Creation Date	Responsible Distributor Code	Responsible Retailer Code	Responsible Meter Owner Code	Meter Identifier	ICP Status Code	ICP Connection Status Code
0001036305NG4CC		1	SULLIVAN CRESCENT	HAMILTON	HTK08301	24/05/2011	NGCD	GENG	NGCM	600580457	ACTC	GAS
0003013924NGC49	1		SULLIVAN CRESCENT	HAMILTON	HTK08301	1/07/2008	NGCD	GENG	NGCM	REMOVED	INACP	GPM
0001036306NG80C		2	SULLIVAN CRESCENT	HAMILTON	HTK08301	24/05/2011	NGCD	GENG	NGCM	600762139	ACTC	GAS
0003013925NG00C	2		SULLIVAN CRESCENT	HAMILTON	HTK08301	1/07/2008	NGCD	GENG	NGCM	REMOVED	INACP	GPM
0001036307NG449		3	SULLIVAN CRESCENT	HAMILTON	HTK08301	24/05/2011	NGCD	GNVG	NGCM	11EG1838	ACTC	GAS
0003013926NGCCC	3		SULLIVAN CRESCENT	HAMILTON	HTK08301	1/07/2008	NGCD	GENG	NGCM	REMOVED	INACP	GPM
0001036308NGB97		4	SULLIVAN CRESCENT	HAMILTON	HTK08301	24/05/2011	NGCD	GENG	NGCM	11EG1814	ACTC	GAS
0003021477NGFE5	4		SULLIVAN CRESCENT	HAMILTON	HTK08301	1/07/2008	NGCD	GENG	NGCM	REMOVED	INACP	GPM
0001036309NG7D2		5	SULLIVAN CRESCENT	HAMILTON	HTK08301	24/05/2011	NGCD	MEGA	NGCM	11EG1812	ACTC	GAS
0003013929NG312	5		SULLIVAN CRESCENT	HAMILTON	HTK08301	1/07/2008	NGCD	GENG	NGCM	REMOVED	INACT	GNM
0001036310NG32E		6	SULLIVAN CRESCENT	HAMILTON	HTK08301	24/05/2011	NGCD	GNVG	NGCM	600579485	ACTC	GAS
0003013930NG7EE	6		SULLIVAN CRESCENT	HAMILTON	HTK08301	1/07/2008	NGCD	GENG	NGCM	REMOVED	INACP	GPM
0001036311NGF6B		7	SULLIVAN CRESCENT	HAMILTON	HTK08301	24/05/2011	NGCD	TRUS	NGCM	11EG1839	ACTC	GAS
0003013931NGBAB	7		SULLIVAN CRESCENT	HAMILTON	HTK08301	1/07/2008	NGCD	GENG	NGCM	REMOVED	INACT	GNM
0001036312NG3AB		8	SULLIVAN CRESCENT	HAMILTON	HTK08301	24/05/2011	NGCD	PUNZ	NGCM	600580432	ACTV	GAS
0003013932NG76B	8		SULLIVAN CRESCENT	HAMILTON	HTK08301	1/07/2008	NGCD	GENG	NGCM	REMOVED	INACT	GNM
0001036317NGEE4		9	SULLIVAN CRESCENT	HAMILTON	HTK08301	25/05/2011	NGCD	GENG	NGCM	600580461	ACTC	GAS
0001036313NGFEE		10	SULLIVAN CRESCENT	HAMILTON	HTK08301	24/05/2011	NGCD	GENG	NGCM	600762763	ACTC	GAS
0003013935NGAA1	10		SULLIVAN CRESCENT	HAMILTON	HTK08301	1/07/2008	NGCD	GENG	NGCM	REMOVED	INACP	GPM
0001036314NG224		11	SULLIVAN CRESCENT	HAMILTON	HTK08301	24/05/2011	NGCD	GENG	NGCM	600762767	ACTC	GAS
0003025349NG204	11		SULLIVAN CRESCENT	HAMILTON	HTK08301	1/07/2008	NGCD	GENG	NGCM	REMOVED	INACP	GPM
0001036315NGE61		12	SULLIVAN CRESCENT	HAMILTON	HTK08301	24/05/2011	NGCD	GENG	NGCM	11EG1841	ACTC	GAS
0003022486NG157	12		SULLIVAN CRESCENT	HAMILTON	HTK08301	1/07/2008	NGCD	GENG	NGCM	REMOVED	INACP	GPM
0001036316NG2A1		13	SULLIVAN CRESCENT	HAMILTON	HTK08301	24/05/2011	NGCD	MEGA	NGCM	600579492	ACTC	GAS
0003013934NG6E4	9		SULLIVAN CRESCENT	HAMILTON	HTK08301	1/07/2008	NGCD	GENG	NGCM	REMOVED	INACP	GPM
0001036318NG13A		14	SULLIVAN CRESCENT	HAMILTON	HTK08301	25/05/2011	NGCD	TRUS	NGCM	11EG1859	ACTC	GAS

ICP Identifier	Physical Address Unit	Physical Address Number / RAPID Number	Physical Address Street	Physical Address Town	Gas Gate Code	ICP Creation Date	Responsible Distributor Code	Responsible Retailer Code	Responsible Meter Owner Code	Meter Identifier	ICP Status Code	ICP Connection Status Code
0003023207NGFFE	14		SULLIVAN CRESCENT	HAMILTON	HTK08301	1/07/2008	NGCD	GENG	NGCM	REMOVED	INACP	GPM
0003025683NG27F	14 A		SULLIVAN CRESCENT	HAMILTON	HTK08301	1/07/2008	NGCD	GENG	NGCM	REMOVED	INACP	GPM
0001036319NGD7F		15	SULLIVAN CRESCENT	HAMILTON	HTK08301	25/05/2011	NGCD	PUNZ	NGCM	11EG1858	ACTC	GAS
0003013940NG2B3	15		SULLIVAN CRESCENT	HAMILTON	HTK08301	1/07/2008	NGCD	GENG	NGCM	REMOVED	INACP	GPM
0001036320NG4D6		16	SULLIVAN CRESCENT	HAMILTON	HTK08301	25/05/2011	NGCD	GENG	NGCM	600580443	ACTC	GAS
0003025696NG59D	16		SULLIVAN CRESCENT	HAMILTON	HTK08301	1/07/2008	NGCD	GENG	NGCM	REMOVED	INACP	GPM
0001036321NG893		17	SULLIVAN CRESCENT	HAMILTON	HTK08301	25/05/2011	NGCD	CTCT	NGCM	11EG1835	ACTC	GAS
0003013943NGE73	17		SULLIVAN CRESCENT	HAMILTON	HTK08301	1/07/2008	NGCD	GENG	NGCM	REMOVED	INACT	GNM
1001246717NGCCB		18	SULLIVAN CRESCENT	HAMILTON	HTV11301	18/05/2012	NGCD	GENG	NGCM	600579482	ACTC	GAS
0003013923NG183		18	SULLIVAN CRESCENT	HAMILTON	HTV11301	1/07/2008	NGCD	GENG	NGCM	REMOVED	DECR	GDE
0003013928NGF57		18	SULLIVAN CRESCENT	HAMILTON	HTV11301	1/07/2008	NGCD	GENG	NGCM	REMOVED	DECR	GDE
0003013933NGB2E		18	SULLIVAN CRESCENT	HAMILTON	HTV11301	1/07/2008	NGCD	GENG	NGCM	REMOVED	DECR	GDE
0003016428NGD7F	18		SULLIVAN CRESCENT	HAMILTON	HTK08301	1/07/2008	NGCD	GENG	NGCM	REMOVED	INACP	GPM
0003013937NGA24		18	SULLIVAN CRESCENT	HAMILTON	HTV11301	1/07/2008	NGCD	GENG	NGCM	REMOVED	DECR	GDE
0003013942NG236		18	SULLIVAN CRESCENT	HAMILTON	HTV11301	1/07/2008	NGCD	GENG	NGCM	REMOVED	DECR	GDE
0003013951NG45B		18	SULLIVAN CRESCENT	HAMILTON	HTV11301	1/07/2008	NGCD	GENG	NGCM	REMOVED	DECR	GDE
1001247017NG269		19	SULLIVAN CRESCENT	HAMILTON	HTV11301	30/05/2012	NGCD	GENG	NGCM	600662830	ACTC	GAS
0003013945NGFFC		19	SULLIVAN CRESCENT	HAMILTON	HTV11301	1/07/2008	NGCD	GENG	NGCM	REMOVED	DECR	GDE
0003022494NGB7F	20		SULLIVAN CRESCENT	HAMILTON	HTK08301	1/07/2008	NGCD	GENG	NGCM	REMOVED	INACT	GNM
0003023466NGA4D	21		SULLIVAN CRESCENT	HAMILTON	HTK08301	1/07/2008	NGCD	GENG	NGCM	REMOVED	INACT	GNM
0003020498NGB21	22		SULLIVAN CRESCENT	HAMILTON	HTK08301	1/07/2008	NGCD	GENG	NGCM	REMOVED	INACP	GPM
0003017719NG461	23		SULLIVAN CRESCENT	HAMILTON	HTK08301	1/07/2008	NGCD	GENG	NGCM	REMOVED	INACT	GNM
0003017010NG532	24		SULLIVAN CRESCENT	HAMILTON	HTK08301	1/07/2008	NGCD	GENG	NGCM	REMOVED	INACP	GPM

Appendix 7 – Control Rating Definitions

Rating	Definition
Ineffective	<p>The design of controls <u>overall is ineffective</u> in addressing key causes and/or consequences.</p> <p>Documentation and/or communication of the controls <u>does not exist</u> (e.g. policies, procedures, etc.).</p> <p>The controls are <u>not in operation</u> or have not yet been implemented.</p>
Needs improvement	<p>The design of controls <u>only partially</u> addresses key causes and/or consequences.</p> <p>Documentation and/or communication of the controls (e.g. policies, procedures, etc.) are <u>incomplete, unclear, or inconsistent</u>.</p> <p>The controls are <u>not operating consistently</u> and/or effectively and have not been implemented in full.</p>
Acceptable	<p>The design of controls is <u>largely adequate and effective</u> in addressing key causes and/or consequences.</p> <p>The controls (e.g. policies, procedures, etc.) <u>have been formally documented but not proactively communicated</u> to relevant stakeholders.</p> <p>The controls are <u>largely operating in a satisfactory manner</u> and are providing some level of assurance.</p>
Effective	<p>The design of controls is <u>adequate and effective</u> in addressing the key causes and/or consequences.</p> <p>The controls (e.g. policies, procedures, etc.) have been <u>formally documented and proactively communicated</u> to relevant stakeholders.</p> <p>The controls overall, are <u>operating effectively</u> so as to manage the risk.</p>

Appendix 8 – Impact Rating Definitions¹

Rating	Definition
Insignificant	<ul style="list-style-type: none"> • A <u>small number of issues</u> with registry file timeliness and/or accuracy. <u>Negligible impact</u> on other participants or consumers. <u>Did not prevent</u> the process completing. • A <u>small number of issues</u> with the accuracy and/or timeliness of files to the Allocation Agent. Corrections <u>were</u> made by the interim allocation. A <u>small number of issues</u> not related to registry or allocation information.
Minor	<ul style="list-style-type: none"> • <u>Some issues</u> with registry file timeliness and/or accuracy. <u>Minor impact</u> on other participants or consumers. <u>Did not prevent</u> the process completing. • <u>Some issues</u> with the accuracy and/or timeliness of files to the Allocation Agent. Corrections <u>were</u> made by the interim allocation. A <u>small number of issues</u> not related to registry or allocation information.
Moderate	<ul style="list-style-type: none"> • A <u>moderate number of issues</u> with registry file timeliness and/or accuracy. <u>Moderate impact</u> on other participants or consumers. <u>Did prevent</u> some processes completing. • A <u>moderate number of issues</u> with the accuracy and/or timeliness of files to the Allocation Agent. Corrections <u>were not</u> made by the interim allocation. A <u>moderate number of issues</u> not related to registry or allocation information.
Major	<ul style="list-style-type: none"> • A <u>significant number of issues</u> with registry file timeliness and/or accuracy. <u>Major impact</u> on other participants or consumers. <u>Did prevent</u> some processes completing. • A <u>significant number of issues</u> with the accuracy and/or timeliness of files to the Allocation Agent. Corrections <u>were not</u> made by the interim allocation. A <u>significant number</u> of issues not related to registry or allocation information.

¹ These ratings are indicative and will be used as a guide only, to aid the Market Administrator's assessment of alleged breaches.

Appendix 9 – Remedial Action Rating Definitions

Rating	Definition
Completed	The alleged breach and impact have been resolved. Systems and processes are now compliant.
In progress	Steps are being taken to resolve the alleged breach and impact and ensure systems and processes are compliant.
No action	Participant undertakes no action to resolve or address auditor controls or impact assessments for commercial reasons.

Appendix 10 – Firstgas Comments

Firstgas Distribution

Above document include comments. We are currently working on identifying discrepancies in the gas registry that were nominated in the preliminary discussions as well as in the Draft presented by the Auditor.

For 528 ICPs (in collaboration with the Engineering team) we updated the gas pressure in the gas registry.

The following gas gate corrections have been made – either by correcting the gas gate as per the Auditor's recommendation or have been corrected as per our own judgement:

2 streets in Kapiti

111 streets in the Bay of Plenty

164 streets in the Waikato region

The Distribution Connection Team is working on the necessary updates for the gas gates assigned to each ICP. Modifications were made where appropriate (not knowing the Auditor's source of truth, I did not make the updates based only on the recommendations of the Firstgas Distributor and Meter Owner draft gas audit report). Gate allocation on a dual feed network is open to interpretation due to the nature of the network where ICP's may be supplied from alternative gates depending on network demand.

I created the Plans for new verification and monitoring business tools.

Once these are finalized and implemented in Prod we can actively update gas registry database information's.

1. A business tool that allows us to verify the physical address for each ICPs
2. A business tool that allows us to verify altitude for ICPs
3. A business tool that allows us to verify all ICPs Network Pressure
4. A business tool that allows us to verify all ICPs Allocated Gas Gate
5. A business tool that allows us to verify the Status of an ICPs (Active, Inactive or Decommissioned)

For check load shedding categories for reasonableness when changes are requested.

Here is a collaboration between Retailers and Distributors, so far we have updated the Load Shedding category at the request of the Retailers. Any change to the Load Shedding Category needs to be in alignment with the Gas Governance (Critical Contingency Management) Regulations.

Meter Owner was solved by the following steps:

1. The problem with user / password for FGDM in gas registry was solved.
2. For the FGDM account, I have updated the email address in gas registry
3. In gas registry I have updated all the details about the meters belonging to the ICPs:
4. We know and have saved all the details related to metering vs gas registry.

All the details about the FGDM account accesses and returns in gas registry have been saved in Sharepoint (with access from the Distribution Team). From now on we know who, what, when will update the gas registry in collaboration with Metrology Lab.

Field technicians (who install meters) are informed of the new roles in the Distribution Team and whenever they make a change to customers they will inform us in due time. Thus we will be able to update the new information in the gas registry in real time in the future.