



# PERFORMANCE AUDIT REPORT UNDER THE SWITCHING ARRANGEMENTS AND DOWNSTREAM RECONCILIATION RULES

Nova Energy Limited as Distributor and Meter Owner

Audit date: 4 to 6 December 2017

Report date: 17 April 2018

Under the Gas (Switching Arrangements) Rules 2008 and the Gas (Downstream Reconciliation) Rules 2008 the Gas Industry Company commissioned Langford Consulting to undertake a performance audit of Nova Energy Ltd in its role as both distributor and meter owner. The purpose of the audit is to assess compliance with the rules and the systems and processes put in place to enable compliance.

Auditor Julie Langford

[julie@langfordconsulting.co.nz](mailto:julie@langfordconsulting.co.nz)

## Executive Summary

Under the Gas (Switching Arrangements) Rules 2008 and the Gas (Downstream Reconciliation) Rules 2008 the Gas Industry Company (GIC) commissioned Langford Consulting to undertake a performance audit of Nova Energy Ltd (Nova) in its role as both distributor and meter owner.

The purpose of the audit is to:

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

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

The summary of report findings shows that the Nova control environment, of the fifteen areas evaluated, is “effective” for five areas, “not adequate” for five areas and five areas were confirmed as not applicable to Nova’s business. No areas were found to be “adequate”.

Nova as meter owner was unable to supply all the documentation required by NZS5259 to demonstrate compliance with the standard, which affected the auditor’s ability to form a view regarding compliance with NZS5259 and to confirm some registry entries. A repeat audit has therefore been recommended.

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

### As Distributor:

**RECOMMENDATION:** That Nova as distributor keep a record of retailer requests for new ICPs to enable them to monitor the timeliness of the distributor’s response.

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

**RECOMMENDATION:** Consider a review of rules 51 and 53 once all the distributors have undergone their first audit. This is already being considered by the GIC.

**RECOMMENDATION:** That Nova as distributor initiate regular processes for identifying and rectifying data quality issues in their registry data.

**RECOMMENDATION:** The load shedding category should be actively maintained. Data that is available to assist includes allocation group changes by retailers, billing information and retailer requests for metering upgrades. GIEP1 data provided by retailers to distributors at an ICP-level to support invoicing, could be used to evaluate potential changes in the category.

**RECOMMENDATION** Where the distributor fields in the registry differ from data in Nova's systems, Nova should verify the data back to its original source to ensure it is accurate, before revising the registry.

**As Meter Owner:**

**RECOMMENDATION:** Nova as meter owner should keep a record of the decision making relating to the equipment selected for a new site to demonstrate its suitability for the likely conditions. Nova intend to build a process for this using their CMMS system.

**RECOMMENDATION:** Nova should produce a procedure relating to the selection of GMSs.

**RECOMMENDATION:** That Nova establish full documentation for its GMS to demonstrate NZS5259 compliance, as required by the standard.

**RECOMMENDATION:** Where Nova is the meter owner in the registry, but it is thought the meter may have been removed and replaced with another meter owners equipment, a site visit should be scheduled to establish the facts and the registry updated by Nova to show that their meter has been removed, if applicable.

**RECOMMENDATION:** That Nova as meter owner is audited again, once they have had time to improve their documentation, to verify that they are compliant with NZS5259 regarding documentation, operation, maintenance and testing. Nova has suggested this should be next year.

**RECOMMENDATION:** Where there is a difference between registry information and that held by Nova's Computerised Maintenance Management System (CMMS), this should be verified against original documentation (i.e. installation or maintenance sheets) before making any changes to the registry. If there is no documentation to confirm the correct information a site visit should be scheduled.

**RECOMMENDATION:** It is recommended Nova keep a log of retailer queries showing the open date, close date, description of the issue and the outcome. This would enable Nova to ensure queries were being effectively managed and note any patterns in the queries, which might highlight problems with equipment or processes.

## Summary of breach allegations

Section	Summary of issue	Rules potentially breached
<b>As Distributor</b>		
4.2	1 ICP out of a sample of 4, where records of the retailer request were available, did not have an ICP assigned within 3 business days of request.	r51.2
4.3	Inaccurate altitudes recorded on the registry for 3 ICPs.	r58.1
4.3	Inaccurate network pressures recorded in the registry for 45 ICPs (r58.1)	r58.1
4.3	Inaccurate load shedding categories for 18 ICPs	r58.1
<b>As Meter Owner</b>		
5.1.1 and 5.5	<p>Registry not updated for Nova meters that have been removed:</p> <ul style="list-style-type: none"> <li>• For 2 ICPs within a sample of 24 the registry is inaccurate – Nova is shown as the meter owner, but their meter is thought to have been removed. (section 5.1.1)</li> <li>• For 13 ICPs shown as active with a Nova meter on the registry there are no records in Nova’s CMMS system because it is suspected by Nova that their meter has been removed. (section 5.5)</li> </ul>	r58.1
5.5	Inaccurate registry entries for meter pressure for 12 ICPs	r58.1
5.5	Inaccurate registry entries for register reading digits for 134 ICPs	r58.1

## Summary of report findings

Issue	Section	Control Rating (refer to appendix 1 for definitions)	Compliance Rating	Comments
GENERAL COMPLIANCE				
Participant registration information	3.1	Effective	Compliant	All details were current, but Nova took the opportunity to change some details to a more suitable contact within the correct business area.
Obligation to act reasonably	3.2	Effective	Compliant	No examples of Nova acting unreasonably were found
Obligation to use registry software competently	3.3	Effective	Compliant	No examples of Nova using software incompetently were found
AS DISTRIBUTOR				
Assignment of ICPs	4.1	Effective	Compliant	
Creation of new ICPs	4.2	Not adequate	Not compliant	There are no operating controls to manage the timeliness of ICP assignment.
Maintenance of ICP information in registry	4.3	Not adequate	Not compliant	Nova as distributor do not currently do any ICP maintenance. There are no quality controls to identify registry data that may have been entered incorrectly or maintenance of fields that can change.
Notices of gas gate creation/decommissioning	4.4	Not applicable		Nova had not had any new gas gates or decommissioned any gas gates in the 60 months leading up to this audit.
Publishing of network price category codes	4.5	Not applicable		Nova confirmed that it does not have any network price categories
Disclosure of ICP information	4.6	Not applicable		No instances of information being withheld under rule 50 have occurred.
Loss factor codes	4.7	Not applicable		Nova has no loss factor codes
AS METER OWNER				
Compliance with NZS5259	5.1	Not adequate	Unable to form a view	Unable to supply all the documentation required by NZS5259 to demonstrate compliance with the standard, which affected auditor's ability to form a view re. compliance with NZS5259.
Provision of metering price codes	5.2	Effective	Compliant	No issues found with this process
Disclosure of ICP information	5.3	Not applicable		No instances have occurred.

Registry information for new ICPs	5.4	Not adequate	Unable to form a view	A lack of documentation meant that registry data could not be verified
Maintenance of ICP information	5.5	Not adequate	Not compliant	Discrepancies between the registry data and Nova's systems were identified.

## Table of Contents

Executive Summary .....	1
Summary of breach allegations .....	3
Summary of report findings.....	0
1. Introduction.....	1
2. General Compliance .....	1
2.1 Switch Breach Report.....	1
2.2 Summary of previous audit.....	1
2.3 Provision of Information to the Auditor (rule 91).....	1
3. Nova as both Distributor and Meter Owner .....	2
3.1 Participant registration information.....	2
3.2 Obligation to act reasonably .....	2
3.3 Obligation to use registry software competently.....	2
4. Obligations as Distributor.....	2
4.1 Assignment of ICPs (Rules 5.2, 43.1, 43.2).....	2
4.2 Creation of new ICPs (rule 51 and 53).....	3
4.3 Maintenance of ICP in the registry .....	5
4.4 Notices of gas gate creation/decommissioning.....	8
4.5 Publishing of network price category codes.....	8
4.6 Disclosure of ICP information.....	8
4.7 Loss factor codes .....	8
5. Obligations as Meter Owner .....	9
5.1 Compliance with NZS5259 .....	10
5.1.1 Documentation.....	10
5.1.2 Operation and maintenance .....	13
5.1.3 Testing .....	13
5.2 Provision of metering price codes.....	14
5.3 Disclosure of ICP information.....	14
5.4 Registry information for new ICPs .....	14
5.5 Maintenance of ICP information.....	15
6. Breach Allegations .....	20
7. Conclusion .....	21
Appendix A – Control Rating Definitions.....	23

# 1. Introduction

Under the Gas (Switching Arrangements) Rules 2008 (the switching rules) and the Gas (Downstream Reconciliation) Rules 2008 (the reconciliation rules) the Gas Industry Company commissioned Langford Consulting to undertake a performance audit of Nova Energy Ltd (Nova) in its role as both distributor and meter owner.

The purpose of the audit is to:

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

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

The engagement commenced on 25 July 2017 and involved a site visit to the Nova offices in Wellington on 4 to 6 December 2017.

The focus of the audit is predominantly the switching rules but extends to the reconciliation rules with respect to Nova's role as meter owner, in particular to rules 26.5 and 27 of the reconciliation rules. These rules specifically require meter owners to support compliance with and verify accuracy in accordance with NZS5259: 2015 (NZS5259). Compliance with this standard is therefore included within the scope of this audit.

## 2. General Compliance

### 2.1 Switch Breach Report

There are no breaches for Nova as a distributor and meter owner in the period 1 January 2014 to the end of August 2017.

### 2.2 Summary of previous audit

This is the first audit for Nova under these rules with respect to its distributor and meter owner responsibilities.

### 2.3 Provision of Information to the Auditor (rule 91)

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



The audit took longer than usual due to delay in the supply of information; the cancelling and rearrangement of the on-site audit dates originally set for October; the lack of staff availability during the rearranged on-site audit in December, which led to the need to pursue outstanding matters by e-mail and phone calls. The last of the initial information request sent 3 August 2017 was supplied 26 February 2018.

### 3. Nova as both Distributor and Meter Owner

#### 3.1 Participant registration information

The participant register information for Nova was reviewed. The physical and postal addresses were both current and the phone number and e-mail address were also current. Nova did however take the opportunity to change the phone number and e-mail address to a more suitable contact within the correct business area.

#### 3.2 Obligation to act reasonably

No examples of Nova acting unreasonably were found.

#### 3.3 Obligation to use registry software competently

No examples of Nova using registry software incompetently were found.

### 4. Obligations as Distributor

All of Nova's distribution systems are bypass networks, where Nova is also the only retailer. When the registry was first set up these ICPs were not included. It was however decided in 2013 that they should be included in the registry. Consequently, the registry records look as if a lot of ICPs were created in 2013, but they pre-dated that. They were set up in the registry in 2013.

#### 4.1 Assignment of ICPs (Rules 5.2, 43.1, 43.2)

Nova have an Excel spreadsheet for creating ICP identifiers. Nova as retailer create a customer premise number, which is used as the unique identifier, "NA" is added to this and the check sum algorithm is built into the spreadsheet to generate the check sum digits. It can be seen from a review of a report from the registry that Nova correctly uses the "NA" code in all its ICP assignments.

No problems with this process were identified during the audit.

### **Rule 43.1 and 43.2**

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

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

Nova has “Mapviewer” linked to their Computerised Maintenance Management System (CMMS), which shows existing pipelines and ICPs. Nova as distributor confirm there is no other customer downstream by viewing the address on “Mapviewer”. Every ICP has a meter with a valve on it to enable isolation.

Nova do not use loss factors and has no network price categories.

Nova as distributor do not do any additional activities, over and above that of its metering team, to ensure a single set of compliant metering equipment.

### **4.2 Creation of new ICPs (rule 51 and 53)**

Nova is the distributor for bypass networks so only ever receives ICP requests from Nova as retailer. They set up very few new ICPs and created only 2 new ICPs in 2017.

The process for creating ICPs is that when Nova as retailer receive a signed contract for a new connection, they create a retailer premise number. This is sent to their distribution colleagues who assign the ICP identifier (see above), raise the work order for the physical connection and populate all the distributor fields. This is done at the same time, so the processes envisaged by the regulations are concatenated.

Distributors are required to assign an ICP within 3 business days of receiving a request. The auditor requested site of the retailer requests for a sample of ICPs created in the previous 60 months to see what date they were requested to test if the distributor responded within the required 3 business days. Nova’s records were not adequate to enable a test for compliance with the 3 business day test because the original retailer requests sent by e-mail could not be located for the sample. The auditor therefore tried to verify that ICP identifiers were created in the required timeframes by reviewing the last 15 ICP creations, but Nova were only able to find the original e-mail requests for four of these 15 ICPs. Of these, three were created within the required timeframe but one was not.

0001485567NA8D5: Retailer requested ICP by e-mail on 22/7/16; ICP assigned 4/8/16 – 9 business days

**ALLEGED BREACH:** 1 ICP out of a sample of 4, where records of the retailer request were available, did not have an ICP assigned within 3 business days of request (rule 51.2).

Otherwise it was not possible to verify if Nova was creating ICPs within the required timeframe.

**RECOMMENDATION:** That Nova as distributor keep a record of retailer requests for new ICPs to enable them to monitor the timeliness of the distributor's response.

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

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

**RECOMMENDATION:** Consider a review of rules 51 and 53 once all the distributors have undergone their first audit. This is already being considered by the GIC.

### **Altitude**

The process for determining the correct altitude is to view the address on "Mapviewer", which has an overlay of elevations.

### **Network pressure**

Network pressure is determined by viewing the address in "Mapviewer", in combination with the CMMS system which holds asset information.

### **Load shedding category**

The load shedding category is determined by Nova retailer colleagues who have the information from the customer about the appliances to be installed and likely load. Nova distribution enter the category advised by Nova retail and do not undertake any further maintenance of this field.

### **Gas Gate**

The process for determining the correct gas gate for a new ICP is to view the address on "Mapviewer" and to follow the relevant pipeline upstream to the gas gate.

For all new ICPs created in 2017, gas gate accuracy was reviewed by geocoding addresses by gas gate and looking for outliers. No issues arose.

### **Network price category**

Nova is not a regulated distributor, so doesn't have a requirement to determine network price categories. Nova confirmed it doesn't have any network price categories, hence there is nothing for it to publish under rule 46 of the Switching Rules.

### 4.3 Maintenance of ICP in the registry

Nova do not currently do any ICP maintenance once the ICP is set up. This means that there are no quality controls to identify registry data that may have been entered incorrectly or maintenance of fields that can change (status or load shedding).

**RECOMMENDATION:** That Nova as distributor initiate regular processes for identifying and rectifying data quality issues in their registry data.

**RECOMMENDATION:** The load shedding category should be actively maintained. Data that is available to assist includes allocation group changes by retailers, billing information and retailer requests for metering upgrades. GIEP1 data provided by retailers to distributors at an ICP-level to support invoicing, could be used to evaluate potential changes in the category.

#### Altitude

It is a distributor responsibility to populate the registry with correct altitude information to support compliance with NZS 5259:2015, and it is a retailer responsibility to comply with NZS 5259:2015 for the conversion of volume to energy.

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

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

The altitude recorded on the registry for a sample of Nova ICPs was reviewed. The sample was selected by firstly looking for obvious outliers and then increasing the sample size through random selection. 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  $\pm 1.0\%$ . Point 2 above recommends altitude figures are determined to within 10m where practicable. An evaluation of altitude data on the registry was conducted to check whether this recommendation had been met. As noted above, the margin of error of the “google earth” data appears to be approximately  $\pm 10\text{m}$ , therefore, to allow for this margin, issues have only been raised where the registry data is more than  $\pm 20\text{m}$  of “google earth” data. The issues identified are listed in the table below.

ICP	Altitude on registry	Altitude on Google Earth	Difference
0001458205NAED3	0	43	-43
0001458817NAEF1	0	45	-45
0000073237NA085	0	215	-215

Nova has reviewed these ICPs and confirmed that the registry needs to be corrected.

**ALLEGED BREACH:** Inaccurate altitudes being recorded on the registry for 3 ICPs (r58.1)

**Network pressure**

The auditor reviewed network pressure for all Nova distribution ICPs as recorded in the registry against that recorded in Nova’s CMMS system. The network pressure on the registry differed from the network pressure on the report supplied by Nova from its CMMS system for most ICPs. It differed by more than 50 kPa for the following ICPs. The list was shown to Nova who were asked whether the registry or the Nova CMMS system were most reliable. Nova confirmed that the CMMS system was more reliable, and that the registry should be revised.

ICPs where registry network pressure differs from Nova reported network pressure by more than 50 kPa	Registry network pressure	Nova reported network pressure
0000071393NA3D4	35	650
0000071410NA55C	35	650
0000071411NA919	35	650
0000071473NA66C	35	650
0000071484NABB1	35	650
0000071537NACC7	35	650
0000071540NA450	35	650
0000071548NA644	35	650
0000071569NA754	580	650
0000071576NA227	35	650
0000071605NA8B9	400	650
0000071615NA214	35	650
0000071639NAC5F	420	650
0000072141NA6F4	400	650
0000072160NA7E4	7	650
0000072161NABA1	167	650
0000072298NA6E4	595	650
0000072523NA580	7	650
0000072759NA84B	440	650
0000073198NA447	402	650
0000073220NA7E2	585	650
0000073234NAC45	391	650
0000073254NA3B5	590	650
0000073432NABCC	400	650
0000073786NAB77	440	650
0000074191NAE76	400	650
0000074497NAAFC	35	650
0000074498NA522	35	650
0000075044NA6DF	35	650
0000075071NAC68	400	650
0000092681NA364	3	100
0000097147NAD26	271	650

0000101152NACAC	130	650
0000101221NA632	440	650
0000122483NA383	32	100
0001208361NAB3E	180	650
0001209568NA2C9	180	650
0001210623NA9FA	180	650
0001213454NA98A	180	650
0001218671NAC77	180	650
0001218724NA034	180	650
0001229330NA71E	180	650
0001229445NA00E	180	350
0001229726NA03D	180	650
0000072849NADE9	100	440
0000073584NA1F5	650	420

**ALLEGED BREACH:** Inaccurate network pressures recorded in the registry for 45 ICPs (r58.1). Pressures differed by more than 50 kPa when compared to Nova’s system data which is considered by Nova to be more accurate than the registry.

**RECOMMENDATION:** Where the distributor fields in the registry differ from data in Nova’s systems, Nova should verify the data back to its original source to ensure it is accurate, before revising the registry.

**Load shedding**

The auditor reviewed the load shedding categories for all the Nova distributor ICPs against the retailer’s allocation group to identify pairings that are unlikely/incompatible. Nova were asked to review these and to confirm if the load shedding category was accurate.

Nova confirmed that the gas registry requires the following ICPs to have their load shedding categories revised.

These 12 ICPs needed their load shedding categories to be revised to category 4 (from either category 6 or 0):

- 0000071485NA7F4
- 0000072640NA5B3
- 0000073786NAB77
- 0000075071NAC68
- 0000073432NABCC
- 0000102926NAA16
- 0000105149NAE55
- 0001476986NA55A
- 0001476993NA2B8
- 0001476996NAFF7
- 0001478314NA8F2
- 0001479741NA014

These 5 ICPs need their load shedding categories revised to category 6 (from category 4):

0000071536NA082

0000071708NAEE6

0000071741NA212

0000073154NA0B6

0000073429NAFB5

This 1 ICP needed its load shedding category revised to Domestic (from category 4).

0001293704NADA4

**ALLEGED BREACH:** Inaccurate load shedding categories for 18 ICPs (rule 58.1)

### Gas Gate

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

The address data for each gas gate was reviewed to ensure the ICP address was in the correct area of the country.

No issues arose.

### 4.4 Notices of gas gate creation/decommissioning

Nova confirmed they had not had any new gas gates or decommissioned any gas gates in the 60 months leading up to this audit. This was also confirmed against the registry.

### 4.5 Publishing of network price category codes

Nova confirmed that it does not have any network price categories and therefore has nothing to publish. As an unregulated private pipeline owner, there is no requirement for it to have network price categories for its customers.

### 4.6 Disclosure of ICP information

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

### 4.7 Loss factor codes

Nova has no loss factor codes recorded on the registry for its ICPs as these are not applicable to its business.

## 5. Obligations as Meter Owner

Nova store their metering asset information in their CMMS system.

Many of their gas meters were acquired along with the Auckland Gas Company several years ago and the CMMS system entries were sourced from the Auckland Gas Company's records in Orion. No additional information or source documentation is available for these entries. Nova have installed very few new meters except on their own network.

When a new meter is requested the metering team receive a sheet from the retailer showing the appliances to be installed and the anticipated load. The metering team then select the appropriate equipment using their experience. No record of this 'suitability' decision making process is retained and was therefore not available to the auditor.

New meters come with a certificate of compliance from the manufacturer. This shows the degree of accuracy and the conditions within which that accuracy can be expected. Nova consider this to meet their 'acceptance testing' requirement and that the GMS meets the NZS5259 Maximum Permissible Error requirements.

Non-residential GMSs have dates in the CMMS system for when maintenance should occur. The plan is to do yearly site checks, 2 yearly regulator diagnostics, rotary exchanges every 15 years, diaphragm exchanges every 15 years and TOU exchanges every 3 to 5 years. The dates for maintenance in the CMMS drive work order lists. Once the work is completed the date of completion is entered in the CMMS. They want to also start attaching the completed worksheet into the CMMS system but that is not being done consistently yet. Nova also want to populate the CMMS system with more asset specific date (about regulators, correctors etc) captured using handheld devices, but currently this isn't in place. What information has been captured has been data entered from paper field staff maintenance sheets and is patchy.

Nova is currently running three meter projects. Firstly, they are replacing all their domestic meters (defined as less than 10 cubic metres per hour), which includes changing the meter, pressure checking the regulator and completing any necessary maintenance as a part of this site visit. They have started this in Auckland, are about six months into the project and will start in Wellington in 2018.

Secondly, they have gas fitters visiting all the commercial/industrial sites and working through their maintenance check list. This was started in the Auckland area in 2017 and in Wellington in 2018 but is not yet complete.

Thirdly, Nova are upgrading all TOU devices in 2018.

The CMMS system is new and was populated using data from Nova's Orion system. Nova are dedicated to improving and fine tuning the CMMS system. They are slowly adding more information, but it will take some while before it becomes a complete authoritative source.

Nova do have processes for maintaining the registry. Updates are made as a routine part of the upgrade project and corrective updates are done when errors are identified as a part of Nova's routine maintenance and in response to investigations arising from retailer queries.



## 5.1 Compliance with NZS5259

To establish if Nova as meter owner was compliant with the requirements of NZS5259 with respect to its GMS operation, maintenance, testing and accuracy the auditor requested documentation for a sample of ICPs, a copy of the recent meter maintenance programme and copies of recent 'as found' test results.

### 5.1.1 Documentation

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

NZS5259 section 2 sets out performance requirements.

- Records shall be kept of the suitability of the GMS components for the life of the asset (NZS5259 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 (NZS5259 2.8.3)

NZS5259 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. In Nova's case there was no documentation of an alternative approach to compliance, so the auditor assessed compliance against section 3.

- Records shall be kept to monitor 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. (NZS5259 3.7.2)
- Procedures for selection, installation and maintenance of GMSs shall be documented. (NZS 5259 3.7.3)

To verify compliance with the standard the auditor requested this documentation for a cross section of 24 ICPs. The documentation made available for the ICP sample is summarised in the following table.

#### For the sample of 24 ICPs:

Suitability of equipment	Certificate of Compliance (Acceptance testing against NZS5259 requirement)	Installation sheets	Maintenance sheets	Other
None	12	2	6	5

Nova confirmed that when they consider the GMS equipment to be installed at a new ICP, they use the information provided by the retailer about the appliances to be installed, but they do not keep a record of this decision making to demonstrate the suitability of the equipment selected, so it was not possible to review this process. They did have information from the manufacturer to verify that the equipment generally met appropriate standards, but they kept no records of how the equipment selected for a particular site was suitable for the duty required, such that the MPEs would not be exceeded over the range of temperature, pressures and flow rates likely to be encountered. (NZS 5259 2.2.1 and 2.3).

**RECOMMENDATION:** Nova as meter owner should keep a record of the decision making relating to the equipment selected for a new site to demonstrate its suitability for the likely conditions. Nova intend to build a process for this using their CMMS system.

Nova supplied the auditor with three policy documents, one titled “Meter Exchange Regulator Diagnostic Maintenance” (which provides step by step instructions for on-site technicians when exchanging a gas meter and regulator diagnostic maintenance), one titled “Gas Network Maintenance Procedure” (which relates to the integrity of Nova’s gas network asset through proactive and systematic maintenance and makes mention that regular inspection and maintenance of consumer meter sets to ensure that inlet, metering and outlet metering are within prescribed limits). The third document “Gas Distribution Network – Customer Sales Stations Installation Specification”, covers the standard specification requirements for installation of Nova Gas customer sales stations and should be customised for a given site. However, no procedures were supplied that related to the selection of GMSs.

Nova explained that they select GMS equipment sized on customer equipment ratings and required outlet pressure and use GMS installation spec 98108075 SP 1 and guidelines from NZS5259 but there was no documented procedure and no site specific record of this to enable this to be verified.

**RECOMMENDATION:** Nova should produce a procedure relating to the selection of GMSs.

For 11 ICPs no documentation was available.

0000224791QT526  
0001392823QT102  
0002381633QTC6E  
0001423603QT0FE  
0001438599NAF70  
0000405276NA8A3  
0000071402NAF74  
0000390630NA267  
0000073237NA085  
0002379323QTB5A  
0001478314NA8F2

For 3 ICPs the only documentation available was a certificate of compliance. No installation, maintenance or any other documentation was available.

0001449009NAE8B

0001485567NA8D5

0002037001QTA68

For 1 ICP there was a maintenance sheet, but no certificate of compliance, installation sheet or any other documentation.

0001416402QT0B0

This lack of documentation required by NZS 5259 impacted the auditor's ability to assess compliance with other aspects of NZS5259.

Nova explained some of the reasons for the lack of documentation:

- They were unable to supply certificate of compliance records by site because they sometimes received these as a batch from the metering supplier and they hadn't been filed in a way where they could be found by site.
- They had changed a supplier and so the current supplier couldn't assist them with backfilling missing certificates for meters supplied by the previous supplier. It will be easier for Nova to switch out those older meters than to backfill the compliance certificates.

Another issue where Nova didn't have the appropriate documentation related to sites in Auckland where it was not clear if Nova was still the meter owner. Nova has a relatively small market share in the meter owner market. It uses a Field Service Provider (FSP) who does not work exclusively for Nova and for whom Nova's business is only a small part of the FSP's meter work. When the FSP goes to a site and identifies that a Nova meter needs to be changed they are likely to be carrying another client's gas meter with them, but not always a Nova meter. The contractor may then swap the meter out for the other client's meter and not properly communicate that to Nova. This may have happened for these 2 ICPs within the sample of 24 reviewed:

0001423603QT0FE

0002381633QTC6E

The FSP have been supplied with reactive boxes which carry Nova meters, however they still install other meter owner equipment. Nova explained that neither the alternate asset owner or contractor have provided exchange documentation to Nova for these exchanges. Nova don't know who authorised them.

It is understood Nova has made a start on working through this issue with their FSP.

**ALLEGED BREACH:** For 2 ICPs within a sample of 24 the registry is inaccurate – Nova is shown as the meter owner, but their meter is thought by Nova to have been removed. (r58.1)

**RECOMMENDATION:** That Nova establish full documentation for its GMS to demonstrate NZS5259 compliance, as required by the standard.

**RECOMMENDATION:** Where Nova is the meter owner in the registry, but it is thought the meter may have been removed and replaced with another meter owners equipment, a site visit should be scheduled to establish the facts and the registry updated by Nova to show that their meter has been removed, if applicable.

The recommendation is restricted to Nova's responsibilities to the gas registry, but it is also suggested that Nova meet with the other parties to resolve the operational issues. It will be necessary for the alternative meter owner to ensure their meter details are added to the registry, for retailers to update the meter information they use for billing their customers and there could be wider implications such as incorrect billing for meter use by Nova to retailers.

Nova as meter owner was unable to supply all the documentation required by NZS5259 to demonstrate compliance with the standard, which affected the auditor's ability to form a view regarding compliance with NZS5259 and to confirm some registry entries. A repeat audit has therefore been recommended.

In summary:

- Nova keep no records relating to the suitability of equipment for the expected operating conditions. They do have general documentation about the compliance of equipment supplied by the manufacturer.
- Nova have no documented procedures for the selection of GMS
- For 11 ICPs within a sample of 24, Nova does not have any of the documentation required by NZS5259 to demonstrate compliance.
- For 3 ICPs within a sample of 24, Nova have a certificate of compliance to demonstrate acceptance testing but have no other records for installation or any other activity.
- For 1 ICP within a sample of 24, Nova had records of one maintenance check but no record of acceptance testing (i.e. no certificate of compliance), installation or any other activity.
- For 16 new ICPs, from a sample of 28 new ICPs, there was no documentation to verify installation or maintenance activities, so registry entries could not be confirmed.

### 5.1.2 Operation and maintenance

For commercial meters Nova plans to visit the site every two years. This will be a condition check unless a lab test is due, including the checking of meter pressure if gas is flowing. They target a lab test every 5 years.

For residential sites Nova has a programme of meter replacement for those over 15 years, although some sampling shows domestic meters over 15 years are still reliable.

The auditor was unable to confirm whether Nova's actual activity complied with their stated processes because of the lack of documentation supplied for the sample selected (as explained in section 5.1.1). However, it was possible to see from the Nova maintenance system that maintenance dates were planned in accordance with the stated process.

The auditor has presumed the lack of maintenance sheets reflects poor documentation rather than a low level of maintenance activity, but it is recommended this is verified in a subsequent audit once Nova have improved their record-keeping.

### 5.1.3 Testing

All components of a GMS that may affect accuracy need to pass acceptance testing prior to installation. The auditor was unable to confirm whether Nova's actual activity complied with this requirement because of the lack of documentation supplied for the sample selected (as explained in section 5.1.1). However, as the manufacturer routinely supplies a certificate of compliance with

equipment when purchased the auditor has presumed this reflects poor documentation rather than equipment that has not been tested.

Nova do 'as found' testing when:

- routine exchange of a device for scheduled maintenance and it is intended to re-cycle the device back into service
- if a device is disputed
- if a customer requests the device is exchanged

If a meter fails a lab test it is scrapped, Nova don't re-use failed meters. Historic corrections are rarely done, and no instances could be recalled in recent memory for auditor review.

Nova do not do 'as found' testing very frequently as their portfolio of meters is small and because they replace residential meters rather than testing and recycling them. Residential meters therefore only get 'as found' tested if they are disputed. Within the sample of documentation requested to confirm compliance with NZS5259 there were no 'as found' test results.

Nova did however supply the auditor with some recent 'as found' laboratory test results and some on-site check sheets which showed accuracy checks for correctors.

**RECOMMENDATION:** That Nova as meter owner is audited again, once they have had time to improve their documentation, to verify that they are compliant with NZS5259 regarding documentation, operation, maintenance and testing. Nova has suggested this should be next year.

## 5.2 Provision of metering price codes

The auditor reviewed the metering price codes published on the registry by Nova against the metering price codes for the Nova meters. No issues arose.

## 5.3 Disclosure of ICP information

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

## 5.4 Registry information for new ICPs

Nova were supplied with a sample of new ICPs, created in the last 60 months, and asked to supply documentation to verify the registry entries for meter pressure, register reading digits and register multiplier. It should be possible to verify registry entries for meter pressure and the number of reading digits against installation or maintenance sheets. However, these were missing for many of the sample.

A summary of the documentation that was made available is detailed in the table below:

### For the sample of 28 new ICPs:

Suitability of equipment	Certificate of Compliance (Acceptance testing against NZS5259 requirement)	Installation sheets	Maintenance sheets	Other
None	22	1	8	3

For 6 ICPs no documentation was available.

For 10 ICPs the only documentation available was a Certificate of Compliance, no installation, maintenance or any other documentation was available.

This meant that for 16 ICPs out of a sample of 28 ICPs, it was not possible to verify the registry entries due to an absence of documentation. There were no installation, maintenance or exchange sheets or any other site visit related documentation.

For those where documentation was available, so it was possible to verify the registry entries, no errors were found.

5 of the sample were TOU meters created in the last 60 months and for 4 out of the 5 it was possible to verify the network pressure back to installation or maintenance sheets. There was no on-site documentation for installation or maintenance for one TOU site, so it was not possible to verify that network pressure.

The lack of documentation meant the auditor was unable to form a view regarding the accuracy of registry information for new ICPs.

## 5.5 Maintenance of ICP information

The auditor reviewed the effectiveness of Nova's processes for maintaining meter owner registry information by comparing registry data for all records where Nova was meter owner against Nova's CMMS records. This analysis of registry information against an extract from Nova's CMMS system revealed the following discrepancies.

There was a list of active Nova meters on the registry, not found in the report provided from CMMS. It was explained by Nova during the on-site audit that these ICPs described as ACTC in the registry no longer have Nova meters.

ICP Identifier	Profile Code	ICP Status Code
0000073197NAB99	XTOU	ACTC
0000489571NAECE	GGRP	ACTC
0000490480NAFD9	GGRP	ACTC
0001397594QTC52	GGRP	ACTC
0001405217QTB55	GGRP	ACTC

0001419968QT1B9	GGRP	ACTC
0001433810QT879	GGRP	ACTC
0002319801QT7DC	GGRP	ACTC
0002378286QT6AE	GGRP	ACTC
0002378299QT3DD	GGRP	ACTC
0002378313QTD02	GGRP	ACTC
0002380261QT942	GGRP	ACTC
0002380803QTC3D	GGRP	ACTC

Nova should update the metering information in the registry to reflect the fact that the meters have been removed.

**ALLEGED BREACH:** For 13 ICPs shown as active with a Nova meter on the registry there are no records in Nova’s CMMS system and it is suspected by Nova that their meter has been removed. (r58.1)

This is thought to be the same issue as was identified and described in more detail, together with a recommendation, in section 5.1.1 relating to the FSP removing Nova meters and exchanging them for another meter owner’s meters.

The following ICPs have meter pressures that differ from those in Nova’s CMMS system:

ICP Identifier	Profile Code	ICP Status Code	TOU Meter	Registry Meter Pressure	Nova meter pressure
0000012041QTB52	GGRP	ACTC	N	3	0
0000071442NADD1	GGRP	ACTC	N	6.5	0
0000071751NA8BF	GGRP	ACTC	N	5	3
0000073745NA058	GGRP	ACTC	N	3	0
0001293704NADA4	GGRP	ACTC	N	3	2.5
0001407127QTCEE	GGRP	ACTC	N	7	2.5
0001422112QT8B4	GGRP	ACTC	N	0	2.5
0001485567NA8D5	GGRP	ACTC	N	2.5	0
0001495063NA43B	GGRP	ACTC	N	3	0
0001501678NA36C	GGRP	ACTC	N	3	2.5
0002381405QT01E	GGRP	ACTC	N	2.75	0
1001145404QT137	GGRP	ACTC	N	7	3

**ALLEGED BREACH:** Inaccurate registry entries for meter pressure for 12 ICPs (r58.1)

The following 134 ICPs have register reading digits that differ from those in Nova’s CMMS system:

ICP Identifier	Profile Code	ICP Status Code	TOU Meter	Register Reading Digits	Nova digits
0000012041QTB52	GGRP	ACTC	N	5	0

0000071442NADD1	GGRP	ACTC	N	6	0
0000071741NA212	GGRP	ACTC	N	5	4
0000101152NACAC	GGRP	ACTC	N	5	8
0000317961QT49A	GGRP	ACTC	N	5	4
0000350241QT534	GGRP	ACTC	N	5	4
0001293704NADA4	GGRP	ACTC	N	5	7
0001394852QTDDA	GGRP	ACTC	N	5	4
0001396947QT07C	GGRP	ACTC	N	5	4
0001397600QT1BC	GGRP	ACTC	N	5	4
0001399221QT46D	GGRP	ACTC	N	5	4
0001400195QTAB9	GGRP	ACTC	N	5	4
0001400992QT77E	GGRP	ACTC	N	5	4
0001401252QT23F	GGRP	ACTC	N	5	4
0001402438QTBB8	GGRP	ACTC	N	5	4
0001404284QT9D2	GGRP	ACTC	N	5	4
0001405353QT1FE	GGRP	ACTC	N	5	4
0001405639QT99A	GGRP	ACTC	N	5	4
0001406237QT4E0	GGRP	ACTC	N	5	4
0001406238QTB3E	GGRP	ACTC	N	5	4
0001406371QTECE	GGRP	ACTC	N	5	4
0001406372QT20E	GGRP	ACTC	N	5	4
0001406388QT088	GGRP	ACTC	N	5	4
0001406391QT474	GGRP	ACTC	N	5	4
0001406394QT93B	GGRP	ACTC	N	5	4
0001406396QT9BE	GGRP	ACTC	N	5	4
0001406398QTA25	GGRP	ACTC	N	5	4
0001406399QT660	GGRP	ACTC	N	5	4
0001406400QT8D4	GGRP	ACTC	N	5	4
0001406404QT9DE	GGRP	ACTC	N	5	4
0001406406QT95B	GGRP	ACTC	N	5	4
0001406408QTAC0	GGRP	ACTC	N	5	4
0001406409QT685	GGRP	ACTC	N	5	4
0001407127QTCEE	GGRP	ACTC	N	5	4
0001408111QT3F9	GGRP	ACTC	N	5	4
0001408112QTF39	GGRP	ACTC	N	5	4
0001408638QTFFF	GGRP	ACTC	N	5	4
0001408639QT3BA	GGRP	ACTC	N	5	4
0001409123QT524	GGRP	ACTC	N	5	4
0001409354QT7B4	GGRP	ACTC	N	5	4
0001409355QTBF1	GGRP	ACTC	N	5	4
0001409357QTB74	GGRP	ACTC	N	5	4
0001409360QT146	GGRP	ACTC	N	5	4
0001409361QTD03	GGRP	ACTC	N	5	4
0001409365QTC09	GGRP	ACTC	N	5	4
0001409367QTC8C	GGRP	ACTC	N	5	4
0001409712QT89F	GGRP	ACTC	N	5	4



0001411031QT3E9	GGRP	ACTC	N	5	4
0001413015QTCF6	GGRP	ACTC	N	5	4
0001413017QTC73	GGRP	ACTC	N	5	4
0001413109QTC41	GGRP	ACTC	N	5	4
0001413119QT6EC	GGRP	ACTC	N	5	4
0001413120QTF45	GGRP	ACTC	N	5	4
0001413121QT300	GGRP	ACTC	N	5	4
0001414588QTD2F	GGRP	ACTC	N	5	4
0001414589QT16A	GGRP	ACTC	N	5	4
0001414590QT596	GGRP	ACTC	N	5	4
0001414961QT5C8	GGRP	ACTC	N	5	4
0001415484QT695	GGRP	ACTC	N	5	4
0001415485QTAD0	GGRP	ACTC	N	5	4
0001415486QT610	GGRP	ACTC	N	5	4
0001416719QT7CA	GGRP	ACTC	N	5	4
0001416980QT077	GGRP	ACTC	N	5	4
0001417029QTE90	GGRP	ACTC	N	5	4
0001417031QT629	GGRP	ACTC	N	5	4
0001417032QTAE9	GGRP	ACTC	N	5	4
0001417180QT1DA	GGRP	ACTC	N	5	4
0001418193QTED7	GGRP	ACTC	N	5	4
0001418997QTFD0	GGRP	ACTC	N	5	4
0001419000QT554	GGRP	ACTC	N	5	4
0001419001QT911	GGRP	ACTC	N	5	4
0001419003QT994	GGRP	ACTC	N	5	4
0001419125QTC4A	GGRP	ACTC	N	5	4
0001419131QT7ED	GGRP	ACTC	N	5	4
0001419132QTB2D	GGRP	ACTC	N	5	4
0001419133QT768	GGRP	ACTC	N	5	4
0001419134QTAA2	GGRP	ACTC	N	5	4
0001419135QT6E7	GGRP	ACTC	N	5	4
0001419136QTA27	GGRP	ACTC	N	5	4
0001419254QT651	GGRP	ACTC	N	5	4
0001422112QT8B4	GGRP	ACTC	N	0	4
0001422482QT256	GGRP	ACTC	N	5	4
0001423282QT5F0	GGRP	ACTC	N	5	4
0001423283QT9B5	GGRP	ACTC	N	5	4
0001423284QT47F	GGRP	ACTC	N	5	4
0001423285QT83A	GGRP	ACTC	N	5	4
0001423286QT4FA	GGRP	ACTC	N	5	4
0001423287QT8BF	GGRP	ACTC	N	5	4
0001423288QT761	GGRP	ACTC	N	5	4
0001423289QTB24	GGRP	ACTC	N	5	4
0001423290QTFD8	GGRP	ACTC	N	5	4
0001423291QT39D	GGRP	ACTC	N	5	4
0001423292QTF5D	GGRP	ACTC	N	5	4

0001423293QT318	GGRP	ACTC	N	5	4
0001423294QTED2	GGRP	ACTC	N	5	4
0001423984QT771	GGRP	ACTC	N	5	4
0001423985QTB34	GGRP	ACTC	N	5	4
0001426144QT7B3	GGRP	ACTC	N	5	4
0001427134QT34E	GGRP	ACTC	N	5	4
0001427135QTF0B	GGRP	ACTC	N	5	4
0001427136QT3CB	GGRP	ACTC	N	5	4
0001427138QT050	GGRP	ACTC	N	5	4
0001427140QT719	GGRP	ACTC	N	5	4
0001427141QTB5C	GGRP	ACTC	N	5	4
0001428796QT4B2	GGRP	ACTC	N	5	4
0001428798QT729	GGRP	ACTC	N	5	4
0001428799QTB6C	GGRP	ACTC	N	5	4
0001428800QT5D5	GGRP	ACTC	N	5	4
0001428801QT990	GGRP	ACTC	N	5	4
0001429565QT3C2	GGRP	ACTC	N	5	4
0001429772QTEA2	GGRP	ACTC	N	5	4
0001429773QT2E7	GGRP	ACTC	N	5	4
0001429774QTF2D	GGRP	ACTC	N	5	4
0001429775QT368	GGRP	ACTC	N	5	4
0001429776QTF8A	GGRP	ACTC	N	5	4
0001429777QT3ED	GGRP	ACTC	N	5	4
0001429778QTC33	GGRP	ACTC	N	5	4
0001429779QT076	GGRP	ACTC	N	5	4
0001430528QTA7D	GGRP	ACTC	N	5	4
0001431261QT82B	GGRP	ACTC	N	5	4
0001431559QT2C5	GGRP	ACTC	N	5	4
0001431562QTB6E	GGRP	ACTC	N	5	4
0001432429QTC7C	GGRP	ACTC	N	5	4
0001433648QT46E	GGRP	ACTC	N	5	4
0001435978QT959	GGRP	ACTC	N	5	4
0001438551QTC71	GGRP	ACTC	N	5	4
0001439441QTE78	GGRP	ACTC	N	5	4
0001440024QT6DF	GGRP	ACTC	N	5	6
0001442109QTE95	GGRP	ACTC	N	5	4
0002377605QTA45	GGRP	ACTC	N	5	4
0002380627QT669	GGRP	ACTC	N	5	4
0002381405QT01E	GGRP	ACTC	N	5	0
0002381998QT5AA	GGRP	ACTC	N	5	4

**ALLEGED BREACH:** Inaccurate registry entries for register reading digits for 134 ICPs (r58.1)

A comparison of Nova system's multiplier against the registry multiplier showed no discrepancies on active, non-TOU meters.

**RECOMMENDATION:** Where there is a difference between registry information and that held by CMMS, this should be verified against original documentation (i.e. installation or maintenance sheets) before making any changes to the registry. If there is no documentation to confirm the correct information a site visit should be scheduled.

For a sample of ICPs the CMMS and registry information for meter pressure, register reading digits and register multiplier were verified back to the Orion system, but no additional issues were identified. The CMMS and Orion systems were well aligned and only discrepancies already identified in the comparison of the registry against the CMMS system were found.

The auditor asked about Nova’s processes for dealing with retailer queries about metering and asked to see a log of issues raised as a consequence of retailer queries over the last 6 months. Nova explained they dealt with queries by e-mail and believed they dealt with them promptly and e-mail chains were found to illustrate this. However, Nova did not keep a log of these so further review/ comment on this process was not possible.

**RECOMMENDATION:** It is recommended Nova keep a log of retailer queries showing the open date, close date, description of the issue and the outcome. This would enable Nova to ensure queries were being effectively managed and note any patterns in the queries, which might highlight problems with equipment or processes.

## 6. Breach Allegations

Section	Summary of issue	Rules potentially breached
<b>As Distributor</b>		
4.2	1 ICP out of a sample of 4, where records of the retailer request were available, did not have an ICP assigned within 3 business days of request.	r51.2
4.3	Inaccurate altitudes recorded on the registry for 3 ICPs.	r58.1
4.3	Inaccurate network pressures recorded in the registry for 45 ICPs (r58.1)	r58.1
4.3	Inaccurate load shedding categories for 18 ICPs	r58.1
<b>As Meter Owner</b>		
5.1.1 and 5.5	Registry not updated for Nova meters that have been removed:	r58.1

	<ul style="list-style-type: none"> <li>For 2 ICPs within a sample of 24 the registry is inaccurate – Nova is shown as the meter owner, but their meter is thought to have been removed. (section 5.1.1)</li> <li>For 13 ICPs shown as active with a Nova meter on the registry there are no records in Nova’s CMMS system because it is suspected the Nova meter has been removed. (section 5.5)</li> </ul>	
5.5	Inaccurate registry entries for meter pressure for 12 ICPs	r58.1
5.5	Inaccurate registry entries for register reading digits for 134 ICPs	r58.1

## 7. Conclusion

The summary of report findings shows that the Nova control environment, of the fifteen areas evaluated, is “effective” for five areas, “not adequate” for five areas and five areas were confirmed as not applicable to Nova’s business. No areas were found to be “adequate”.

Nova as meter owner was unable to supply all the documentation required by NZS5259 to demonstrate compliance with the standard, which affected the auditor’s ability to form a view regarding compliance with NZS5259 and to confirm some registry entries. A repeat audit has therefore been recommended.

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

### As Distributor:

**RECOMMENDATION:** That Nova as distributor keep a record of retailer requests for new ICPs to enable them to monitor the timeliness of the distributor’s response.

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

**RECOMMENDATION:** Consider a review of rules 51 and 53 once all the distributors have undergone their first audit. This is already being considered by the GIC.

**RECOMMENDATION:** That Nova as distributor initiate regular processes for identifying and rectifying data quality issues in their registry data.

**RECOMMENDATION:** The load shedding category should be actively maintained. Data that is available to assist includes allocation group changes by retailers, billing information and retailer requests for metering upgrades. GIEP1 data provided by retailers to distributors at an ICP-level to support invoicing, could be used to evaluate potential changes in the category.

**RECOMMENDATION** Where the distributor fields in the registry differ from data in Nova's systems, Nova should verify the data back to its original source to ensure it is accurate, before revising the registry.

#### **As Meter Owner:**

**RECOMMENDATION:** Nova as meter owner should keep a record of the decision making relating to the equipment selected for a new site to demonstrate its suitability for the likely conditions. Nova intend to build a process for this using their CMMS system.

**RECOMMENDATION:** Nova should produce a procedure relating to the selection of GMSs.

**RECOMMENDATION:** That Nova establish full documentation for its GMS to demonstrate NZS5259 compliance, as required by the standard.

**RECOMMENDATION:** Where Nova is the meter owner in the registry, but it is thought the meter may have been removed and replaced with another meter owners equipment, a site visit should be scheduled to establish the facts and the registry updated by Nova to show that their meter has been removed, if applicable.

**RECOMMENDATION:** That Nova as meter owner is audited again, once they have had time to improve their documentation, to verify that they are compliant with NZS5259 regarding documentation, operation, maintenance and testing. Nova has suggested this should be next year.

**RECOMMENDATION:** Where there is a difference between registry information and that held by Nova's Computerised Maintenance Management System (CMMS), this should be verified against original documentation (i.e. installation or maintenance sheets) before making any changes to the registry. If there is no documentation to confirm the correct information a site visit should be scheduled.

**RECOMMENDATION:** It is recommended Nova keep a log of retailer queries showing the open date, close date, description of the issue and the outcome. This would enable Nova to ensure queries were being effectively managed and note any patterns in the queries, which might highlight problems with equipment or processes.

## Appendix A – Control Rating Definitions

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