RECONCILIATION AUDIT

MERCURY ENERGY

Date of audit: 10 to 20 June 2024

Report completed: 5 August 2024

Under the Gas (Downstream Reconciliation) Rules 2008 the Gas Industry Company commissioned Langford Consulting to undertake a performance audit of Mercury Energy Ltd. 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

Executive Summary

This performance audit was conducted at the request of the Gas Industry Company (GIC) in accordance with rule 65 of the 2015 Amendment Version of the Gas (Downstream Reconciliation) Rules 2008 effective from September 2015.

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

The audit was conducted in accordance with terms of reference prepared by the GIC, and in accordance with the "Guideline note for rules 65 to 75 and 80: the commissioning and carrying out of performance audits and event audits, V3.0" which was published by the GIC in June 2013.

The summary of report findings in the table below shows that the Mercury control environment is "effective" for 10 areas evaluated; acceptable for 1 area; needs improvement in 4 areas; is ineffective in 2 areas and 1 was not relevant.

4 alleged breaches have been raised in relation to TRUS, 2 in relation to MEEN and 1 in relation to UNLG.

The report also makes the following recommendations:

- Establish and document how GTV maps each ICP to the correct gas type to ensure the correct inputs are used in energy conversion, update the table to the newest version and establish a process to actively manage the table.
- Review procedures and staff training for dealing with an ICP that is identified as having more than 10TJs/annum consumption.
- Continue the workstream to improve reporting and implement initiatives used by MEEN to work the list of meters that haven't been read for more than 4 months and resolve longstanding issues.
- Prioritise the development of the use of the new zero reads reporting/review process used for data validation to ensure issues are identified and managed in a timely fashion, for example to enable flags and filtering.
- Investigate how GTV is calculating historic estimates for the following two scenarios, and rectify any issues found.
    - Continuous ICP with a read during the month
    - Continuous ICP without a read during the month

  As these scenarios are the most common type it is suggested this is done as a matter of urgency as any issues could be widespread.

Summary of Breach Allegations

Section	Participant	Summary of issue	Rules potentially breached
2.1.1	TRUS	1 ICP out of a sample of 12 new ICPs, did not have its meter read until 2 years 6 months after the meter was installed, and was also not included in submission files for that period.	28.3 and 29.4.3
2.1.1	MEEN	2 ICPs out of a sample of 7 new ICPs, did not have their meters read for more than 12 months after becoming active and were also not included in submission files for that period.	28.3 and 29.4.3
2.1.2	UNLG	When reviewing a sample of TRUS ICPs the altitude for 3 ICPs was found to be lower by 60 meters in the registry compared with Google Earth	Gas (Switching Arrangements) Rules 2008 58.1
3.2	TRUS	An ICP was identified as using more than 10 TJs/annum but was recategorized as allocation group 3 instead of 1 or 2. Also, TOU metering was not installed within 3 months of realising the annual consumption exceeded 10 TJs/annum.	29.1.1 and 29.1.2
5.3	TRUS + MEEN	TRUS didn't meet the requirement for initial submissions to be within +/-10% or <200 GJs of the final submission on 61 occasions. MEEN didn't meet this requirement on 19 occasions. For TRUS there were 7 submission periods when the overall submission exceeded the +/- 10% threshold. For MEEN there was 1 submission period.	37.2
5.4	TRUS	The GTV system is not working as expected for two of the tested historic estimates: • Continuous ICP with a read during the month • Continuous ICP without a read during the month It was not possible to replicate the system outcome via manual calculations.	35.2

Summary of Report Findings

Issue	Section	Control Rating (Refer to Appendix 1 for definitions)	Compliance Rating	Comments
ICP set up information	2.1	Needs Improvement	Not compliant	1 TRUS ICP out of a sample of 12 new ICPs, did not have its meter read until 2 years 6 months after the meter was installed, and was also not included in submission files for that period. 2 MEEN ICPs out of a sample of 7 new ICPs, did not have their meters read for more than 12 months after becoming active and were also not included in submission files for that period.
Metering set up information	2.2	Effective	Compliant	No significant differences were identified between GTV and the registry.
Billing factors	2.3	Ineffective	Compliant	Mercury need establish and document how GTV maps each ICP to the correct gas type to ensure the correct inputs are used in energy conversion, update the table to the newest version and establish a process to actively manage the table MEEN was noted as not compliant re temperature, the non-application of Joules-Thomson and compressibility in the prior audit and continued to be so, up to the point of transfer to TRUS. This non-compliance has not however been repeated in this audit in the light of the migration.
Archiving of reading data	3.1	Effective	Compliant	Meter reading data is available after 30 months.

Meter interrogation requirements	3.2	Needs improvement	Not compliant	Mercury should review their procedures and staff training for dealing with an ICP that is identified as having more than 10TJs/annum consumption. An ICP was identified as using more than 10 TJs/annum but was recategorized as allocation group 3 instead of 1 or 2. Also, TOU metering was not installed within 3 months of realising the annual consumption exceeded 10 TJs/annum.
Meter reading targets	3.3	Needs improvement	Not Compliant	The statistics had slipped since the last audit. Examples of non-compliance were found re new ICPs in section 2.1
Non-TOU validation	3.4	Needs improvement	Compliant	It is recommended Mercury prioritise the development of the use of the new zero reads reporting/review process to ensure issues are identified and managed in a timely fashion, for example to enable filtering, as recommended in the last audit for the previous reporting system.
Non-TOU error correction	3.5	Effective	Compliant	
TOU validation	3.6	Effective	Compliant	
Energy consumption calculation	4	Effective	Compliant	Manual computations demonstrated that the TRUS system was compliant. The MEEN system was found to have the same issues re temperature, Joules-Thomson and compressibility as identified in the previous audit, however these are not repeated here in the light of the migration to TRUS.
TOU estimation and correction	5.1	Effective	Compliant	Examples were reviewed and no issues arose.
Provision of retailer consumption information	5.2	Effective	Compliant	No issues identified

Initial submission accuracy	5.3	Acceptable	Not compliant	TRUS didn't meet the requirement for initial submissions to be within +/- 10% or <200 GJs of the final submission on 61 occasions. MEEN didn't meet this requirement on 19 occasions. For TRUS there were 7 submission periods when the overall submission exceeded the +/- 10% threshold. For MEEN there was 1 submission period.
Historic estimates	5.4	Ineffective	Not Compliant	The TRUS system did not work as expected for 2 scenarios
Proportion of HE	5.5	Effective	Compliant	The correct proportion of HE is being reported.
Forward Estimates	5.6	Effective	Compliant	Processes were reviewed and no issues were identified.
Billed vs consumption comparison	5.7	Effective	Compliant	No issues identified
Gas trading notifications	5.8	Not applicable	Not applicable	Mercury confirmed it hadn't commenced, amended or ceased gas supply under a supplementary agreement since the last audit.

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1. Pre-Audit and Operational Infrastructure Information

1.1 Scope of Audit

This performance audit was conducted at the request of the Gas Industry Company (GIC) in accordance with rule 65 of the 2015 Amendment Version of the Gas (Downstream Reconciliation) Rules 2008 (the Downstream rules) effective from September 2015.

65. Industry body to commission performance audits

65.1 The industry body must arrange at regular intervals performance audits of the allocation agent and allocation participants.

65.2 The purpose of a performance audit under this rule is to assess in relation to the allocation agent or an allocation participant, as the case may be, -

65.2.1 The performance of the allocation agent or that allocation participant in terms of compliance with these rules; and

65.2.2 The systems and processes of the allocation agent or that allocation participant that have been put in place to enable compliance with these rules.

The audit was conducted in accordance with terms of reference prepared by the GIC, and in accordance with the "Guideline note for rules 65 to 75 and 80: the commissioning and carrying out of performance audits and event audits, V3.0" which was published by the GIC in June 2013.

The audit included virtual meetings with Mercury staff between 10 and 24 June 2024.

The scope of the audit includes "downstream reconciliation" only. Switching and registry management functions were audited in conjunction with this audit but are included in a separate report.

In May 2022 Mercury acquired Trustpower's retail business. The scope of this audit includes both retailer codes (MEEN and TRUS) from the date of their last audits.

Mercury made the decision to use the Trustpower systems and processes going forwards. Since 28 July 2023 the MEEN ICPs have been transferred to the TRUS code as a switch in staggered batches. They were also transferred to the TRUS GTV system at the same time.

Analysis has been conducted to ascertain compliance under both codes since the last audits using reports and data for both codes, but the emphasis of the audit has been on the Trustpower systems and processes as these will be the processes going forwards.

1.2 System Overview

MEEN's core system is SAP. This holds the customer information; meter reads; OATIS data and performs the energy calculation. The meter service provider supplies 'read' files into SAP. SAP does automatic uploads and downloads to/from the registry. SAS software is used to extract data from SAP to create submission files which are sent on to the allocation agent portal.

The TRUS core system is GTV. It also holds meter reads, ICP information, OATIS data and performs energy calculations. The main difference is that GTV creates the submission files itself (i.e. there is no additional software analogous to the SAP use of SAS software). The submission files however have to be manually loaded to the allocation agent portal.

Only TRUS has TOU customers. The submission processes for these are managed manually outside of GTV.

There are two teams that manage most of the relevant processes. The Network team mostly manages the processes with the distributors, but also manage the manual ICP processes for TOU sites re. the registry and allocation agent requirements. The Energy Services team manages the registry and allocation processes for the non-TOU sites.

1.3 Moving ICPs from MEEN to TRUS

Since 28 July 2023 the MEEN ICPs have been transferred from MEEN over to TRUS in batches. The data has been moved over automatically, but the switch has been done individually like a normal switch. Switch type "SM" has been used for this process. A 'final 'invoice has been done in SAP prior to the transfer/switch.

Once an ICP has been transferred the ongoing compliance will be managed under TRUS using GTV, but historical obligations for the submission of data relating prior to the switch continues to be managed under MEEN within SAP.

1.4 General Compliance

1.4.1 Summary of Previous Audit

At the time of the last audit Mercury and Trustpower were separate entities. There are therefore two previous audits. The Mercury one undertaken in November 2020 and the Trustpower audit done in June 2020, both undertaken by Veritek Ltd.

In the Mercury audit 14 of the 17 areas evaluated were found to be compliant. Six breach allegations were made in relation to the remaining areas. They were summarised as follows:

- The registry was populated late for four new connections resulting in submission information not being provided for the initial and interim allocation. The final allocation did not have submission information for one ICP for the period June 2018 to November 2019,
- ICP 1002063469QT236 has an altitude of 400m in the registry but the actual altitude is 40m; the altitude factor is therefore too low by 4.1% and the annualised consumption is approximately 85 GJ, which means submission has been too low by 3.5 GJ,
- incorrect temperature data for three gas gates for January, two gas gates for February and one gas gate for December,
- incorrect temperature conversion factors were used for 16 ICPs because Joule Thomson adjustment was not applied,
- 218 ICPs are likely to have had incorrect CV values applied, which were outside the threshold allowed by NZS 5259:2015, and
- the initial submission accuracy did not meet the required accuracy percentage for three gas gates for April and June 2019.

In the Trustpower audit 13 of the 19 areas were found to be compliant. Five breach allegations were made in relation to the six remaining areas. They were summarised as follows:

- temperature information was incorrect for the Gisborne (GIS07810) gas gate, leading to a conversion error of 1.14%,
- 88 ICPs have the incorrect allocation group,
- meter pressure corrections were not backdated to the correct start date for 21 ICPs,
- consumption information not submitted for the initial allocation for at least five ICPs, and
- the initial submission accuracy did not meet the required accuracy percentage for some gas gates for the period January 2018 to December 2018

Mercury supplied the following table to confirm what action had been taken since the last audits in relation the recommendations made.

Section	Recommendation TRUS	Status
3.2	Improve reporting and controls to ensure allocation groups are corrected as soon as practicable.	Adopted
3.4	Improve "zero consumption" reporting to enable filtering of records to exclude records where the zero consumption is likely to be correct. Build in the capability to "flag" records that have previously been confirmed as "false positives".	Adopted

Section	Recommendation MEEN	Status
3.2	Recommendation: Consider adjusting temperature to include the Joule-Thompson effect.	N/A – Mercury is in the process of retiring SAP
3.4	Recommendation: Conduct a periodic check of all ICPs with pressures above 50kPa to ensure the error does not exceed 0.2%.	N/A – Mercury is in the process of retiring SAP

1.4.2 Breach Allegations

Neither MEEN nor TRUS has had any alleged breaches under the Downstream rules since the last audit.

1.5 Provision of Information to the Auditor (rule 69)

In conducting this audit, the auditor may request any information from Mercury, the Allocation Agent and any allocation participant.

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

The auditor considers that all parties have complied with the requirements of this rule.

1.6 Transmission Methodology and Audit Trails (rule 28.4.1)

The rules require that "The consumption information supplied to the allocation agent in accordance with rules 29 to 40 is transferred and stored in such a manner that it cannot be altered without leaving a detailed audit trail…"

The TRUS GTV system automatically creates a memo note when a change is made and a user can right click on an item to see audit history. When a submission file is sent, the system locks down the associated data so it cannot be changed.

MEEN's SAP system also creates an audit trail of changes but doesn't have the same 'lockout' system as GTV for submission files. Instead, the SAS software that creates the submission file creates a 'read only' file that cannot subsequently be changed. This is effectively a snapshot of data in the SAP system at that time.

A complete set of meter reading data was retained, prior to entering SAP or GTV.

A complete audit trail was viewed for all data gathering, validation and processing functions. Compliance is confirmed with this rule.

2. Set-up and Maintenance of Information in Systems (rule 28.2)

Every retailer must ensure the conversion of measured volume to volume at standard conditions and the conversion of volume at standard conditions to energy complies with NZS 5259:2015, for metering equipment installed at each consumer installation for which the retailer is the responsible retailer.

Compliance with this rule has been examined in relation to the set-up of ICP, metering and billing information. The "Gas (Downstream Reconciliation) Rules 2008 Billing factors guideline note, V2.0" (Billing Factors Guideline) published by GIC on 30/11/15 was also considered when examining the set up and maintenance of information.

2.1 ICP Set Up Information

2.1.1 New Connections Process

The process was examined for the connection and activation of new ICPs.

The switching and registry management audit that was completed alongside this audit, reports on the analysis of the new connections process with respect to the Gas (Switching Arrangements) Rules 2008 (the switching rules) and this is therefore not repeated here.

A sample of new connections were checked for correct inclusion in consumption submission files for both MEEN and TRUS.

Of the 12 new TRUS ICPs reviewed:

- 5 ICPs were included in submission files for the same month they were made READY
- 4 ICPs were included in the initial file for the month after they were made READY, and the interim file for the month prior
- 2 ICPs were left without a meter for several months, but were included in the initial submission file for their first month with a meter
- 1 ICP (1002147033QTF8F) was made READY and a meter installed in October 2021 but didn't get included in submission files until March 2024 (when the meter was 1st read). It will have been included in washups but only back to May 2023.

Alleged breach

New ICP not included in submission files and meter not read - TRUS		
Non-compliance	Description	
Report section: 2.1.1 Rule: 28.3 and 29.4.3 From: October 2021 To: March 2024	Audit history: Yes Controls: Needs Improvement Impact: Minor	1 ICP out of a sample of 12 new ICPs, did not have its meter read until 2 years 6 months after the meter was installed, and was also not included in submission files for that period.

Remedial action rating	Remedial timeframe	Remedial comment
No action	August 2021 – March 2024	MEEN/SAP did not have reporting to alert for this scenario. Unless there is exceptional circumstances we are not allowing new connections on the MEEN code, SAP is planned to be retired by end of 2024. Going forward new connections will be on TRUS/GTV and we have reporting for this scenario so will not be a recurring issue.

Audited party comment	
The circumstances of the matters outlined in the breach notice.	The issue initially arose in August 2021 when the ICP was loaded in the Registry with MEEN as the proposed retailer. Mercury didn't receive paperwork and MEEN/SAP did not have reporting to alert for this scenario. When the Registry was updated to TRUS after an initial delay (more info below) we made progress and were able to get a reading in March 2024 (with washup going back to May 2023).
Whether or not the participant admits or disputes that it is in breach.	We acknowledge that we have breached.
Estimate of the impact of the breaches (where admitted).	Little to no impact.
What steps or processes were in place to prevent the breaches?	As noted MEEN/SAP did not have reporting to alert for this scenario. While TRUS/GTV does, further delay was caused when the Registry was updated to TRUS as the ICP was then loaded into GTV by a CEA rather than a member of the New Connections team so it didn't show on reporting that we have that identifies that TRUS is the proposed retailer but we don't have the ICP loaded in GTV. We are currently

	investigating creating reporting that will alert when non-New Connections staff have registered a New Connection ICP to avoid this in the future.

Of the 7 new MEEN ICPs reviewed:

- 3 ICPs were included in submission files for the same month they were made READY
- 1 ICP was included in the initial file for the month after they were made READY, and the interim file for the month prior
- 1 ICP wasn't set up until 8 months after the ICP was READY with a meter installed. It was included in the final submission for its first month.
- 2 ICPs (1002143180QTE79, 1000600945PGF66) didn't have their accounts set up until more than 12 months after they were made READY and had meters installed. They will have had several months where they were active but not included in submissions.

Alleged breach

<table>
<tr><td colspan="4">New ICPs not included in submission files and meters not read - MEEN</td></tr>
<tr><td>Non-compliance</td><td colspan="3">Description</td></tr>
<tr><td>Report section: 2.1.1
Rule: 28.3 and 29.4.3

From: July 2021
To: December 2022</td><td>Audit history: Yes
Controls: Needs improvement
Impact: Minor</td><td colspan="2">2 ICPs out of a sample of 7 new ICPs, did not have their meters read for more than 12 months after becoming active and were also not included in submission files for that period.</td></tr>
<tr><td colspan="2">Remedial action rating</td><td>Remedial timeframe</td><td>Remedial comment</td></tr>
<tr><td colspan="2">No action</td><td>1002143180QTE79: 21.07.2021 – 28.09.2022

1000600945PGF66: 13.09.2021 – 05.12.2022</td><td>These were new ICPs. Once the accounts were setup and we were able to get reads they were included in submissions.</td></tr>
<tr><td colspan="4">Audited party comment</td></tr>
<tr><td colspan="2">The circumstances of the matters outlined in the breach notice.</td><td colspan="2">Similar to the issue for ICP 1002147033QTF8F, when the jobs were raised we accepted them via the Network portal and raised the jobs in SAP, however there was no reporting to advise that the ICPs had been created in the Registry and assigned to MEEN.</td></tr>
<tr><td colspan="2">Whether or not the participant</td><td colspan="2">We acknowledge that we have breached.</td></tr>
</table>

admits or disputes that it is in breach.	
Estimate of the impact of the breaches (where admitted).	Little to no impact.
What steps or processes were in place to prevent the breaches?	As noted we did not have reporting for this scenario for MEEN/SAP. Unless there is exceptional circumstances we are not allowing new connections on the MEEN code, SAP is planned to be retired by end of 2024. Going forward new connections will be on TRUS/GTV.

2.1.2 Altitude Information

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.

A review was done of active MEEN ICPs, looking for outliers and checking a sample of altitudes against Google Earth – no issues were found.

A review was done of active TRUS ICPs, looking for outliers and checking a sample of altitudes against Google Earth –3 ICPs were found, all of them 60 metres different from the altitude on Google Earth.

Mercury has raised the issue with the distributor, UNLG, to get them corrected. They have been raised as an alleged breach against UNLG, as there was incorrect information in the registry. It hasn't however been raised as a breach against TRUS as the difference would not be sufficient to make the energy calculation inaccurate by more than +/- 1%.

Alleged breach

Inaccurate altitude in the registry - UNLG		
Non-compliance	Description	
Report section: 2.1.2 Rule: Gas (Switching Arrangements) Rules 2008 58.1 From: July 2022 To: Date of the audit	Audit history: Yes Controls: Adequate Impact: Minor	When reviewing a sample of TRUS ICPs the altitude for 3 ICPs was found to be lower by 60 meters in the registry compared with Google Earth 1002163491QT459 1002163494QT916 1002164005QT2D5 All have altitude of 6 in the registry, Google Earth suggests 66

Remedial action rating	Remedial timeframe	Remedial comment

In progress	July 2024 - Ongoing	We contacted the distributor and they have updated 2 of the 3 ICPs, we will follow up with them regarding the uncorrected ICP (1002164005QT2D5).
Audited party comment		
The circumstances of the matters outlined in the breach notice.	We validate between the Registry and GTV and the info matched. We do not have resource to validate between Registry, GTV and Google earth however we are considering what could be done to avoid this in future.	
Whether or not the participant admits or disputes that it is in breach.	We acknowledge that we have breached.	
Estimate of the impact of the breaches (where admitted).	Little to no impact.	
What steps or processes were in place to prevent the breaches?	Please see above.	
What steps have been taken to prevent recurrence?	Please see above.	

2.2 Metering Set-up Information

The records in GTV were compared against the information in the registry for gas gate; meter multiplier; meter digits; network pressure and meter pressure.

Initially there appeared to be some differences with the meter digits. A sample were checked during the audit and they all related to new meters going in and a difference in timing between reports were pulled. At the time of the audit GTV aligned with the registry.

Initially the extract from GTV didn't align with the registry data for a large number of network pressures. However, it was determined there was a problem with the data extract and that GTV and the registry did align.

No significant differences were identified between GTV and the registry.

2.3 Billing Factors

Mercury routinely run discrepancy reporting to identify differences in fields between their systems and the registry. During the associated switching audit, it was confirmed that there was a strong alignment between the Mercury systems and the registry. The current

discrepancy reporting was sighted and it was demonstrated the reports were short and being regularly worked.

MEEN pick up OATIS gas type data every day and upload it into SAP.

TRUS uses an SIS package to automate the gas type process.

2.3.1 Temperature Information

The MEEN temperature table was provided to the auditor. The last audit had found that there were differences between the MEEN temperature table and the recommended GIC temperature table, sufficient that in some instances differences in energy conversion could be outside of de minimis levels of accuracy. This table had not been changed since the last audit due to the migration of ICPs from SAP to GTV. The same alleged breach is therefore not repeated in relation to MEEN as it is acknowledged that migration to the TRUS system will have resolved the issue.

During the last audit it was confirmed that TRUS use the GIC temperature in GTV. The current temperature table in GTV was extracted and supplied to the auditor who was able to match it to the GIC table. The ICPs are connected to the relevant temperature table using the gas gate field, so providing the gas gate field is accurate no issues will arise.

The sample energy calculation described in section 4 also demonstrates that this table is the table being used in GTV energy calculations.

2.3.2 Calorific Values

It was confirmed that TRUS and MEEN both use an average of the CV over the relevant period, not an individual days' value.

TRUS extracted the gas type data from their system. The auditor validated this for the first 3 months of 2024 against the gas type data in OATIS. There was perfect alignment except for small differences for some gas types on 4 days. FirstGas had made corrections to the gas type data and TRUS had not uploaded the revised data into their system. The auditor did a sample calculation to see how much difference this would have made to an energy calculation and the outcome was well below de minimis limits as the Frist Gas corrections were for trivial amounts. This was brought to Mercury's attention for them to consider adding a step into their process to look for corrections but has not been alleged as a breach due to the minimal differences arising.

The auditor asked how GTV established which gas type should be used for each ICP, it was expected there would be a table embedded linking gas gates to gas types. Initially Mercury were unable to demonstrate how GTV knows which gas type should be used for which ICP when performing an energy conversion. It was however established for 1 ICP, when replicating the energy conversion calculation as explained in section 4, that for the selected ICP the correct gas type was used.

By the end of the audit Mercury were able to find the connecting table by asking for support from Gentrack. The auditor compared the table against the current version on OATIS and established that the current version was not being used. In particular new gas types have been added for Taupo and Reparoa gas gates to allow for the new biogas plant, which have not been

reflected in GTV. As the biogas plant has not yet commenced operation no inaccuracy in energy conversion would have yet happened.

Recommendation

That Mercury establish and document how GTV maps each ICP to the correct gas type to ensure the correct inputs are used in energy conversion, update the table to the newest version and establish a process to actively manage the table.

3. Meter Reading and Validation

3.1 Archiving of Register Reading Data (rule 28.4.2)

Retailers are required to keep register reading data for a period of 30 months. Data was examined during the audit and it is confirmed that meter reads are available 30 months after their date of origin for both MEEN and TRUS ICPs, including TRUS TOU ICPs.

Sample meter read data was also verified against the data used as the meter read input for the energy calculation to help prove the end-to-end process.

3.2 Metering Interrogation Requirements (rule 29)

Rule 29 specifies the type of metering (TOU or non-TOU) that must be installed at a consumer installation, the relevant allocation group that the consumer installation falls within and the interrogation requirements that apply depending on the type of metering and allocation group.

MEEN only have allocation group 4 and 6 ICPs. TRUS have ICPs in 1,2,4 and 6.

MEEN demonstrated they had been monitoring for ICPs who needed to be moved to a different allocation group by sending a report from prior to the start of the ICP migration. This showed 3 ICPS as of September 2023 that needed moving between 4/6. It could be seen that all 3 were changed in the registry Sept/Oct ’23. It was also demonstrated that ICPs that had been moved to allocation group 4 were now being read monthly.

TRUS supplied a copy of their Power BI report used to monitor allocation groups. It monitors annual consumption looking for inconsistencies between annual consumption and allocation groups, as an additional quality check they also add a comparison with load shedding categories to look for inconsistencies. The report is worked every week.

The code that underlies the report that is used by TRUS was supplied to the auditor. If a change between allocation group 4 and 6 is required the process is for it to be changed in GTV and the registry.

The BI report data is exported into Excel and, when appropriate, the allocation group is changed in GTV and the gas registry. There is no need for the person working this report to notify the meter reading team of an ICP moving from 6 to 4, to ensure that the meter is read every month as the metering team pull a list of group 4 ICPs every month.

During the audit preparation in April the auditor identified ICP 1002123925QT97C had been categorised as load shedding 3 since 18 December 2023 but was allocation group 4 in the registry. This was queried during the audit, and it was noted that on 21 May 2024 the allocation group had been changed to allocation group 3. The ICP had been noted on the Power BI report as "to be investigated" and the staff member had discussed the ICP with the distributor before changing it in GTV and the registry to allocation group 3.

It was confirmed that the annual consumption was 12TJs/annum so the correct allocation group would be 1 or 2 and a TOU gas meter should be installed within 3 months of identifying this. It was noted that another Mercury team had independently identified this ICP as requiring a TOU meter early in June and had started to discuss this with the customer.

Allocation groups were compared against load shedding category to identify any obvious inconsistencies among the active ICPs. Load shedding can be a useful quality control when comparing to allocation group to identify inconsistencies, but it's not a straightforward like for like where allocation group should match load shedding category. Load shedding 3 should be either allocation group 1 or 2.

Alleged Breach

<table>
<tr><td colspan="5">Incorrect allocation group and failure to install TOU metering - TRUS</td></tr>
<tr><td colspan="2">Non-compliance</td><td colspan="3">Description</td></tr>
<tr><td colspan="2">Report section: 3.2
Rule: 29.1.1 and 29.1.2

From: 18 December 2023
To: Date of the audit</td><td>Audit history: Yes
Controls: Needs Improvement
Impact: Minor</td><td colspan="2">An ICP was identified as using more than 10 TJs/annum but was recategorized as allocation group 3 instead of 1 or 2. Also, TOU metering was not installed within 3 months of realising the annual consumption exceeded 10 TJs/annum.</td></tr>
<tr><td colspan="2">Remedial action rating</td><td>Remedial timeframe</td><td colspan="2">Remedial comment</td></tr>
<tr><td colspan="2">In progress</td><td>June 2024 - Ongoing</td><td colspan="2">We are actively discussing with the customer on best options, whether to switch to another retailer or remain with Mercury and have a TOU meter installed.</td></tr>
<tr><td colspan="5">Audited party comment</td></tr>
<tr><td colspan="2">The circumstances of the matters outlined in the breach notice.</td><td colspan="3">We have an ICP that based on usage should be on allocation group 1 or 2 with a TOU meter installed, however it currently is on allocation group 3 with non-TOU metering installed.</td></tr>
<tr><td colspan="2">Whether or not the participant admits or disputes that it is in breach.</td><td colspan="3">We acknowledge that we have breached.</td></tr>
</table>

Estimate of the impact of the breaches (where admitted).	Little to no impact.
What steps or processes were in place to prevent the breaches?	This was picked up by our reporting but the overall handling of the situation resulted in it being unresolved.
What steps have been taken to prevent recurrence?	We have taken learnings from this scenario which will help to avoid recurrence.

Recommendation

It is recommended that Mercury review their procedures and staff training for dealing with an ICP that is identified as having more than 10TJs/annum consumption. Currently their report will identify the ICP and staff are instructed "to investigate".

TRUS ensures group 4 ICPs are read monthly by sending a list every month to their MRS service provider of which ICPs they are to ensure are read monthly. The whole list of ICPs classed as group 4 in GTV is sent every month. If a site hasn't been read a 'special read' is booked.

3.3 Meter Reading Requirements (rules 29.4.3, 29.5 & 40.2)

All consumer installations with non-TOU meters must have register readings recorded at least once every 12 months unless exceptional circumstances prevent such an interrogation (rule 29.4.3).

The MEEN GAS080 was produced by SAS using SAP data. An example MEEN GAS080 was reviewed and proven as accurate.

A GAS080 for TRUS was reviewed, alongside the supporting report from which it was built. The supporting report demonstrates that the GAS080 is built from ICP level information and that the ICPs reported as having no reads for over 12 months reconciles back to the number of sites shown on the associated reporting.

The historical process for MEEN was to have gas meter reads done bi-monthly, except for allocation group 4 customers. The default process for TRUS was to have meters read every month except for in Auckland where only allocation group 4 ICPs were read monthly.

Mercury described the TRUS processes for ensuring meter reads are done. The same process is followed for MEEN ICPs still held in SAP. A report is pulled from both GTV and SAP of ICPs held for over 4 months that haven't had a read for 4 months or more. Firstly, ICPs that have been switched out or accounts finalised are removed from the list. The remaining ICPs are then worked with a number of options being available depending on the information available, such as the skip code used by the MRS.

Examples of actions taken included the sending of communications to the customer (e.g. to ask where the meter is located, or if they can submit a read); challenge the MRS about descriptions such as 'wrong route' where MRS should be reallocating the ICP to the correct route; for dog

issues the customer is sent a message 48 hours prior to the meter reader visit. Corresponding action may also be taken by related teams such as Metering or Revenue Assurance.

There has been a hiatus for MEEN ICPs transferred to TRUS which are now starting to appear on the TRUS list as held for over 4 months without a read.

The last audit showed a TRUS GAS080 for February 2020 with 98.65% of ICPs (May 2024 it was 91.46%) with reads at the 4 month stage and 99.98% of ICPs (May 2024 it was 99.66%) with reads at the 12 month stage. So, the meter reading performance had slipped since the last audit.

A sample of sites with no reads for over 12 months were reviewed, some had been on the list for more than 5 years. Typically, they had been read up to the point of disconnection (with meter not removed). Once disconnected the premises had become vacant and the MRS was unable to obtain access. In some instances, the meter reader reported that the meter had been removed. There was an opportunity to follow these up with the meter owner to confirm the meter status. These ICPs haven't been listed as an alleged breach as efforts had been made to visit the ICP and read the meter, but nonetheless it is noted that performance in this area has deteriorated since the last audit and there are opportunities for improvement.

MEEN had undertaken a special project to deal with sites with no reads prior to the migration, and this is being transitioned over to the new TRUS processes. For example, sites not read over 6 months they try to call the customer or get a 'special' read which requires the MRS not just to do a 'forced complete' but to supply a photo of the read or of the obstruction preventing a read.

There had also been discussions with the MRS provider, who had been suffering from staff shortages. 5 new meter readers had been taken on and had been undergoing training so it is expected the MRS service will improve.

It is recommended that this is an area for improvement. The statistics had slipped since the last audit, some ICPs on the list had been there for years without resolution and it was expected the list would get longer now that ICPs transitioned from MEEN had been with TRUS for more than 4 months.

Recommendation

Mercury continue the workstream to improve reporting and implement initiatives used by MEEN to work the list of meters that haven't been read for more than 4 months and resolve longstanding issues.

3.4 Non-TOU Validation

The validation processes for MEEN didn't change from the last audit up to the migration of ICPs to TRUS. The MRS systems were the same and the meter read in SAP would have been validated using 'readings management' and the risk assurance team. A validation report was also worked by the billing team.

The TRUS processes for validation hadn't changed since the last audit and were now being applied to the transferred MEEN ICPs. Examples of items highlighted for review are higher than average dollar values, meter reads below previous actual reads. The parameters are set by the GTV system, not by the user. Larger sites will have different parameters. Photos of reads were

often used to assist investigations into stopped meters, damaged and 'racing' meters. Often the outcome of a review might be the negotiation with the switching out retailer of a new start read.

The last audit recommended TRUS improve reporting to enable the filtering of records when there was zero consumption. This had been implemented and had been working well. However, TRUS had recently changed its reporting system from Discrepancy Manager to Power BI for zero reads, which meant they had reverted to having a very long list of ICPs with zero consumption again. The team was under resourced to cope with the review of such a long list. They are working to improve the new reporting to enable them to note/identify and filter going forwards. Today's list was viewed and it showed there were 255 entries, a couple were dated May but the majority were from 13th June onwards.

Recommendation

Mercury prioritise the development of the use of the new zero reads reporting/review process used for data validation to ensure issues are identified and managed in a timely fashion, for example to enable flags and filtering.

3.5 Non-TOU Error Correction

Examples of non-TOU error correction were supplied and reviewed, including stopped meters, incorrect meter pressure and damaged meter. No issues were identified.

3.6 TOU Validation

MEEN has no TOU customers.

TRUS manage their metering data manually using spreadsheets. They receive one site via telemetry daily, but they don't process the data daily, they run it at the end of the month alongside the rest of the TOU sites. Their contractor sends monthly data via email on business day 1 or 2. Original downloads are all saved before the data is brought into the spreadsheet for processing.

The auditor reviewed the calculations in the TOU spreadsheet and the gas type factors used, no issues arose with the use of factors or the calculations.

Once the monthly processing of the TOU data has been completed and validated it is also peer reviewed. Once peer reviewed and any discussions arising have been peer reviewed the spreadsheets are saved off and the consumption is loaded into GTV for billing.

Mercury has made a strategic decision to stop supporting TOU ICPs so this process will shortly become redundant.

4. Energy Consumption Calculation (rule 28.2)

The energy conversion in a sample non-TOU TRUS calculation was recomputed manually by the auditor. The outcome matched the conversion rate used by GTV in its energy calculations. This review demonstrated that:

- the meter reads used in the consumption calculation were correct as per the original MRS files as stored in Oracle
- each component of the calculation was verified back to the original source (OATIS gas type data, GIC temperature table and the registry) and, where appropriate, averages were calculated for the correct period
- that Joule-Thomson and compressibility calculations were being implemented

The auditor manually calculated a conversion factor for a MEEN ICP of 11.4004 compared with the MEEN SAP factor of 11.2788. Previous audits had identified that MEEN weren't using the GIC temperature table and they weren't applying Joule-Thomson or compressibility in their energy calculations. Mercury confirmed they hadn't changed their processes for any of these factors since the last audit.

The auditor repeated the manual calculation, but without using Joule-Thomson or compressibility. This reduced the difference to 11.3223 versus 11.2788. When the temperature used was changed from the average of the period from the GIC temperature table to the equivalent average for the period from the MEEN temperature table the manually computed figure dropped to 11.2661 which was within 99.9% of the MEEN SAP conversion rate of 11.2788.

It can be concluded that the MEEN process of using an alternative temperature table, combined with not adjusting for Joule-Thomson or compressibility, has led to some ongoing inaccuracy in energy conversion, but the issues were the same as identified in the previous audit. In light of the fact that these have already been investigated and that Mercury have transitioned away from the MEEN SAP system to the GTV system which addresses all of these concerns, the alleged breaches have not been repeated in this audit.

5. Estimation and Submission Information

5.1 TOU Estimation and Correction (rule 30.3)

Examples of TRUS TOU estimations were given to the auditor for review. Customer specific profiling was done depending on the team's understanding of the customer's business e.g. if they only operate business days, regular hours or 24/7. No issues arose from the review.

5.2 Provision of Retailer Consumption Information (rules 30 to 33)

MEEN uses SAS to build its GAS040 files from SAP for submission to the Allocation Agent portal. TRUS builds the GAS040 within GTV. For both MEEN and TRUS, once the submission file has been validated the data is locked. As a part of the audit the accuracy of a sample initial and final GAS040 file was demonstrated, including the HE component, by proving the data for a gas gate.

TRUS has a validation process for its submission files. This includes a comparison against the file prepared at an ICP level for the network owner. This is particularly useful for identifying vacant sites with consumption. If any are identified they send a person to site to investigate and change the status if appropriate so future GAS040s pick up any consumption. The GAS040 report is designed to still pick up vacant disconnected sites, but not those where the meter is 'removed'. The MEEN GAS040 is defined the same as for TRUS. This was demonstrated by finding an example within the GAS040 of a disconnected ICP.

A list of inactive ICPs with consumption was provided to the auditor. Further examination demonstrated these sites mostly had zero consumption, but in any case, the sites and any related consumption were being picked up by the submission files, so no issues arose.

5.3 Initial Submission Accuracy (rule 37.2)

Rule 37.2 requires that the accuracy of consumption information, for allocation groups 3 to 6, for initial allocation must be within a certain percentage of error published by the industry body. The published percentage for the months analysed is 10%.

MEEN					
Month	**Total Gas Gates**	**Number Within +/- 10%**	**% Compliant**	**Within +/- 10% or < 200 GJ**	**% Compliant or immaterial**
March 2022	74	38	51%	73	99%
April 2022	74	37	50%	72	97%
May 2022	74	37	50%	73	99%
June 2022	74	40	54%	73	99%
July 2022	74	37	50%	72	97%
August 2022	74	42	57%	73	99%
September 2022	74	33	45%	71	96%
October 2022	74	38	51%	73	99%

November 2022	74	34	46%	70	95%
December 2022	74	42	57%	73	99%
January 2023	74	40	54%	73	99%
February 2023	74	33	45%	73	99%

MEEN			
Month	**Initial Submission All Gas Gates (GJ)**	**Final Submission All Gas Gates (GJ)**	**Percentage Variation**
March 2022	54,941	52,967	4%
April 2022	64,085	59,581	9%
May 2022	101,379	95,046	7%
June 2022	126,678	120,613	5%
July 2022	136,226	132,930	2%
August 2022	138,348	131,206	5%
September 2022	118,609	108,194	10%
October 2022	94,271	90,984	4%
November 2022	75,843	68,437	11%
December 2022	57,576	55,285	4%
January 2023	52,339	53,647	-2%
February 2023	48,615	50,772	-4%

TRUS					
Month	**Total Gas Gates**	**Number Within +/- 10%**	**% Compliant**	**Within +/- 10% or < 200 GJ**	**% Compliant or immaterial**
March 2022	71	46	65%	71	100%
April 2022	71	28	39%	65	92%

May 2022	71	20	28%	60	85%
June 2022	71	25	35%	61	86%
July 2022	71	51	72%	70	99%
August 2022	71	56	79%	71	100%
September 2022	71	39	55%	66	93%
October 2022	71	27	38%	60	85%
November 2022	70	19	27%	60	86%
December 2022	70	11	16%	60	86%
January 2023	70	41	56%	68	97%
February 2023	70	49	70%	70	100%

TRUS			
Month	**Initial Submission All Gas Gates (GJ)**	**Final Submission All Gas Gates (GJ)**	**Percentage Variation**
March 2022	46,241	47,642	-2.94%
April 2022	49,609	55,581	-10.74%
May 2022	68,499	82,970	-17.44%
June 2022	89,959	107,076	-15.99%
July 2022	108,498	115,968	-6.44%
August 2022	110,276	108,221	1.90%
September 2022	100,020	92,115	8.58%
October 2022	89,744	78,988	13.62%
November 2022	65,805	55,334	18.92%
December 2022	58,042	48,065	20.76%
January 2023	46,474	44,064	5.47%
February 2023	42,543	42,704	-0.38%

Mercury were asked to review the 10 worst TRUS gates/months to look for any reasons/patterns. The main source of difference was where commercial sites had an estimate that was too high at the initial submission stage. The high estimates were either due to their being no history to go on or the company was moving into its seasonal drop off and the estimation process hadn't anticipated this.

Alleged breach

<table>
<tr><td colspan="4">Initial v Final submission differences – TRUS and MEEN</td></tr>
<tr><td>Non-compliance</td><td colspan="3">Description</td></tr>
<tr><td>Report section: 5.3
Rule: 37.2

From: March 2022
To: February 2023</td><td>Audit history: Yes
Controls: Acceptable
Impact: Minor</td><td colspan="2">TRUS didn't meet the requirement for initial submissions to be within +/-10% or <200 GJs of the final submission on 61 occasions. MEEN didn't meet this requirement on 19 occasions.
For TRUS there were 7 submission periods when the overall submission exceeded the +/- 10% threshold. For MEEN there was 1 submission period.</td></tr>
<tr><td colspan="2">Remedial action rating</td><td>Remedial timeframe</td><td>Remedial comment</td></tr>
<tr><td colspan="2">No action</td><td>Ongoing</td><td>This is impacted by new commercial sites that we don't have history for; we're confident that by the final washup we will have actual readings and be accurate.</td></tr>
<tr><td colspan="4">Audited party comment</td></tr>
<tr><td>The circumstances of the matters outlined in the breach notice.</td><td colspan="3">Some initial submissions not being within the compliant threshold relative to the final submissions.</td></tr>
<tr><td>Whether or not the participant admits or disputes that it is in breach.</td><td colspan="3">We acknowledge that we have breached.</td></tr>
<tr><td>Estimate of the impact of the breaches (where admitted).</td><td colspan="3">Little to no impact.</td></tr>
<tr><td>What steps or processes were in place to prevent the breaches?</td><td colspan="3">We perform analysis and monitoring to ensure that submissions are as accurate as possible and ensure that differences between initial and final are minimised.</td></tr>
<tr><td>What steps have been taken to prevent recurrence?</td><td colspan="3">We are reviewing and considering options to improve accuracy.</td></tr>
</table>

Both MEEN and TRUS have reports that monitor sites that are INACT that nonetheless have consumption reported. They routinely pull the report and investigate the usage. Often the outcome is a misread meter reading, but if a volume is still outstanding it is typically charged to Mercury (i.e. in effect it is written off, but still counted for submission purposes). In this case the site would have its status changed to active and the disconnect process would be started again.

The auditor viewed the current TRUS list of inactive sites with consumption. There were only two ICPs on the list that were more than six weeks old, so it was confirmed the list was actively worked. The equivalent list for MEEN was viewed for a date in early 2023 (prior to the migration) to confirm that it was actively worked.

A review was done of a sample of switched in sites to see if they were being included in the submission files in a timely fashion.

Out of a sample of 7 ICPs switched into MEEN:

- 4 were included in the initial submission file for the month they were switched in
- 2 were set up late (approx. 3 weeks after the switch in date) so missed the initial submission, caught the interim
- 1 ICP wasn't set up until approx. 5 months after the switch in date so wasn't included until the final submission

Mercury was asked why the 3 that hadn't been included in the initial submission file had taken so long, but there was insufficient information in the notes to establish any particular reason other than work pressure causing a backlog.

Out of a sample of 13 TRUS ICPs:

- 7 were included in the initial submission file for the month they were switched in, 2 had the switch cancelled
- 3 missed the initial, caught the interim submission. However, all 3 had switch in dates in the last week of the month, so account set up was still done in a timely fashion
- 1 ICP was a backdated switch, the set up was done in the same month that the switch was completed and inclusion occurred in the earliest submission file practical.

Overall, this suggests that MEEN had had some issues with processing switches in a timely fashion, such that it could affect the accuracy of their initial submission files. TRUS look to be processing these in a timely fashion.

A sample of 10 TRUS reconnections were also reviewed. All had been included in the initial submission file for the month in which the contractor had completed the reconnection, except for one which had been reconnected on the last day of the month. This reconnection had nonetheless been included in the next month's initial files and the 1st day of reconnection included in the interim submission, so no concerns arose from this review.

No MEEN reconnections were reviewed.

5.4 Historic Estimates (Rules 34 & 35)

To assist with determining compliance of the historic estimate processes, Mercury was supplied with a list of scenarios. MEEN was able to provide an example of each type of scenario and to demonstrate by manual calculation that the system met the test expectation.

The ICP 0000552941QT41D was used as an example for MEEN of scenario C. It was noted during review that the registry showed a date of 24/7/2023 whereas the scenario supplied showed 5/7/2023. After further investigation it was confirmed that human error had resulted in the wrong reconnection date being used in SAP when the read was loaded. The registry date of 24/7 in the registry was the correct reconnection date. The actual reading was correctly loaded in SAP, other than the error on the associated date.

As the correct reading was used there will be no error in the total consumption reported and as this was an error with the MEEN process there is no need to follow through with further investigations or improved controls as ICPs have been migrated off the SAP system.

HE Scenarios - MEEN			
Test	**Scenario**	**Test Expectation**	**Result**
A	ICP becomes Active part way through a month	Consumption is only calculated for the Active portion of the month.	Compliant
B	ICP becomes Inactive part way through a month.	Consumption is only calculated for the Active portion of the month.	Compliant
C	ICP's become Inactive then Active within a month.	Consumption is only calculated for the Active portion of the month.	Compliant
D	ICP switches in part way through a month	Consumption is calculated to include the 1st day of responsibility.	Compliant
E	ICP switches out part way through a month	Consumption is calculated to include the last day of responsibility.	Compliant
F	ICP switches out then back in within a month	Consumption is calculated for each day of responsibility.	Compliant
G	Continuous ICP with a read during the month	Consumption is calculated assuming the readings are valid until the end of the day	Compliant
H	Continuous ICP without a read during the month	Consumption is calculated assuming the readings are valid until the end of the day	Compliant
I	Rollover Reads	Consumption is calculated correctly in the instance of meter rollovers.	Compliant

TRUS was able to find an example of all scenarios except C and F. For the scenarios where examples were found, there were two scenarios (G and H) where the analyst was unable to replicate the system outcome. During the audit the manual calculation was peer reviewed by a second analyst who was also unable to replicate the TRUS system outcomes.

An alleged breach is therefore made on the basis that the system is not working as expected for two scenarios.

HE Scenarios - TRUS			
Test	**Scenario**	**Test Expectation**	**Result**
A	ICP becomes Active part way through a month	Consumption is only calculated for the Active portion of the month.	Compliant
B	ICP becomes Inactive part way through a month.	Consumption is only calculated for the Active portion of the month.	Compliant
C	ICP's become Inactive then Active within a month.	Consumption is only calculated for the Active portion of the month.	No examples
D	ICP switches in part way through a month	Consumption is calculated to include the 1st day of responsibility.	Compliant
E	ICP switches out part way through a month	Consumption is calculated to include the last day of responsibility.	Compliant
F	ICP switches out then back in within a month	Consumption is calculated for each day of responsibility.	No examples
G	Continuous ICP with a read during the month	Consumption is calculated assuming the readings are valid until the end of the day	Not compliant
H	Continuous ICP without a read during the month	Consumption is calculated assuming the readings are valid until the end of the day	Not compliant
I	Rollover Reads	Consumption is calculated correctly in the instance of meter rollovers.	Compliant

Alleged breach

<table>
<tr><td colspan="4">The GTV system is not working as expected for two Historic Estimate scenarios – TRUS</td></tr>
<tr><td>Non-compliance</td><td colspan="3">Description</td></tr>
<tr><td>Report section: 5.4
Rule: 35.2

From: Unknown
To: Current</td><td>Audit history: Yes
Controls: Ineffective
Impact: Moderate</td><td colspan="2">The GTV system is not working as expected for two of the tested historic estimates:
Continuous ICP with a read during the month
Continuous ICP without a read during the month
It was not possible to replicate the system outcome via manual calculations.
It is therefore recommended Mercury investigate system behaviour. As these are the two most common scenarios it is suggested this is done as a matter of urgency.</td></tr>
<tr><td colspan="2">Remedial action rating</td><td>Remedial timeframe</td><td>Remedial comment</td></tr>
<tr><td colspan="2">In progress</td><td>August/September 2024</td><td>Investigating.</td></tr>
<tr><td colspan="4">Audited party comment</td></tr>
<tr><td colspan="2">The circumstances of the matters outlined in the breach notice.</td><td colspan="2">For historic estimates we were not able to do a manual calculation that matched the system outcome for scenario G (Continuous ICP with a read during the month) and scenario H (Continuous ICP without a read during the month).</td></tr>
<tr><td colspan="2">Whether or not the participant admits or disputes that it is in breach.</td><td colspan="2">We acknowledge that we have breached.</td></tr>
<tr><td colspan="2">Estimate of the impact of the breaches (where admitted).</td><td colspan="2">Little to no impact.</td></tr>
<tr><td colspan="2">What steps or processes were in place to prevent the breaches?</td><td colspan="2">All other scenarios matched, we are investigating why we were not able to manually match the calculation for the relevant scenarios.</td></tr>
<tr><td colspan="2">What steps have been taken to prevent recurrence?</td><td colspan="2">Pending outcome of investigation.</td></tr>
</table>

Recommendation

That Mercury investigate how GTV is calculating historic estimates for the following two scenarios, and rectify any issues found.

- Continuous ICP with a read during the month

- Continuous ICP without a read during the month

As these scenarios are the most common type it is suggested this is done as a matter of urgency as any issues could be widespread.

5.5 Proportion of Historic Estimates (rule 40.1)

This rule requires retailers to report to the Allocation Agent the proportion of historic estimates contained within the consumption information for the previous initial, interim and final allocations. Sample files were examined and no issues arose.

5.6 Forward Estimates (rules 34 & 36)

The rules do not prescribe how forward estimates are to be calculated. Mercury were asked to describe the forward estimate methodology used.

TRUS use a shape profile to calculate their forward estimates. This will be bespoke to the site where they have history, or an uploaded generic profile for new sites. The forward estimate is produced automatically by GTV, but documentation of the process was provided. The system uses both historical data from 12 months prior and more recent data to identify trends when making a forward estimate. If data from a year prior isn't available it bases the estimate on the more recent data, and if the site is new with no historical data the last resort is to use a value based on the customer type.

The team routinely review initial submission data against interim date to look for differences. This is the main control re the automatically generated forward estimates. Estimation is usually the main reason for initial v interim differences, the shoulder months are particularly hard to forecast. However, TRUS is content their forward estimates aren't consistently skewed too high or too low, otherwise this would have been identified through this comparison process.

5.7 Billed vs Consumption Comparison (rule 52)

A sample reconciliation of GAS070 data and billing data at an ICP level was completed for both MEEN and TRUS to prove that the file included data for all the ICPs at the sample gas gate. No issues arose from this check.

The table below shows a comparison between quantities billed and consumption information submitted to the Allocation Agent for three years.

MEEN Billed vs Consumption				
Year ending	**Billed**	**Submission**	**Difference**	**Percent**
Dec 2020	1,097,862	1,107,933	-10,071	99

Dec 2021	1,047,999	1,063,119	-15,119	99
Dec 2022	1,005,830	1,024,441	-18,610	98
Dec2023	890,179	933,893	-43,713	95

TRUS Billed vs Consumption				
Year ending	**Billed**	**Submission**	**Difference**	**% Difference**
Dec 2020	1,009,680	1,030,316	-20,636	98
Dec 2021	1,013,665	1,042,366	-28,701	97
Dec 2022	960,493	985,185	-24,692	97
Dec 2023	1,202,054	1,142,223	59,830	105

It can be seen that the billed and submitted figures are broadly aligned.

5.8 Gas Trading Notifications (Rule 39)

A retailer must give notice to the Allocation Agent when they commence, amend or cease gas supply under a supplementary agreement to a transmission services agreement. They must do this by the third business day of the month following the relevant consumption month of the change.

Mercury confirmed it hadn't commenced, amended or ceased gas supply under a supplementary agreement since the last audit.

6. Conclusion

The audit found that the Mercury control environment is "effective" for 10 areas evaluated; acceptable for 1 area; needs improvement in 4 areas; is ineffective in 2 areas and 1 area was not relevant.

4 alleged breaches have been raised in relation to TRUS, 2 in relation to MEEN and 1 in relation to UNLG.

The report also makes the following recommendations:

- Establish and document how GTV maps each ICP to the correct gas type to ensure the correct inputs are used in energy conversion, update the table to the newest version and establish a process to actively manage the table.

- Review procedures and staff training for dealing with an ICP that is identified as having more than 10TJs/annum consumption.
- Continue the workstream to improve reporting and implement initiatives used by MEEN to work the list of meters that haven't been read for more than 4 months and resolve longstanding issues.
- Prioritise the development of the use of the new zero reads reporting/review process used for data validation to ensure issues are identified and managed in a timely fashion, for example to enable flags and filtering.
- Investigate how GTV is calculating historic estimates for the following two scenarios, and rectify any issues found.
    - Continuous ICP with a read during the month
    - Continuous ICP without a read during the month

  As these scenarios are the most common type it is suggested this is done as a matter of urgency as any issues could be widespread.

Appendix 1 – Control rating definitions[1]

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

[1] All relevant systems and processes in place

Appendix 2 – Impact rating definitions[2]

Rating	Definition
Insignificant	• A small number of issues with registry file timeliness and/or accuracy. Negligible impact on other participants or consumers. Did not prevent the process completing. • A small number of issues with the accuracy and/or timeliness of files to the Allocation Agent. Corrections were made by the interim allocation. A small number of issues not related to registry or allocation information.
Minor	• Some issues with registry file timeliness and/or accuracy. Minor impact on other participants or consumers. Did not prevent the process completing. • Some issues with the accuracy and/or timeliness of files to the Allocation Agent. Corrections were made by the interim allocation. A small number of issues not related to registry or allocation information.
Moderate	• A moderate number of issues with registry file timeliness and/or accuracy. Moderate impact on other participants or consumers. Did prevent some processes completing. • A moderate number of issues with the accuracy and/or timeliness of files to the Allocation Agent. Corrections were not made by the interim allocation. A moderate number of issues not related to registry or allocation information.
Major	• A significant number of issues with registry file timeliness and/or accuracy. Major impact on other participants or consumers. Did prevent some processes completing. • A significant number of issues with the accuracy and/or timeliness of files to the Allocation Agent. Corrections were not made by the interim allocation. A significant number of issues not related to registry or allocation information.

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

Appendix 3 – Remedial 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.