ELECTRICITY INDUSTRY PARTICIPATION CODE
RECONCILIATION PARTICIPANT AUDIT REPORT

For

NOVA ENERGY LIMITED
NZBN: 9429030450660

Prepared by: Tara Gannon and Brett Piskulic

Date audit commenced: 13 May 2024

Date audit report completed: 17 June 2024

Audit report due date: 15 July 2024

TABLE OF CONTENTS

EXECUTIVE SUMMARY

This Electricity Industry Participation Code Reconciliation Participant audit was performed at the request of **Nova Energy Limited (Nova),** to support their application for renewal of certification in accordance with clauses 5 and 7 of schedule 15.1. The audit was conducted in accordance with the Guideline for Reconciliation Participant Audits V7.2.

Nova operates the following participant codes:

- TODD for the Nova Energy brand,
- WISE for the Wise Prepay brand,
- HNET for the Megatel brand, and
- TGTL to manage generation point of connection MKE1101TGTLGG.

Unless otherwise specified, the processes and non-compliances described in the report apply to all codes.

TODD

Registry and static data accuracy is generally well managed, and few inaccuracies were identified. A large number of reports are available to identify data discrepancies; some are not consistently used and overlap with other reports, and others are only reviewed as workloads allow. TODD is working through reviewing all the reports, determining which ones should be prioritised and allocating workloads. I have recommended some minor improvements to validation and exception management processes including for new connections, rejected MEP nominations and distributed generation which should help to increase accuracy.

Switching is well managed, and there are processes to identify and correct inaccurate data. If validations are not completed on time, some inaccurate data may be provided in switch files. TODD is aware of these issues and endeavours to ensure data is accurate.

Read attainment is closely monitored and TODD is well aware of the best endeavours requirements. Read validation processes are compliant, and processes to correct volume information for stopped, faulty and bridged meters are compliant and well managed.

TODD's reconciliation processes are compliant, and where accuracy issues occurred it was generally because of incorrect underlying data rather than a system or process issue. TODD has tried to improve the accuracy of underlying data with increased validation of consumption information, and the reconciliation team taking responsibility for profile changes. Unmetered load processes are compliant now that TODD has stopped profiling the consumption.

WISE

Registry and static data is well managed and validated, and no data discrepancies were identified.

Switching is managed using PEBS and most data was accurate and on time, although a small number of errors occurred while new staff were being trained.

Readings and read attainment is closely monitored, and a high level of compliance was achieved. Processes to correct volume information for stopped, faulty and bridged meters are compliant and well managed. Validation of meter events requires some improvement.

Submission data was accurate, with only one minor submission accuracy issue identified. I have recommended that GR100 reports from the reconciliation manager are reviewed to prevent recurrence of this issue.

HNET

Registry and static data is well managed and validated, and a small number of data discrepancies were identified.

Switching is well managed using IPBMS and most data was accurate and on time.

Readings and read attainment is closely monitored, and a high level of compliance was achieved. Validation of meter events requires some improvement. Processes to correct volume information for stopped, faulty and bridged meters are compliant and well managed. The profile change process requires improvement to ensure that changes are made on the correct date and on an actual reading.

Submission data was accurate, with only one minor submission accuracy issue identified. I have recommended that GR100 reports from the reconciliation manager are reviewed to prevent recurrence of this issue.

Conclusion

Overall, compliance was high and non-compliances generally affected a small number of ICPs and events for manual processes, or only occurred under specific circumstances. The impact of the non-compliances was low and controls were generally strong or moderate, and Nova indicated that further control improvements are planned.

The audit found 35 non-compliances, and 16 recommendations are raised. The future risk rating has increased from 51 to 53. Although the number of non-compliance raised is the same as the previous audit, some non-compliances were for Code clauses where compliance was recorded previously, because no examples of non-compliance were identified during the previous audit. Where non-compliance was re-raised against the same Clauses as the previous audit I sometimes found the controls and/or impact had changed during the audit period. The change in rating does not correlate to a decline in performance.

The next audit frequency indicator recommends that the next audit be conducted in six months. I have considered this in conjunction with Nova's responses, which indicate that process improvements have or will be made to resolve a number of the issues identified. I agree that Nova's requested audit period of 16 months is reasonable based on the audit findings.

The matters identified are shown in the tables below:

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Relevant information	2.1	15.2	**TODD** Some inaccurate data was not corrected as soon as practicable. **HNET** Some inaccurate data was not corrected as soon as practicable.	Moderate	Low	2	Identified
Electrical Connection of Point of Connection	2.11	10.33A	**TODD** 55 ICPs did not have full certification within five business days of reconnection. **WISE** Three ICPs did not have full certification within five business days of reconnection. **HNET** Six ICPs did not have full certification within five business days of reconnection.	Strong	Low	1	Identified
Meter bridging	2.17	10.33C and 2A of Schedule 15.2	**TODD** Two ICPs have had their meters unbridged but corrections are still to be peer reviewed before being added in Orion. The meters were unbridged between 26 June 2023 and 27 July 2024. Four ICPs switched out before bridged meter corrections were processed.	Moderate	Low	2	Identified
Changes to registry information	3.3	10 Schedule 11.1	**TODD** 208 late updates to "active" status for reconnections. 94 late status updates to "inactive" status. 495 late trader updates. 314 ANZSIC code updates were made more than 20 business days after the ICP start date. **WISE** 16 late updates to "active" status for reconnections.	Moderate	Low	2	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			Ten late status updates to "inactive" status. Eight late trader updates. Three ANZSIC code updates were made more than 20 business days after the ICP start date. **HNET** Eight late updates to "active" status for reconnections. 12 late status updates to "inactive" status. 44 late trader updates. Six ANZSIC code updates were made more than 20 business days after the ICP start date.				
Provision of information to the registry manager	3.5	9 Schedule 11.1	**TODD** 163 late updates to "active" status for new connections. Seven late updates to "inactive - new connection in progress" status and late MEP nominations for new connections. Two of a sample of 25 new connections with date discrepancies had an incorrect "active" date and were corrected during the audit.	Moderate	Low	2	Identified
ANZSIC codes	3.6	9 (1(k) of Schedule 11.1	**TODD** One of a sample of 100 ICPs had an incorrect ANZSIC code applied and was corrected during the audit. **HNET** One of a sample of 50 ICPs had an incorrect ANZSIC code applied and was corrected during the audit.	Strong	Low	1	Cleared
Changes to unmetered load	3.7	9(1)(f) of Schedule 11.1	**TODD** Four of the 228 ICPs with unmetered load had incorrect daily unmetered kWh recorded and were corrected during the audit.	Strong	Low	1	Cleared
Management of "active" status	3.8	17 Schedule 11.1	**TODD** ICP 1001155450CK45C is believed to have been reconnected by the gaining trader, but its status was not updated to "active" prior to switch out.	Strong	Low	1	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			Two of a sample of 25 new connections with date discrepancies had an incorrect "active" date and were corrected during the audit.				
Losing trader response to switch request and event dates - standard switch	4.2	3 and 4 Schedule 11.3	**TODD** Four ANs had the AA response code applied because they were vacant, but the AD code should have applied because they had AMI metering. A bug in the report logic resulted in the incorrect code being applied. ICP 0273157280LC292 AN-8232575 28 February 2024 had the PD code applied when it was not disconnected due to a discrepancy between the Orion and registry status. **WISE** One AN file had an incorrect response code manually selected. **HNET** One AN file had an incorrect response code applied.	Moderate	Low	2	Identified
Losing trader must provide final information - standard switch	4.3	5 Schedule 11.3	**TODD** 0007180217RNFF4 CS-4835341 26 June 2023 had an incorrect average daily consumption recorded. **WISE** 15 CS breaches. ICP 0497540274LCB49 CS-4834715 22 June 2023 had an incorrect last actual read date. **HNET** Average daily consumption was incorrect for 1000616455PC5CF CS-5364430 17 December 2023. ICP 0006110590WM304 CS-5354112 7 December 2023 had an incorrect last actual read date.	Strong	Low	1	Investigating
Losing trader provides information - switch move	4.8	10(1) Schedule 11.3	**TODD** 13 ANs had the AA response code applied because they were vacant, but the AD code should have applied because they had AMI metering.	Moderate	Low	2	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			Four ANs had the AA response code applied but should have had PD because they were disconnected. Ten ANs had the AD response code applied when the AMI flag was set to no. One E2 breach. **WISE** Two E2 breaches. One WR breach.				
Losing trader must provide final information - switch move	4.10	11 Schedule 11.3	**TODD** 0000103127TRB29 CS-4939305 2 June 2023 had an incorrect average daily kWh applied. 44 CS files had an event date before the last actual read date, because reads after the event date were not made misreads. ICP 0000000443CP811 CS-5455330 12 February 2024 should have had an actual read type but the reading was mislabeled when it was moved to an occupier account. ICP 0000001515UNDA1 CS-4813830 6 June 2023 should have switched out on 42214/27150 A which are the reads for 5 June 2023 but switched out on 42215/27152 A which are the reads for 6 June 2023. ICP 0000037455CP67F CS-5161256 16 October 2023 should have switched out with an estimated read type but actual was applied, and the last actual read date was incorrect. ICP 0000500900CAE05 CS-5441096 12 February 2024 should have switched out with an estimated read type but actual was applied, and the last actual read date was incorrect. ICP 0900086046PCFFD CS-4908312 7 August 2023 had an actual read type applied but should have been estimated, and the average daily kWh was incorrect.	Moderate	Low	2	Investigating

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			ICPs 0000538407NR066 CS-5368107 7 December 2023 and 0000007850UN283 CS-5454042 1 March 2024 had incorrect last actual read dates applied. For ICP 0000538407NR066 the average daily kWh was also incorrect. **WISE** Four CS files contained incorrect average daily kWh and readings, because the closing readings were entered incorrectly for some meter registers. The readings were corrected through the RR process, or the switches were withdrawn. **HNET** ICP 0000543613TU8C0 CS-4732186 5 April 2023 had an incorrect last actual read date and average daily kWh because reads after disconnection were not loaded against the ICP.				
Gaining trader changes to switch meter reading - switch move	0	12 Schedule 11.3	**TODD** 11 RR breaches. **HNET** One RR breach.	Strong	Low	1	Identified
Gaining trader to advise the registry manager - gaining trader switch	4.14	16 Schedule 11.3	**HNET** One HH CS breach.	Strong	Low	1	Identified
Withdrawal of switch requests	0	17 and 18 Schedule 11.3	**TODD** Three NW files had the date failed code applied where the proposed event date was not more than ten business days in the future. 11 SR breaches. 55 NA breaches. **WISE** Three NW files had the date failed code applied where the proposed event date was not more than ten business days in the future. Three NW files were created in error and rejected by the other trader at WISE's request.	Moderate	Low	2	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			One NA breach. One SR breach. **HNET** Three NW files had the date failed code applied where the proposed event date was not more than ten business days in the future. Six NA breaches.				
Metering information	4.16	21 Schedule 11.3	**TODD** ICP 0000001515UNDA1 CS-4813830 6 June 2023 should have switched out on actual reads 42214/27150 which are the reads for 5 June 2023 but switched out on actual reads 42215/27152 which are the reads for 6 June 2023. The impact is 3 kWh. **WISE** Four CS files contained incorrect readings, because the closing readings were entered incorrectly for some meter registers. The readings were corrected through the RR process, or the switches were withdrawn.	Strong	Low	1	Identified
Maintaining shared unmetered load	5.1	11.14	**TODD** Three of the 68 ICPs with shared unmetered load had incorrect daily unmetered kWh recorded and were corrected during the audit.	Strong	Low	1	Identified
Electricity conveyed & notification by embedded generators	6.1	10.13, Clause 10.24 and 15.13	**TODD** ICPs 0000931804TU29B, 0000542172TU5D7 and 1001266765UN6ED remain on RPS only but should have RPS PV1 profile. Ten ICPs had jobs for I flow meter installation turned down and are under investigation to determine whether generation should be gifted or are being queried with the network. While meters were bridged, energy was not metered and quantified according to the code for 25 ICPs. **WISE** While meters were bridged, energy was not metered and	Moderate	Low	2	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			quantified according to the code for nine ICPs. **HNET** ICP 1002063645LCC9B was confirmed to have solar generation in use, but no I flow metering has been requested and no notification of gifting has been provided to the reconciliation manager. While meters were bridged, energy was not metered and quantified according to the code for two ICPs.				
Derivation of meter readings	6.6	5 Schedule 15.2	**TODD** Wells meter condition events are not currently reviewed.	Weak	Low	3	Investigating
NHH meter reading application	6.7	6 Schedule 15.2	**TODD** ICP 0000001515UNDA1 CS-4813830 6 June 2023 should have switched out on actual reads 42214/27150 which are the reads for 5 June 2023 but switched out on actual reads 42215/27152 which are the reads for 6 June 2023. The impact is 3 kWh. Profile changes for ICPs 0000052655HB79C and 0000831042HBD34 were processed incorrectly resulting in HHR consumption on the day of the meter change being omitted from submission. **WISE** Four CS files contained incorrect readings, because the same final readings were entered into PEBS against two channels. The readings were corrected through the RR process, or the switches were withdrawn.	Moderate	Low	2	Identified
Trading period duration	7.1	13 Schedule 15.2	**TODD** EDMI recorded a time difference of 61-62 seconds for category 2 ICP 1000600536PC2DA from September 2023 which was resolved by January 2024.	Strong	Low	1	Identified
Identification of readings	9.1	3(5) Schedule 15.2	**TODD**	Strong	Low	1	Investigating

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			Four switch move CS files had incorrectly recorded switch event read types.				
Meter data used to derive volume information	9.3	15.6	**TODD AMI data** AMI readings with decimal places are rounded to zero decimal places on import into Orion, and the rounded readings are used to calculate submission data. **HNET AMI data** AMI readings with decimal places are rounded to zero decimal places on import into IPBMS, and the rounded readings are used to calculate submission data.	Moderate	Low	2	**TODD:** Disputed The auditor agrees that this is a technical non-compliance, and resolving it could create discrepancies and inaccuracies for switching and billing. The impact is very low. **HNET:** Identified
Half hour estimates	9.4	15 Schedule 15.2	**TODD** Zero HHR estimates were applied for "active" ICPs with less than one week of history before the process was changed to estimate based on the ANZSIC code during the audit.	Strong	Low	1	Cleared
Electronic meter readings and estimated readings	9.6	17 Schedule 15.2	**TODD** During EDMI's agent audit, ICP 1099576180CN5A1 meter 212615969 had a Voltage Tolerance Failure/Error in March 2023. This was not sent to TODD and no action has been taken. **WISE** AMI Meter event logs are not reviewed for all event types. **HNET** AMI Meter event logs are not consistently reviewed.	Moderate	Low	2	**TODD:** Disputed TODD believes that investigating this issue should be the responsibility of the MEP only. **WISE:** Identified **HNET:** Identified
Calculation of ICP days	11.2	15.6	**TODD** ICP 0000604730MP151 had accidentally been closed one day early resulting in under submission of one ICP day at CUL0661 for July 2023. The error was corrected on	Strong	Low	1	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			discovery during the audit and revised submission data will be washed up. **WISE** Between June 2023 and April 2024 ICP days and volumes for ICP 0009951282CNBD7 were recorded against BOB0331 but should have been recorded against BOB1101. The NSP has been corrected and revised submission information will be washed up. **HNET** ICP 0326516743LC9D7 had an incorrect submission type recorded on the registry from 1 July 2023 until 23 April 2024 which prevented TODD from providing HHR volumes and ICP days. The submission type error was corrected as soon as it was identified and revised submission data will be washed up.				
Electricity supplied information provision to the reconciliation manager	11.3	15.7	**WISE** Billed data was double counted in the AV120 submission in September 2022 and August 2023. The process has been corrected to prevent recurrence of this issue.	Strong	Low	1	Identified
HHR aggregates information provision to the reconciliation manager	0	15.8	**TODD** Two submissions for April 2023 (before TODD included validation of aggregates against volumes as part of their pre submission checks) had X flow differences of around ±700 kWh between the volumes and aggregates, which are believed to be caused by a small number of ICPs which had duplicated volumes in the aggregates report before this issue was corrected. The differences were washed out by Revision 3. **HNET** ICP 0326516743LC9D7 had an incorrect submission type recorded on the registry from 1 July 2023 until 23 April 2024 which prevented TODD from	Strong	Low	1	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			providing HHR volumes and ICP days. The submission type error was corrected as soon as it was identified and revised submission data will be washed up.				
Creation of submission information	12.2	15.4	**TODD** ICPs 0000052655HB79C and ICP 0000831042HBD34 underwent meter upgrades and had HHR volumes on the day of the meter change omitted. ICP 0000541521TUFFE had no unmetered load reported because an opening meter read was not recorded on the dummy meter register and has been corrected. Zero HHR estimates were applied for "active" ICPs with less than one week of history before the process was changed to estimate based on the ANZSIC code during the audit. **HNET** ICP 0326516743LC9D7 had an incorrect submission type recorded on the registry from 1 July 2023 until 23 April 2024 which prevented TODD from providing HHR volumes and ICP days. The submission type error was corrected as soon as it was identified and revised submission data will be washed up.	Strong	Low	1	Identified
Accuracy of submission information	12.7	15.12	**TODD** ICPs 0000052655HB79C and ICP 0000831042HBD34 underwent meter upgrades and had HHR volumes on the day of the meter change omitted. ICP 0000541521TUFFE had no unmetered load reported because an opening meter read was not recorded on the dummy meter register and has been corrected. Zero HHR estimates were applied for "active" ICPs with less than one week of history before the process was changed to estimate based	Strong	Low	1	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			on the ANZSIC code during the audit. **WISE** ICP days and volumes for ICP 0009951282CNBD7 were recorded against BOB0331 but should have been recorded against BOB1101. The NSP has been corrected and revised submission information will be washed up. **HNET** ICP 0326516743LC9D7 had an incorrect submission type recorded on the registry from 1 July 2023 until 23 April 2024 which prevented TODD from providing HHR volumes and ICP days. The submission type error was corrected as soon as it was identified and revised submission data will be washed up.				
Permanence of meter readings for reconciliation	12.8	4 Schedule 15.2	**TODD** TODD does not enter permanent estimate readings before Revision 14 is created, and some forward estimate remains at Revision 14.	Moderate	Low	2	Investigating
Forward estimate process	12.12	6 Schedule 15.3	**TODD, HNET** and **WISE** Some balancing area differences where the variation between revisions was more than ± 15% were caused by forward estimates which were higher or lower than the actual data.	Strong	Low	1	Identified
Compulsory meter reading after profile change	12.13	7 Schedule 15.3	**HNET** ICP 1000549774PC17C's profile change was not made on an actual or permanent estimate reading. The ICP switched in on 28 April 2023 and no actual or permanent estimate readings were available until 23 May 2023.	Weak	Low	3	Identified
Reporting resolution	13.2	9 Schedule 15.3	**WISE** Up to April 2024, AV080 submission data was produced to four decimal places and rounded to three decimal places. Rounding was updated in April 2024 and submissions are now	Strong	Low	1	Cleared

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			rounded to two decimal places.				
Historical estimate reporting to RM	0	10 Schedule 15.3	**TODD** Historic estimate targets were not met for some revision 3, 7 and 14 submissions. **HNET** Historic estimate targets were not met for some revision 3 and 7 submissions.	Moderate	Low	2	Identified
Future Risk Rating						53	

Future risk rating	0	1-3	4-15	16-40	41-55	55+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

RECOMMENDATIONS

Subject	Section	Recommendation	Comment
Event dates for trader updates	2.1	**TODD** Ensure that event dates are updated to reflect the correct date that the ICP attributes in the event applied from.	**TODD** Recommendation accepted TODD will complete refresher training with staff by end of Q3 2024
Event dates for trader updates	2.1	**HNET** Ensure that event dates are updated to reflect the correct date that the ICP attributes in the event applied from.	**HNET** Recommendation accepted. HNET will continue to provide internal training and focus on accuracy of event dates.
Identification of new connection date discrepancies	2.9	**TODD** Instead of using the IECD vs trader status date and IECD vs meter cert date reports I recommend using the AC020 trader compliance report to identify "active" date discrepancies for new connections in particular: AC020Trader14 – "inactive" status with new connection in progress reason, or "ready" status with Initial Electrically Connected Date AC020Trader21 - Accuracy of status "active" event date, which identifies discrepancies between the "active" status date, initial electrical connection date and meter certification date on one report.	**TODD** Recommendation accepted. TODD will utilise the AC020 reporting to improve Active Date discrepancy reporting. This will be embedded Q3 2024
Monitor rejected MEP nominations	3.4	**TODD** Monitor incoming MN responses which indicate the MEP has rejected the MEP nomination, so that errors can be identified, and nominations reissued as necessary.	**TODD** Recommendation accepted. TODD will investigate controls to identify rejected MEP notifications in Q3 2024

Subject	Section	Recommendation	Comment
Monitor rejected MEP nominations	3.4	**WISE** Monitor incoming MN responses which indicate the MEP has rejected the MEP nomination, so that errors can be identified, and nominations reissued as necessary.	**WISE** Recommendation accepted. WISE will implement controls to identify rejected MEP notifications in Q3 2024
Identification of additions of unmetered load	3.7	**HNET** Check for ICPs where the distributor has added unmetered load at least monthly.	**HNET** Recommendation accepted. HNET will generate a monthly check report for metering category of 9 and check for unmetered load ICPs by Q3 2024
Estimated daily consumption for ICPs with less than two actual reads before switch out.	4.3	**HNET** Ensure that new connections and switch ins with less than two actual readings before switch out have an accurate estimate of average daily consumption applied.	**HNET** Recommendation acknowledged HNET is investigating potential options for CS consumption calculation to increase accuracy for sites without two actual reads.
Creation of occupier accounts	4.10	**TODD** The billing team should consistently check whether a switch is in progress before transferring ICPs to occupier accounts.	**TODD** Recommendation acknowledged. TODD will investigate and implement a solution to remove the impacts of sites being changed to different accounts mid-switch process Q4 2024
Notification of gifting	6.1	**TODD** Develop a process to provide notification of gifting to the reconciliation manager where an ICP is confirmed to be generating but no I flow metering can or will be installed.	**TODD** Recommendation accepted. TODD is currently investigating options for implementing a process where these conditions are met Q4 2024
Identification of additions of generation	6.1	**HNET** Identify ICPs where the installation type is updated to D or G, a generation fuel type is added, or a non-zero generation capacity is added by the distributor. Investigate to determine whether distributed generation is present. If generation is present arrange for an I flow metering to be installed or the ICP to be added to the reconciliation manager's gifting register.	**HNET** Recommendation accepted. HNET will implement a process to verify whether a new ICP has an export meter and how generation is conducted.
Compliance with requirement to measure generation volumes or notify the reconciliation manager	6.1	**HNET** If a customer refuses to have generation metering installed, provide notification of gifting to the reconciliation manager.	**HNET** Recommendation accepted. HNET has informed of gifting to the reconciliation manager to add the ICP to the gift generation register
Review of Bluecurrent and WEL Networks meter events	9.6	**WISE** Expand the PEBS validation of meter events to include more event types after discussing the event types reported and expected actions with each MEP.	**WISE** Recommendation accepted. WISE will expand our process to review all logs by September 2024
Review of meter events	9.6	**HNET** Review meter event lists provided by the MEPs to determine whether any action is required.	**HNET** Recommendation accepted. HNET currently reviews all emails received. HNET will investigate if

Subject	Section	Recommendation	Comment
			reports are being sent via other channels.
GR100 ICP days review	11.2	**WISE** Review the GR100 ICP days reports published by the reconciliation manager to identify and resolve discrepancies between the reported and expected ICP days. Where an ICP has an incorrect NSP, there will be negative and positive ICP days differences of the same amount at the affected NSPs.	**WISE** Recommendation accepted. WISE has implemented the download and review of the GR100 reports in July 2024
Compare the HHR volumes and aggregates submission totals prior to submission	11.4	**TODD** Compare the HHR volumes and aggregates submission totals prior to submission. Investigate any differences over ±10 kWh for I flows and ±90 kWh for X flows, to determine whether they are caused by ICP issues that require correction.	**TODD** Recommendation acknowledged. TODD will investigate the feasibility of building checks to determine HHR Volumes and HHR Aggregates prior to submissions.
Profile changes	12.13	**HNET** Review the profile change process to ensure that profile changes are applied from the correct date, and on an actual or permanent estimate reading.	**HNET** Recommendation accepted. HNET will review the current weekly internal profile change process whether profile changes are applied with the correct date and actual or permanent estimate reading.

ISSUES

Subject	Section	Clause	Description
			Nil

1. ADMINISTRATIVE

1.1. Exemptions from Obligations to Comply with Code (Section 11)

Code reference

Section 11 of Electricity Industry Act 2010.

Code related audit information

Section 11 of the Electricity Industry Act provides for the Electricity Authority to exempt any participant from compliance with all or any of the clauses.

Audit observation

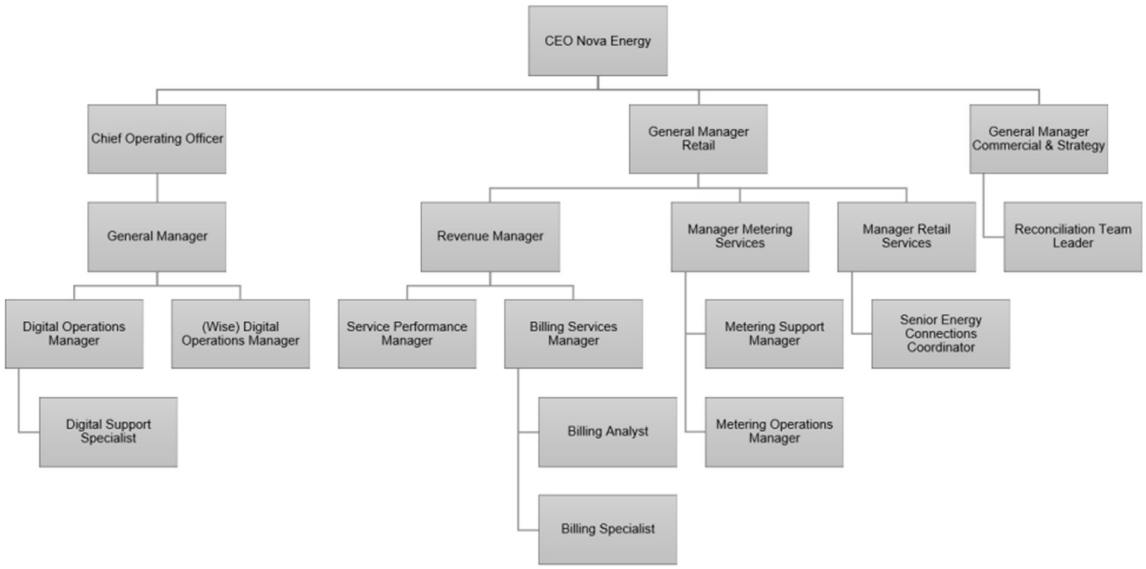
The Electricity Authority website was checked to identify any exemptions currently in place for Nova.

Audit commentary

There are no exemptions relevant to the scope of this audit. Exemption 276 relates to Nova's MEP activities.

1.2. Structure of Organisation

An organisation chart was provided.



1.3. Persons involved in this audit

Auditors:

Name	Company	Role
Tara Gannon	Provera	Lead Auditor
Brett Piskulic	Provera	Supporting Auditor

Personnel assisting with this audit:

Company	Title
Megatel	Digital Operations Manager
Megatel	Junior Software Developer
Nova Energy	Billing Analyst
Nova Energy	Billing Analyst
Nova Energy	Billing Services Manager
Nova Energy	Billing Specialist
Nova Energy	Energy Analyst
Nova Energy	Energy Analyst
Nova Energy	Manager Metering Services
Nova Energy	Manager Retail Services
Nova Energy	Metering Operations Manager
Nova Energy	Metering Support Manager
Nova Energy	Senior Energy Connections Coordinator
Nova Energy	Service Performance Manager
Nova Energy	Team Leader Reconciliation
Wise	Customer Services Manager
Wise	Digital Operations Manager

Agent personnel assisting with this audit:

Company	Role
Bluecurrent	C&I Data Services Specialist
EDMI NZ Limited	Solution Support Specialist
EMS	Data Analyst
EMS	Grid Metering Specialist
MRS	MRS Technical Support Team-Lead
NZX	Reconciliation Manager
Wells	Operations Manager Service Hub

1.4. Use of Agents (Clause 15.34)

Code reference

Clause 15.34

Code related audit information

A reconciliation participant who uses an agent

- *remains responsible for the contractor's fulfilment of the participant's Code obligations,*
- *cannot assert that it is not responsible or liable for the obligation due to something the agent has or has not done.*

Audit observation

The agents used by Nova were identified and their agent reports assessed as a part of this audit.

Audit commentary

All agents have been audited in accordance with the Guidelines for Reconciliation Participant Audits. The EMS, EDMI, Bluecurrent, MRS and Wells audits were completed more than seven months before this audit report's due date. Additional checks were conducted to confirm whether there have been any changes to procedures, or any events which could affect meter accuracy had occurred. The agent audit reports are expected to be submitted along with this report.

1.5. Hardware and Software

TODD

TODD uses:

- **Orion** for billing, switching, and registry information management,
- **Stark** to retrieve and validate generation data,
- **Kinetiq** for TOU (time of use) billing,
- **Axos** holds all readings and is used for TOD (time of day) billing,
- **SalesForce** to manage customer applications, interactions and tasks associated with ICPs, and
- **EnergyMarket** to produce NHH and HHR submission information using data from Orion, the registry and Stark.

Systems are backed up. Access to systems is restricted through logins and passwords based on the specific role a user is performing.

WISE

WISE uses the Pre-Pay Energy Billing System (PEBS) platform which is owned by Energy Billing System Limited. PEBS is a bespoke MySQL database on a Linux operating system. Daily backups are performed to a remotely hosted server.

Access to systems is restricted through logins and passwords based on the specific role a user is performing.

HNET

HNET continues to use a bespoke MySQL database (IPBMS) on a Linux operating system. Daily backups are performed to a remotely hosted server.

Access to systems is restricted through logins and passwords based on the specific role a user is performing.

TODD's systems are used to produce HNET's HHR submissions.

1.6. Breaches or Breach Allegations

There were no alleged breaches relating to the scope of this audit for TODD, HNET or WISE during the audit period.

1.7. ICP Data

TODD

The quantity of ICPs by status is shown below.

Status	2024	2023	2022	2021	2020	2018	2017	2016
Active (2,0)	80,304	85,985	95,278	103,318	91,298	78,861	76,477	82,245
Inactive – new connection in progress (1,12)	158	247	356	101	154	20	42	25
Inactive – electrically disconnected vacant property (1,4)	419	375	352	248	220	256	377	488
Inactive – electrically disconnected remotely by AMI meter (1,7)	451	411	423	249	168	94	35	16
Inactive – electrically disconnected at pole fuse (1,8)	118	134	126	159	155	110	104	14
Inactive – electrically disconnected due to meter disconnected (1,9)	51	32	28	27	28	32	27	23
Inactive – electrically disconnected at meter box fuse (1,10)	60	78	87	133	136	117	27	1
Inactive – electrically disconnected at meter box switch (1,11)	19	23	26	52	65	25	25	0
Inactive – electrically disconnected ready for decommissioning (1,6)	93	92	93	102	73	71	80	88

Status	2024	2023	2022	2021	2020	2018	2017	2016
Inactive – reconciled elsewhere (1,5)	-	-	-	-	-	1	1	1
Decommissioned (3)	2,678	2,451	2,208	1,844	1,590	1,328	1,022	736

The "active" ICPs on the list file are summarised by meter category in the table below.

Metering Category	2024	2023	2022	2021	2020	2018	2017	2016
1	78,323	83,906	93,013	100,501	88,735	76,751	75,511	80,130
2	1865	1,936	2,040	2480	2,344	1,972	1,830	1,977
3	77	99	121	148	130	100	92	85
4	21	26	35	43	43	29	33	29
5	2	2	2	3	4	4	4	5
9	8	6	6	10	11	2	3	12
Blank	8	10	61	133	31	3	4	7

WISE

The quantity of ICPs by status is shown below.

Status	2024	2023	2022	2021	2020	2019	2018
Active (2,0)	5,194	5,280	4,768	4,870	3,062	2,321	1,688
Inactive – new connection in progress (1,12)	-	-	-	-	-	-	-
Inactive – electrically disconnected vacant property (1,4)	4	6	5	3	6	10	8
Inactive – electrically disconnected remotely by AMI meter (1,7)	190	176	132	107	68	53	38
Inactive – electrically disconnected at pole fuse (1,8)	12	4	3	-	1	1	-
Inactive – electrically disconnected due to meter disconnected (1,9)	4	5	2	3	1	1	-
Inactive – electrically disconnected at meter box fuse (1,10)	1	1	-	-	-	-	-
Inactive – electrically disconnected at meter box switch (1,11)	1	-	-	-	-	-	-

Inactive – electrically disconnected ready for decommissioning (1,6)	2	1	1	2	-	1	1
Inactive – reconciled elsewhere (1,5)	-	-	-	-	-	-	-
Decommissioned (3)	231	177	126	72	47	40	30

The "active" ICPs on the list file are summarised by meter category in the table below.

Metering Category	2024	2023	2022	2021	2020	2019	2018 (Nov 2018)
1	5,194	5,280	4,768	4,870	3,062	2,321	1,688
2	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-

HNET

The quantity of ICPs by status is shown below.

Status	2024	2023	2022	2021	2020	2019	2018
Active (2,0)	9,396	8,220	7,701	7,746	5,489	5,365	5,194
Inactive – new connection in progress (1,12)	1	9	-	1	2	1	-
Inactive – electrically disconnected vacant property (1,4)	19	21	20	21	19	19	18
Inactive – electrically disconnected remotely by AMI meter (1,7)	70	73	128	55	63	37	37
Inactive – electrically disconnected at pole fuse (1,8)	-	1	1	1	1	1	-
Inactive – electrically disconnected due to meter disconnected (1,9)	4	4	2	2	2	3	12
Inactive – electrically disconnected at meter box fuse (1,10)	2	2	3	2	-	1	-
Inactive – electrically disconnected at meter box switch (1,11)	3	3	3	2	1	-	2
Inactive – electrically disconnected ready for decommissioning (1,6)	18	16	14	6	3	4	-
Inactive – reconciled elsewhere (1,5)	-	-	-	-	-	-	-

Decommissioned (3)	167	142	123	98	77	54	32

The "active" ICPs on the list file are summarised by meter category in the table below.

Metering Category	2024	2023	2022	2021	2020	2019	2018
1	9,328	8,164	7,651	7,691	5,440	5,347	5,179
2	64	54	48	51	45	18	15
3	2	1	1	4	4	-	-
4	1	1	1	-	-	-	-
5	1	-	-	-	-	-	-
9	-	-	-	-	-	-	-

1.8. Authorisation Received

Nova provided email authorisation to collect information in relation to this audit.

1.9. Scope of Audit

This Electricity Industry Participation Code Reconciliation Participant audit was performed at the request of Nova, to support their application for renewal of certification in accordance with clauses 5 and 7 of schedule 15.1.

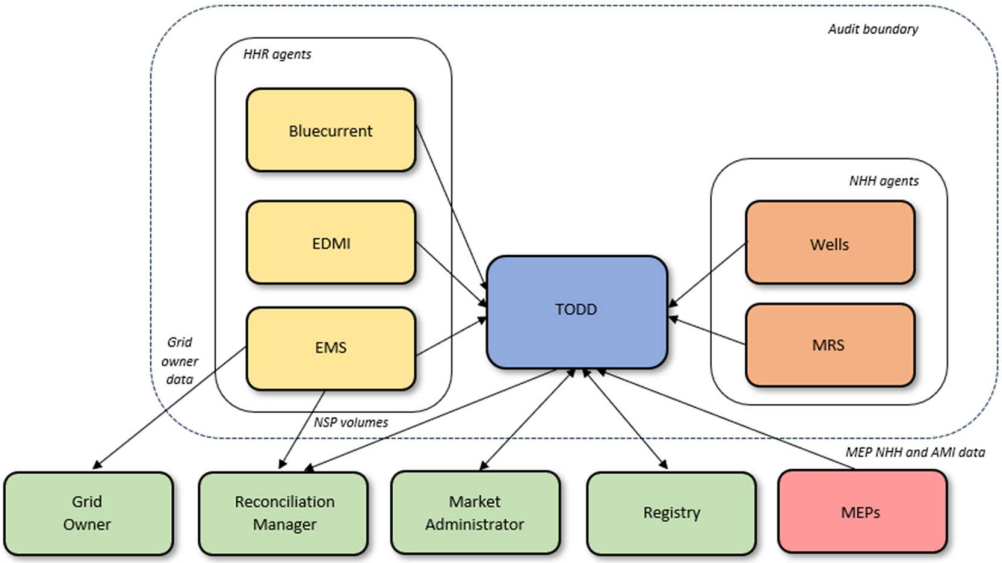
The audit was conducted in accordance with the Guideline for Reconciliation Participant Audits V7.2.

TODD

Registry, meter reading, switching and data validation processes were audited on remotely via zoom between 15 May 2024 and 23 May 2024.

A registry list, event detail report and audit compliance report for 1 April 2023 and 13 March 2024 and a registry list snapshot for 13 March 2024 were reviewed.

The scope of the audit is shown in the diagram below, with the audit boundary shown for clarity.



The table below shows the tasks under clause 15.38 of part 15 for which TODD requires certification. This table also lists any agents who assist with these tasks:

Tasks Requiring Certification Under Clause 15.38(1) of Part 15	Agents Involved in Performance of Tasks		MEPs providing data
	HHR	NHH	
(a) Maintaining registry information and performing switching			
(b) Gathering and storing raw meter data	Bluecurrent EMS EDMI	Wells MRS	Bluecurrent (NGCM, SMCO) Arc Innovations (ARCS) Influx (FCLM) IntelliHUB (IHUB) - incl Metrix (MTRX), BOPE and Counties Power (COUP)
(c)(iii) Creation and management of HHR & NHH volume information			
(d)(i) Calculation of ICP days			
(d)(ii) - delivery of electricity supplied information under clause 15.7			
(d)(iii) - delivery of information from retailer and direct purchaser half hourly metered ICPs under clause 15.8			
(e) – Provision of submission information for reconciliation	EMS		
(f) – Provision of metering information to the Grid Owner	EMS		

EMS provides data collection and submission services for grid connected generators, plus provision of metering information to the grid owner. Bluecurrent and EDMI are agents for data collection only. Wells and MRS provide NHH meter reading services.

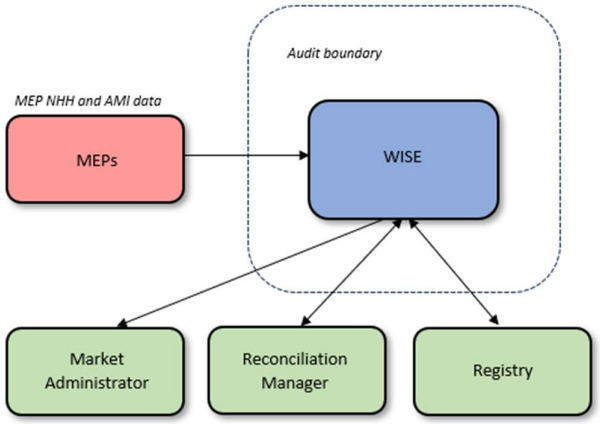
All agents have been audited in accordance with the Guidelines for Reconciliation Participant Audits. The EMS, EDMI, Bluecurrent, MRS and Wells audits were completed more than seven months before this audit report's due date. The agent audit reports are expected to be submitted along with this report, and the agents confirmed that there have been no changes to their processes which could have a negative impact on TODD's compliance.

WISE

The audit was carried out via Microsoft Teams meetings between 13 May 2024 and 20 May 2024.

A registry list, event detail report and audit compliance report for 1 April 2023 to 18 March 2024 and a registry list snapshot for 18 March 2024 were reviewed.

The scope of the audit is shown in the diagram below, with the audit boundary shown for clarity.



The table below shows the tasks under clause 15.38 of part 15 for which HNET requires certification. This table lists the agents and MEPs who assist with these tasks:

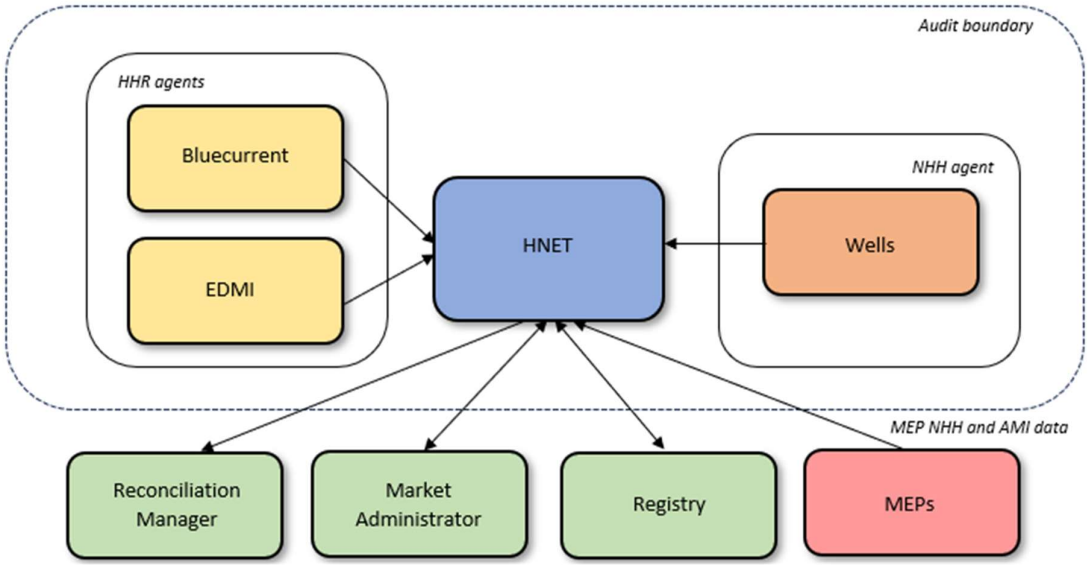
Tasks Requiring Certification Under Clause 15.38(1) of Part 15	Agents Involved in Performance of Tasks	MEPs
(a) - Maintaining registry information and performing customer and embedded generator switching		
(b) – Gathering and storing raw meter data		Bluecurrent – NHH IntelliHUB - NHH Wel Networks – NHH
(c)(ii) - Creation and management of NHH volume information		
(d) – Calculation of ICP days		
(da) - delivery of electricity supplied information under clause 15.7		
(e) – Provision of submission information for reconciliation		

HNET

The audit was carried out via Microsoft Teams meetings between 13 May 2024 and 21 May 2024.

A registry list, event detail report and audit compliance report for 1 April 2023 to 19 March 2024 and a registry list snapshot for 19 March 2024 were reviewed.

The scope of the audit is shown in the diagram below, with the audit boundary shown for clarity.



The table below shows the tasks under clause 15.38 of part 15 for which HNET requires certification. This table lists the agents and MEPs who assist with these tasks:

Tasks Requiring Certification Under Clause 15.38(1) of Part 15	Agents Involved in Performance of Tasks	MEPs
(a) - Maintaining registry information and performing customer and embedded generator switching		
(b) – Gathering and storing raw meter data	Bluecurrent – HHR EDMI - HHR Wells - NHH	Bluecurrent (incl Smartco) (NGCM, SMCO) Arc Innovations (ARCS) Influx (FCLM) IntelliHUB (IHUB) - incl Metrix (MTRX), BOPE and Counties Power (COUP) Wel Networks (WASN)
(c)(ii) - Creation and management of NHH volume information		
(d) – Calculation of ICP days		
(da) - delivery of electricity supplied information under clause 15.7		
(e) – Provision of submission information for reconciliation		

The Wells and Bluecurrent audit reports are expected to be attached and confirm compliance with the Code. The agents have been audited in accordance with the Guidelines for Reconciliation Participant Audits. The agent audit reports are expected to be submitted along with this report, and the agents

confirmed that there have been no changes to their processes which could have a negative impact on HNET's compliance.

1.10. Summary of previous audit

Nova provided a copy of the report from the previous audit completed in July 2023 by Bernie Cross (lead auditor). The current status of the non-compliances, recommendations and issues is recorded in the table below. The status still existing is noted if non-compliance with the clause has been found in this audit and does not refer to the specific ICPs where these are detailed. Further comment is made in the relevant sections of this report.

Subject	Section	Clause	Non-compliance	Status
Relevant information	2.1	15.2	**TODD** Some inaccurate data was not corrected as soon as practicable. Profile discrepancy on the day of meter change for upgrades and downgrades. Volume corrections for three ICPs with defective meters have not been applied. Volume corrections not applied for bridged ICP 0000542837TU334 between 22 July 2022 to 11 January 2023. Two unmetered load corrections applied without virtual boundary reads resulting in the apportionment of consumption volumes applied into incorrect periods. ICP 0000033012TCD70 switched in effective from 16 November 2019 on 19 October 2022. and consumption for submission periods from November 2019 to September 2021 has not been reported. ICP 0329488094LC1C3 did not have its HHR estimates for December 2022 replaced. Inaccurate submission for Arc Innovations HHR metering. **WISE** One ICP had an incorrect ANZSIC code which has now been updated.	Still existing
Retailer responsibility for electricity conveyed - access to metering installations	2.6	10.7(2),(4),(5) and (6)	**HNET** Access was not arranged for one ICP 0436764334LC885 to enable the MEP to complete meter compliance work.	Cleared, no new non-compliance was identified
Electrical Connection of Point of Connection	2.11	10.33A	**TODD** 38 ICPs did not have full certification within five business days of reconnection. **WISE** Two ICPs did not have full certification within five business days of reconnection.	Still existing

Subject	Section	Clause	Non-compliance	Status
			ICP 0030284093PC947 was not recertified on resolution of the tamper. **HNET** Three ICPs did not have full certification within five business days of reconnection.	
Meter bridging	2.17	10.33C and 2A of Schedule 15.2	**TODD** 15 ICPs where the MEP was notified of a bridged meter later than one business day from when TODD was notified. Volume corrections not applied for bridged ICP 0000542837TU334 between 22 July 2022 to 11 January 2023.	Still existing
Changes to registry information	3.3	10 Schedule 11.1	**TODD, HNET** and **WISE** Some registry information was not updated within five business days of the event.	Still existing
Provision of information to the registry manager	3.5	9 Schedule 11.1	**TODD** 249 late updates to "active" status for new connections. Four newly connected ICPs (of a sample of 18) had incorrect "active" status event dates. All were corrected during the audit. **HNET** Three late updates to "active" status for new connections.	Still existing
ANZSIC codes	3.6	9 (1(k) of Schedule 11.1	**TODD** Two ICPs had incorrect ANZSIC codes applied. These have been corrected. **WISE** Incorrect ANZSIC code for ICP 0000130320UN5F0. **HNET** Two incorrect ANZSIC codes.	Still existing
Changes to unmetered load	3.7	9(1)(f) of Schedule 11.1	**TODD** Five ICPs where unmetered load no longer present but unmetered load details recorded by TODD was not end dated. Three standard unmetered load ICPs were found to have a daily kWh value that was different to a calculation derived from the distributors UNM details information with an assessed impact of 2,394 kWh per annum.	Still existing
Management of "active" status	3.8	17 Schedule 11.1	**TODD** Four newly connected ICPs (of a sample of 18) had incorrect "active" status event dates. All were corrected during the audit.	Still existing

Subject	Section	Clause	Non-compliance	Status
Management of "inactive" status	0	19 Schedule 11.1	**TODD** Seven ICPs with "inactive" consumption did not have their status updated to "active" for the periods with consumption. Five ICPs were recorded with incorrect status codes. Four were reversed and replaced and ICP 1002158202LC555 still has incorrect status reasons recorded for historic status records. **WISE** Two ICPs (0008112982HB234, 1002059298LCDEF) had incorrect status reason codes initially applied.	Cleared, no new non-compliance was identified
Losing trader response to switch request and event dates - standard switch	4.2	3 and 4 Schedule 11.3	**TODD** Two ANs had the AD (advanced metering) response code applied when the AMI flag was set to N. 16 ICPs had a proposed event date more than ten business days after the NT update date. The AN for three ICPs AN had the AA (acknowledge and accept) response code applied when the AMI flag was set to Y and the meter was constantly returning meter reads to TODD. **WISE** One AN had the AA (acknowledge and accept) response code applied when the AMI flag was set to Y and the meter was constantly returning meter reads to WISE. One AN had the OC (occupied premises) response code applied for a transfer switch when the AMI flag was set to Y and the meter was constantly returning meter reads to WISE where the correct code should have been AD.	Still existing
Losing trader must provide final information - standard switch	4.3	5 Schedule 11.3	**TODD** Four CS files were confirmed to have incorrect average daily consumption recorded. The CS file for ICP 0000520264EN644 recorded an incorrect last actual read date. **WISE** Incorrect methodology used to calculate average daily consumption. The CS file for ICP 0000069500TRFC3 recorded an incorrect last actual read date. **HNET** Average daily consumption was incorrect for 0005440530RN478.	Still existing
Retailers must use same reading - standard switch	0	6(1) and 6A Schedule 11.3	**TODD** The read type for one RR file was incorrectly recorded as actual instead of estimate. The read for one rejected RR file was not updated in Orion to reflect the provided CS read resulting in an under submission of 116 kWh.	Cleared, no new non-compliance was identified

Subject	Section	Clause	Non-compliance	Status
			Two RR breaches.	
Losing trader provides information - switch move	4.8	10(1) Schedule 11.3	**TODD** The AN for five ICPs AN had the AA (acknowledge and accept) response code applied when the AMI flag was set to Y and the meter was constantly returning meter reads to TODD. **WISE** One E2 breach.	Still existing
Losing trader must provide final information - switch move	4.10	11 Schedule 11.3	**TODD** Three CS files were confirmed to have incorrect average daily consumption recorded. One CS file (ICP 0001721890PC8B5) had estimated switch event reads where the last actual read date was after the last day of responsibility. The CS files for 0000057236CP111, 1099574638CN945, 0090436400WRDBF, 0001261440TGF84 and 0000637890WE966 were issued with correct read values but incorrect read types. The opening estimate read on the occupier account was used instead of the closing read on the customer account. One CS file (ICP 0082060862WEEA2) had actual switch event reads where the last actual read date was before the last day of responsibility. **WISE** Calculation methodology for average daily consumption not compliant. ICP 0458221287LCBE0 had estimated switch event reads where the last actual read date was on the last day of responsibility. ICPs 0452070031LC072 and 0387970525LC701 had actual switch event reads where the last actual read date was before the last day of responsibility. Average daily consumption was incorrect for 0000003166UNB7D due to an incorrect switch read applied for register two. **HNET** Incorrect last actual read dates applied to four CS files.	Still existing
Gaining trader changes to switch meter reading - switch move	0	12 Schedule 11.3	**TODD** 22 RR breaches.	Still existing
Withdrawal of switch requests	0	17 and 18 Schedule 11.3	**TODD** NW (ICP 0000048335CP554) was issued in error. Six SR breaches. 42 NA breaches.	Still existing

Subject	Section	Clause	Non-compliance	Status
			WISE Incorrect NW advisory code for one ICP. Five NA breaches. One SR breach. **HNET** Two NW's (ICPs 0125742304LC071 and 0080042437WE016) were issued in error. One SR breach. Three NA breaches.	
Electricity conveyed & notification by embedded generators	6.1	10.13, Clause 10.24 and 15.13	**TODD** While meters were bridged, energy was not metered and quantified according to the code for 19 ICPs. 18 from a sample of 20 ICPs had generation recorded by the distributor and I flow metering where TODD did not record a generation profile. Five ICPs with distributed generation do not have settled I flow registers installed and there is no record added to the gifting register. **WISE** While meters were bridged, energy was not metered and quantified according to the code for 15 ICPs. **HNET** While meters were bridged, energy was not metered and quantified according to the code for one ICP. For ten ICPs an incorrect profile code of PV1 was applied when no generation was present. ICP 0244638179LCF59 with distributed generation does not have settled I flow registers installed and there is no record added to the gifting register.	Still existing
Reporting of defective metering installations	6.4	Clause 10.43(2) and (3)	**TODD** The MEP was not advised of 15 bridged meters.	Cleared, no new non-compliance was identified
Collection of information by certified reconciliation participant	6.5	2 Schedule 15.2	**TODD** Three ICPs were not interrogated within their maximum interrogation cycle. Two have since switched out, and the other ICP is disconnected.	Cleared, no new non-compliance was identified
Interrogate meters once	6.8	7(1) and (2) Schedule 15.2	**TODD** Exceptional circumstances were not proven for six of the ten ICPs sampled that were not read during the period of supply. **HNET**	Cleared, no new non-compliance was identified

Subject	Section	Clause	Non-compliance	Status
			Exceptional circumstances were not proven for two ICPs that were not read during the period of supply.	
NHH meters interrogated annually	6.9	8(1) and (2) Schedule 15.2	**TODD** The best endeavours requirements were not met for ICP 0000039211TR55D that was not read during the previous 12 months. **HNET** The best endeavours requirements were not met for ICP 0000446386UNECA that was not read during the previous 12 months.	Cleared, no new non-compliance was identified
NHH meters 90% read rate	6.10	9(1) and (2) Schedule 15.2	**TODD** The best endeavours requirements were not met for all ten ICPs sampled that were not read during the previous four months.	Cleared, no new non-compliance was identified
Identification of readings	9.1	3(5) Schedule 15.2	**TODD** One ICP which underwent RRs had incorrect switch read type recorded in Orion. Five ICPs had incorrect read types in CS files.	Still existing
Meter data used to derive volume information	9.3	15.6	**TODD and HNET for Bluecurrent and EDMI data collection** Prior to June 2022 the EIEP3 and GEN file format may round the trading period data to two decimal places if the meter does not have a multiplier and the volume for that hour has a non-zero value in the third decimal place. **TODD AMI data** AMI readings with decimal places are rounded to zero decimal places on import into Orion, and the rounded readings are used to calculate submission data.	Cleared Still existing
Half hour estimates	9.4	Clause 15 Schedule 15.2	**TODD** HHR estimates were not replaced by actual data for two ICPs as part of TODD's business as usual process. The estimates were replaced during the audit.	Still existing
Electronic meter readings and estimated readings	9.6	Clause 17 Schedule 15.2	**TODD** Stark meter events for generation meters are not being reviewed. AMI Meter event logs and time synchronisation reports are not consistently reviewed, and no formal process is in place to ensure complete reviews are conducted. Four ICPs with time synchronisation corrections between 3,597 and 3,602 seconds where no investigation or volume correction applied. **WISE**	Still existing

Subject	Section	Clause	Non-compliance	Status
			AMI Meter event logs are not consistently reviewed, and no formal process is in place to ensure complete reviews are conducted. **HNET** AMI Meter event logs are not consistently reviewed, and no formal process is in place to ensure complete reviews are conducted.	
Calculation of ICP days	11.2	15.6	**TODD** ICP days were duplicated for December 2022 for ICP 0003875008AL995 because it was recorded as an "active" TOU ICP in Orion and Stark. 0000036953DE5C4 was downgraded from HHR to RPS on 27 August 2022. HHR data after the downgrade was not removed from Stark and the ICP was reported as both NHH-RPS and HHR-HHR until 31 October 2022. ICP days and volumes were duplicated for ICP 0003875008AL995 for December 2022 because it was "active" in the Orion and Stark as HHR, which resulted in over submission of 31 days. **WISE** Incorrect ICP days for 18 combinations on NSP/consumption month due to PEBS not correctly reflecting the registry status for 21 ICPs. **HNET** Zeroing does not occur for AV110 submissions. Four NHH ICP days differences between AV110 submissions and the registry were caused by either human error or mismatched event dates in MySQL system.	Still existing
HHR aggregates information provision to the reconciliation manager	0	15.8	**TODD** ICP 0005083575RN47D had an incorrect volume recorded in the September 2022 aggregates file. ICP days and volumes were duplicated for ICP 0003875008AL995 for December 2022 because it was "active" in the Orion and Stark as HHR, which resulted in over submission of 28,574.3 kWh.	Still existing
Creation of submission information	12.2	15.4	**TODD** Alleged breach 2205NOVE1 for late provision of submission information. 1000510763PC9CF was upgraded from NHH to TOU on 21 December 2022. The profile change coincided with a network pricing change. The HHR meter was not properly set up in Stark to receive data until a meter change on 7 February 2023. Zeros had been estimated from 21 December 2022 until 6 February 2023. ICP 0000033012TCD70 switched in effective from 16 November 2019 on 19 October 2022. Correctly calculated volumes have been included in NHH submissions for the October 2021	Still existing

Subject	Section	Clause	Non-compliance	Status
			submission period onwards, but consumption for submission periods from November 2019 to September 2021 has not been reported. **WISE** GR-100 ICP Days comparison report identified 21 ICPs were missing from either R7 or R14 revision submission due to PEBS not correctly reflecting the registry "active" status. Incorrect ICP days for 27 combinations on NSP/ consumption month due to PEBS not correctly reflecting the registry status for 21 ICPs. **HNET** Alleged breach 2208NOVE2 for incorrect provision of HHR data and ICP days.	
Accuracy of submission information	12.7	15.12	**TODD** Alleged breach 2205NOVE1 for late provision of submission information. Some inaccurate submission information was not corrected as soon as practicable. **WISE** Some inaccurate submission information was not corrected as soon as practicable. **HNET** Alleged breach 2208NOVE2 for incorrect provision of HHR data and ICP days. Some inaccurate submission information was not corrected as soon as practicable.	Still existing
Permanence of meter readings for reconciliation	12.8	4 Schedule 15.2	**TODD** TODD does not enter permanent estimate readings before Revision 14 is created, and some forward estimate remains at Revision 14.	Still existing
Historical estimate process	12.11	4 and 5 Schedule 15.3	**TODD** HE Scenarios J & K relating to UML load are not producing expected results as the volumes are being profiled using RPS SASV information.	Cleared, no new non-compliance was identified
Forward estimate process	12.12	6 Schedule 15.3	**TODD** Some balancing area differences where the variation between revisions was more than ± 15% were caused by forward estimates which were higher or lower than the actual data. **WISE** Some balancing area differences where the variation between revisions was more than ± 15% were caused by either data corruption or forward estimates which were higher or lower than the actual data.	Still existing

Subject	Section	Clause	Non-compliance	Status
Historical estimate reporting to RM	0	10 Schedule 15.3	**TODD** Historic estimate thresholds were not met for Aug-Oct 21 R14, Mar-May 22 R7, and Jul-Sep 22 R3. **HNET** Historic estimate thresholds were not met for R3 for a small number of months and revisions.	Still existing

Subject	Section	Recommendation	Status
Periodically check meter category 2 or higher meters with no multiplier	2.1	**TODD** At least 6-9 monthly, check ICPs with meter category 2 or higher meters with no multiplier, so that any multiplier issues can be resolved prior to Revision 14.	Adopted.
Independently confirm ANZSIC code updates identified by automated word check program	3.6	**HNET** I recommend that a manual check is added to the ANZSIC code update program to enable a user to independently review any proposed ANZSIC code update identified by the automated work check program prior to any updates being made to the registry.	Adopted. The Digital Operations Manager checks the validity of the codes before they are updated in Orion and on the registry.
Changes to unmetered load	3.7	**TODD** I recommend that a manual check is undertaken periodically on ICPs where the distributor UNM details is not formatted consistently to ensure the daily kWh value is correctly calculated.	Adopted. The last review was in December 2023.
Escalate proposed transfer date potential errors with gaining traders	3.9	**HNET** I recommend that where "inactive" consumption is detected just prior to a switch event date that HNET engages with the gaining trader to have the proposed transfer date reviewed and amended where it is confirmed to be incorrect.	Adopted.
Process to monitor connection status of non-communicating "inactive" ICPs.	3.9	**WISE and HNET** Implement a process to ensure non communicating "inactive" ICPS are also monitored to ensure the correct connection status is known for all ICPS where WISE or HNET are responsible.	Adopted.
Losing trader must provide final information - switch move	4.1	**TODD** The billing team should consistently check whether a switch is in progress before transferring ICPs to occupier accounts.	Not adopted. This is an ongoing issue and the recommendation has been re-raised.

Subject	Section	Recommendation	Status
Provide training on the upgrade and downgrade process	6.7	**TODD** Provide further training on the upgrade and downgrade process to ensure: • meters are correctly set up in systems to start/cease collecting data from the correct date and prevent overlaps where ICPs are reported as NHH and HHR, and • upgrades and downgrades are processed effective from the correct date.	Adopted. The reconciliation team took responsibility for profile changes associated with upgrades and downgrades in February 2024.
Review Orion validation thresholds	9.5	**TODD** Review meter read is exceptionally high and meter read is exceptionally low validation thresholds to ensure these remain relevant.	In progress. There is currently a job in progress to review the thresholds, but it has not been completed.
Review Stark meter events	9.6	**TODD** Regularly review Stark meter events to identify and resolve any issues which could affect meter accuracy	In progress. The reconciliation team does not actively monitor meter events. The Generation team monitors metering data in real time and notifies the reconciliation team if they identify any issues, and EMS validates meter event and clock synchronisation events as part of their own data validation. Compliance is recorded in the EMS agent audit report. TODD's reconciliation team intends to reinstate their own review of meter condition events, once they confirm the meanings of the event type codes.
Compare the HHR volumes and aggregates submission totals prior to submission	11.4	**TODD** Compare the HHR volumes and aggregates submission totals prior to submission. Investigate any differences over ±10 kWh for I flows and ±90 kWh for X flows, to determine whether they are caused by ICP issues that require correction.	Not adopted, re-raised and will be reconsidered by TODD.
Advise the reconciliation team of backdated switches	12.2	**TODD** Advise the reconciliation team where an ICP switches in with an event date more than 12 months ago. The reconciliation team should ensure that all consumption is reported within a 14-month window.	Adopted.

Subject	Section	Recommendation	Status
Report missing volumes for ICP 0000033012TCD70	12.2	**TODD** Create a correction to report the omitted volumes for the submission periods between November 2019 to September 2021 for ICP 0000033012TCD70.	Adopted. I confirmed that the correction has been processed.
Allocation of submission information	12.3	**HNET** Extend pre submission checks to compare current submission to previous submission files at row level to enable rows previously submitted that are now no longer required to be zeroed out.	Adopted.
Review historic estimate processes for unmetered load ICPs to improve accuracy	12.11	**TODD** Review historic estimate processes for unmetered load ICPs to improve accuracy, including considering whether end of month readings could be entered.	Adopted. Unmetered load is reported based on readings entered against a dummy meter register on the scheduled read date. Orion automatically estimates consumption based on the average daily kWh recorded against the register. TODD has excluded unmetered load meter registers from being profiled using the reconciliation manager's seasonal adjusted shape values, and volumes between readings are apportioned to each reconciliation period on a straight line basis. There are small rounding differences of less than ±1 kWh compared to expected submission values based on the average daily kWh x days in the period, because Orion rounds the meter reading on the unmetered load register but the daily kWh value may be to three decimal places. It was not practical to enter end of month readings for unmetered load.
Use of disconnection and reconnection reads when calculating historic estimate	12.11	**TODD** Consider validating disconnection and reconnection readings for use in the historic estimate process to ensure that consumption is allocated to the correct submission period.	Partially adopted. I confirmed that disconnection readings are treated as validated actual readings by the historic estimate process, but reconnection readings are not. The previous audit recommended that reconnection readings should be treated as validated readings and TODD is still considering how this could be managed. The previous audit also recommended that end of month readings be entered, and this is consistently being done.

Subject	Section	Clause	Issue	Status
Retailers must use same reading - standard switch	4.4	6(1) and 6A Schedule 11.3	**WISE** Not all switch reads reflect HHR volumes up to switch date where losing retailer was settling ICP as HHR. In the scenario where the losing retailer is settling an ICP as HHR and the gaining retailer is to settle the ICP as NHH there are instances where the switch read provided is an estimate and does not accurately reflect the HHR volumes up to the switch date. The code does not enable the gaining trader to dispute the switch read for a transfer switch unless the difference is more than 200 kWh. However, if the gaining trader was to be settling the ICP as HHR then the 200-kWh threshold does not apply if the gaining trader provides a RR within five business days of the receipt of the CS file.	No response received, and expected to be evaluated as part of the switching review.

2. OPERATIONAL INFRASTRUCTURE

2.1. Relevant information (Clause 10.6, 11.2, 15.2)

Code reference

Clause 10.6, 11.2, 15.2

Code related audit information

A participant must take all practicable steps to ensure that information that the participant is required to provide is:

a) complete and accurate,
b) not misleading or deceptive,
c) not likely to mislead or deceive.

If the participant becomes aware that in providing information under this Part, the participant has not complied with that obligation, the participant must, as soon as practicable, provide such further information as is necessary to ensure that the participant does comply.

Audit observation

The process to find and correct incorrect information was examined. The registry validation process was examined in detail in relation to the achievement of this requirement. The registry list files and AC020 reports were examined to determine compliance.

Audit commentary

TODD

Registry data management

Disconnection and reconnection service orders and paperwork are managed using SalesForce's JIT (job issue tracking) system. A daily report of open service requests is monitored, and overdue paperwork is followed up.

The RFS team extracts successfully completed disconnections and reconnections from SalesForce to create a file of status updates which are sent to the registry, and checked to determine whether the updates are successful. The process has logic to determine the correct reason code for disconnections, remote disconnections have the 1,7-reason code applied and "vacant" disconnections have 1,4. All other disconnections are processed manually. The status updates, disconnection and reconnection readings are manually entered into Orion from the paperwork.

Trader updates are processed manually through the registry user interface or by importing a bulk file for groups of updates. Orion is updated at the same time. I found that the event date is not consistently updated when manually updating trader information changes on the registry, which means the previous trader record event date is automatically applied. For example:

- ICPs 0005049620CN28D and 0001401646TU787 which had ANZSIC codes updates from the last trader event date, but should have had ANZSIC codes updated from the customer change date,
- ICPs 0000377735TUBD5, 0000540969TU2E3, 0000067578CPE01 and 0000370068TU7E4 which had unmetered load details updated from the last trader event date, but should have had unmetered load updated from the date the change took effect, and
- ICP 0000223456WE4D4 changed from no unmetered load to 0.025 kWh effective 1 February 2023 but unmetered load was added by the network on 2 February 2023.

Description	Recommendation	Audited party comment	Remedial action
Event dates for trader updates	**TODD** Ensure that event dates are updated to reflect the correct date that the ICP attributes in the event applied from.	**TODD** Recommendation accepted TODD will complete refresher training with staff by end of Q3 2024	Identified

Meter changes can be processed using a bulk process where the MEP provides a bulk deployment file or excel file. Meter changes are processed manually where the MEP provides a PDF file, and for new meters.

Incoming registry information is imported into Orion. Registry acknowledgements are not specifically reviewed. Any failed or rejected updates are expected to be identified on screen at the time the manual update is attempted, or through the daily registry data validation process.

A suite of daily discrepancy reports is used to identify potentially incorrect information. A large number of reports are available and some are not consistently used and overlap with other reports, others are only reviewed as workloads allow. TODD is working through reviewing all the reports to determine which ones should be prioritised and allocating workloads.

The discrepancy reports used are listed in the table below.

Data field(s)	Validations
Unmetered load	The billing team is responsible for ensuring that unmetered load is correctly recorded in Orion and on the registry. Unmetered load is validated using the following reports which are emailed to the billing team daily for action: • **Registry_UML_LoadCheck_action_required** which shows differences between the trader/Orion average daily kWh and the value calculated from the distributor information, • **Registry_UML_OnRegistry_NotInOrion** which shows ICPs with unmetered load recorded on the registry but not in Orion, and • **OrionActiveUML_WithNoReads** which shows unmetered load registers which do not have readings recorded. The previous audit recommended that a periodic manual comparison of trader unmetered load details and distributor unmetered load details be completed for ICPs where the distributor unmetered load details are not in the recommended format and this has been adopted. The last review was in December 2023.
New connections	New connection progress is monitored using SharePoint and SalesForce, and daily discrepancy reports are reviewed for: • ICPs at "ready" with TODD as the proposed trader but not claimed, and • ICPs at new connection in progress status. Discrepancies between initial electrical connection dates, meter certification dates and "active" status dates are reviewed as workloads allow.
Metering	The meter details reports identify mismatch between open meters recorded in Orion and on the registry. There is a suite of metering reports which sometimes overlap, and include some false positives where there is no discrepancy. TODD is working through reviewing and consolidating the reports and confirming which staff should be responsible, and in the meantime they are reviewed as workloads allow

Data field(s)	Validations
	with focus on identifying ICPs where meters are missing from Orion or the registry, or there are multiplier differences, number of channels differences, number of dials differences or only a controlled meter is recorded. The daily ExpiredMeterCert_WithReconnection report identifies any ICPs which have been reconnected which do not have current full meter certification. It was temporarily not reviewed during the audit period but has been reinstated, and jobs are being raised for meter replacement or recertification. ICPs on the report are allocated to a smart metering team member who determines whether the meter is already scheduled to be replaced or recertified by the MEP, and if not raises a job.
Status mismatch	Daily reporting identifies ICPs which are "active" in Orion and "inactive" on the registry and vice versa, and ICPs recorded as "active" with TODD in Orion but with another trader on the registry.
Distributed generation	Daily discrepancy reports are produced for distributed generation and reviewed as workloads allow. The reports were designed to identify ICPs with generation capacity and install type L, fuel type other, and fuel type solar with installation type B generation capacity and no I flow register. The reports had some deficiencies and the restrictions by fuel type were preventing all exceptions from being identified. During the audit, TODD updated the report logic and it now identifies: • **PV1 profile without a solar fuel type:** ICPs where the fuel type is not solar or solar+battery and the profile is not RPS EG1 or HHR, • **generation profiles without distributor generation:** ICPs where a PV1 or EG1 profile is applied and the installation type is not B, • **settled EG registers with incorrect flow direction:** ICPs with a settled EG register without flow direction I, • **settled EG registers without distributor generation:** ICPs with a settled EG register and the installation type is not B, and • **distributor generation without an EG meter:** ICPs with installation type B and no settled EG register. As part of its review of discrepancy reporting TODD intends to review the distributed generation discrepancy reports more regularly.
Reconciliation report aggregation factors	Prior to submission the reconciliation team runs a registry list discrepancies report which compares submission information to a registry list with history to identify ICPs missing from the reconciliation submission, or included in the submission but excluded from the registry, aggregation factor discrepancies including incorrect profiles and submission types, and **"**inactive**"** and "vacant" consuming ICPs.

There are also periodic checks for closed meters without closing readings.

Registry data accuracy

The registry list file and AC020 report were examined to confirm that information was correct and not misleading. The analysis returned the following findings:

Item No.	Issue	2024 Qty	2023 Qty	2022 Qty	2021 Qty	2019 Qty	Comments
1	Status mismatch between registry and Orion	3	16	18	3	3	ICP 1001155450CK45C is believed to have been reconnected by the gaining trader, but its status was not updated to "active" prior to switch out. See **section 3.8**. Two of a sample of 25 new connections with date discrepancies had an incorrect "active" date and were corrected during the audit. See **section 3.5**.
2	ICP at status "inactive - new connection in progress" with an initial electrical connection date populated by the distributor	2	10	10	-	1	Both were timing differences and the ICPs were updated to "active" after the report was run.
3	Active date variance with Initial Electrical connection Date	30	6	486	469	472	I checked a sample of 25 of the 30 updates with variances and found two had incorrect active dates which were corrected during the audit. See **section 3.5**.
4	Incorrect submission flag	-	-	-	-	-	Compliant.
5	Incorrect profiles	-	-	-	28	-	26 ICPs had RPS HHR profile and HHR and NHH submission type. All were HHR settled ICPs with unmetered load connected and the registry information was correct.
6	Distributor indicates embedded generation present with RPS profile	3	35	28	11	5	ICPs 0000931804TU29B, 0000542172TU5D7 and 1001266765UN6ED remain on RPS only but should have RPS PV1 profile. See **section 6.1**.
7	Active ICP with cat 9 and UML=N	8	1	2	3	21	Seven ICPs now have metering event records present in the registry which align with the "active" status date. ICP 0234172045LCFD4 had its MEP nomination accepted in November 2022, but still does not have metering details recorded on the registry. TODD has confirmed that metering is present and are receiving readings and submitting volumes for reconciliation. They are working with

Item No.	Issue	2024 Qty	2023 Qty	2022 Qty	2021 Qty	2019 Qty	Comments
							the MEP to confirm the metering details so that the MEP can update the registry. See **section 2.9**.
8	Active ICP with no MEP recorded and UML=N	4	4	1	2	14	The four ICPs now have an MEP and metering recorded.
9	Active with blank ANZSIC codes	-	-	-	2	-	Compliant.
10	Meter cat 3 with residential ANZSIC code	-	-	-	-	1	Compliant.
11	Active with ANZSIC T999 not stated	-	-	-	-	-	Compliant.
12	Active with ANZSIC T994 don't know	-	-	-	-	-	Compliant.
13	Incorrect ANZSIC code applied	1	2	5	16	6	One of a sample of 100 ICPs had an incorrect ANZSIC code applied, and was corrected during the audit. See **section 3.6**.
14	ICPs with Distributor unmetered load populated but retail unmetered load is blank	-		-	-	-	Compliant.
15	ICPs with standard unmetered load flag Y but load is recorded as zero	-		-	-	-	Compliant.
16	ICPs with incorrect shared unmetered load	3	2	-	2	1	Three of the 68 ICPs with shared unmetered load had incorrect daily unmetered kWh recorded and were corrected during the audit. See **section 5.1.**
17	ICPs have UML flag N and no shared unmetered load but Distributor field shows shared unmetered load.	-	-	-	-	-	Compliant.
18	Arc category 2 meters submitted as HHR, with	-	-	-	-	2	All Arc category 2 meters are settled as NHH. 34 Arc category 1 meters are settled as NHH.

Item No.	Issue	2024 Qty	2023 Qty	2022 Qty	2021 Qty	2019 Qty	Comments
	compensation factors of 100 or greater						

In most cases, data inaccuracies were corrected as soon as they were identified, with the exception of incorrect registry event dates for some trader updates.

I rechecked data accuracy exceptions identified during the previous audit and found profile change dates were not corrected for the ICP 0000179220TR119 upgrade on 5 April 2022 or the ICP 0000173047TR764 downgrade on 13 October 2022 and Revision 14 has now passed.

I rechecked "inactive" consumption exceptions identified during the previous audit which had not been corrected and confirmed that none had genuine consumption during "inactive" periods. They all invalidly appeared on the exception report because the reconciliation period contained some "active" consumption as well as an "inactive" period**.**

Submission data accuracy

Processes for correction of incorrect NHH meter readings are reviewed in **section 8.1**. In this section, I reviewed correction processes where volumes were incorrect, but the readings recorded matched the meter register (if metered) including multiplier corrections, defective and faulty meters, "inactive" consumption, and unmetered load corrections.

Defective meters	Defective meters are typically identified through meter read validation, or through the faults process. Where a defective meter is identified a field services job is raised, and the meter is usually replaced. Consumption during the affected period is estimated based on consumption prior to the bridging (if available) or consumption during the month after un-bridging. The estimated consumption is calculated using a template which allows for seasonal adjustment. All corrections are peer reviewed before being added into Orion. If the meter is replaced, the estimated consumption is added to the meter removal reading to create an estimated closing read. If the meter is fixed without replacement, TODD completes an internal meter replacement where the meter is closed on an estimated closing reading capturing the estimated consumption during the faulty period and reopened on the read on the meter when it was fixed. Audit trails are automatically created in Orion when readings are loaded and meters are closed. A reference note is added to the read indicating it is a CRR (compliance read) so that any staff viewing the read history will be aware that it is a correction. SalesForce SFI records supporting information relating to the correction, including service requests, paperwork and supporting information and calculations for the correction. Orion activities are no longer used to record supporting information for corrections. TODD provided ten examples of potentially defective meters. Three were confirmed not to be defective meters and related to relay or hot water faults. Four ICPs still have outstanding service requests because the initial service requests were closed due to customers missing appointments for the technicians to attend these sites. I re-checked the previous audit non-compliances. All issues were resolved in time for Revision 14 submissions except ICPs 0001450521PC4E7 (confirmed faulty 10 March 2023), 0000923413TU251 (confirmed bridged October 2022 to February 2023) and 0110006013EL580 (confirmed faulty 16 January 2023 until replaced 21 March 2023) which have not undergone corrections.

Multiplier corrections	A daily discrepancy report is used to identify ICPs where the multiplier recorded in Orion differs from the multiplier recorded on the registry. Investigation is carried out with the MEP to determine the correct multiplier. The multiplier field in Orion is not date ranged. If the multiplier is incorrect, the invoices for the customer are reversed and then the multiplier is corrected, and the invoices are reissued. If a multiplier change is independent of a meter change, the meter is replaced in Orion by another meter with the same serial number, and an X is added to the meter number for the replaced meter. The appropriate multiplier for the time period is then applied for each meter. Four examples of multiplier corrections were provided, and submissions were corrected accurately.
Bridged meter corrections	TODD has processes to identify bridged meters and arrange for them to be unbridged. Consumption during the bridged period is estimated based on consumption prior to the bridging if available or consumption during the month after un-bridging. The estimated consumption is calculated using a template which allows for seasonal adjustment. All corrections are peer reviewed before being added into Orion. If the meter is replaced, the estimated consumption is added to the meter removal reading to create an estimated closing read. If the meter is unbridged without replacement, TODD completes an internal meter replacement where the meter is closed on an estimated closing reading capturing the estimated consumption during the bridged period and reopened on the read on the meter when it was unbridged. Audit trails are automatically created in Orion when readings are loaded and meters are closed. A reference note is added to the read indicating it is a CRR (compliance read) so that any staff viewing the read history will be aware that it is a correction. SalesForce SFI records supporting information relating to the correction, including service requests, paperwork and supporting information and calculations for the correction. Orion activities are no longer used to record supporting information for corrections. TODD provided a list of 27 ICPs with potentially bridged meters, and 25 of those were confirmed to have been bridged. 24 meters were later unbridged, or switched out before un-bridging was able to be completed. ICP 0000009536CP5A7 is believed to have been bridged when it was reconnected on 7 February 2023 and has not been unbridged. The ICP may have been disconnected sometime between 7 February 2023 and 2 May 2023 due to adverse weather events. TODD has had difficulty arranging a site visit with the customer and MEP and is following up with the MEP every few days in an effort to resolve the issue. Of the 24 meters which were unbridged or switched out before un-bridging was able to be completed: • Six ICPs were unbridged and had accurate corrections processed before the audit, and a further ten ICPs had accurate corrections processed during the audit. • Two ICPs were unbridged and had corrections calculated, but are awaiting peer review before being entered into Orion; the meters were unbridged between 26 June and 27 July 2023 and a list is recorded in **section 2.17**. • Four ICPs[1] switched out while bridged or before a correction was processed; TODD has since updated their process to estimate consumption during their bridged period of supply where ICPs have switched.

[1] 0000110488EN175, 0000983016LN57F, 0011005980PC3D1 and 1000009987BP916.

	The previous audit recorded that ICP 0000542837TU334 was bridged between 22 July 2022 to 11 January 2023 with no correction applied, and this issue has still not been resolved.
Inactive ICPs with consumption	All "inactive" and "vacant" consumption is reported for reconciliation regardless of ICP status, and TODD continues to attempt to obtain readings for "vacant" and "disconnected" ICPs. TODD has a process to identify ICPs with genuine "inactive" consumption and return the status to "active" for the consumption period which is discussed in detail in **section 3.9**. TODD provided a list of 38 ICPs with 12,103 kWh of "inactive" consumption. I checked a sample of all 20 ICPs with "inactive" consumption over 42 kWh, totalling 11,889 kWh and found: • 12 ICPs did not have genuine "inactive" consumption and were included on the report because the reconciliation period contained some "active" consumption as well as an "inactive" period, and • eight ICPs had 7,972 kWh of genuine "inactive" consumption and their statuses were corrected to "active" for the consumption period. I rechecked "inactive" consumption exceptions identified during the previous audit which had not been corrected and confirmed that none had consumption during "inactive" periods. They all invalidly appeared on the exception report because a reconciliation period which was partially "active" was included on the report.
Unmetered load corrections	TODD records unmetered load against a dummy UML meter register, by entering reads which are calculated as the previous read + (number of days in the read to read period x daily unmetered kWh). Where a change to unmetered load is required, the customer's invoices will be reversed and the readings for the unmetered load register will be adjusted to reflect the new daily unmetered kWh. I checked six examples of unmetered load changes and confirmed that they were correctly processed.

Submission accuracy issues are discussed in detail in **section 12.7**. There were some instances were submissions made by TODD were incomplete:

- ICPs 0000052655HB79C and ICP 0000831042HBD34 underwent meter upgrades had HHR volumes on the day of the meter change omitted,
- ICP 0000541521TUFFE had no unmetered load reported because an opening meter read was not recorded on the dummy meter register, and has been corrected,
- zero HHR estimates were applied for "active" ICPs with less than one week of history before the process was changed to estimate based on the ANZSIC code where there is insufficient history during the audit, and
- HHR settled Arc meters have data recorded to 0.1 kWh.

I re-checked the previous audit submission accuracy non-compliances. All issues were resolved in time for Revision 14 submissions except ICPs 0001450521PC4E7 (confirmed faulty 10 March 2023), 0000923413TU251 (confirmed bridged October 2022 to February 2023) and 0110006013EL580 (confirmed faulty 16 January 2023 until replaced 21 March 2023) which have not undergone corrections.

TODD has implemented previous audit submission accuracy recommendations including checking meter multipliers and ensuring that estimated HHR submission data is replaced with actual as soon as it becomes available.

WISE

Registry data management

Most ICPs are disconnected and reconnected remotely. Disconnection and reconnection data is provided via SFTP by the MEPs and imported into PEBS. If the job completion status indicates the job was successfully completed, PEBS updates the ICP status and reason (1,7 for remote disconnections and 2,0 for reconnections) and event date, and the status updates are sent from PEBS to the registry. Disconnections are held for one day before update occurs to determine whether there is a reconnection the same day, in which case no status update is required. Manual disconnections and reconnections are entered into PEBS manually.

An email is automatically generated following each update showing the ICPs updated, any ICPs which could not be updated and any ICPs with exceptions such as consumption after having "inactive" status. WISE staff manually check all paperwork received to check that PEBS and the registry have been updated correctly, and enter any reads provided which are not already present in PEBS. Any daily reads received during disconnected periods continue to be loaded.

Trader updates are completed manually on the registry, and then imported into PEBS via an EDA file. MEP nominations are raised at the time a service order is issued to the MEP.

Incoming network information is received through the EDA import process, and changes to metering information are processed manually in PEBS once paperwork is received.

WISE completes daily checks of data accuracy, using PEBS and SQL queries and any exceptions are emailed to staff for action. These checks include:

- consistency of ICP statuses between PEBS and the registry,
- consistency of meter number, meter type, AMI flag, metering category, meter compensation factor and MEP between PEBS and the registry, and
- changes to unmetered load and distributed generation details on the registry since the previous report - WISE declines any applications for ICPs with unmetered load.

Any discrepancies are investigated and resolved.

Registry data accuracy

The analysis of the list file found no discrepancies, as recorded in the table below.

Item No.	Issue	2024	2023	2022	2021	2020	Comments
1	Status mismatch between registry and WISE	-	-	-	-	-	Compliant.
2	Active with no MEP	-	-	-	-	-	Compliant.
3	Incorrect submission flag	-	-	-	-	-	Compliant, all ICPs have submission type NHH.
4	Blank ANZSIC codes	-	-	-	-	-	Compliant.
5	ANZSIC T999 not stated	-	-	-	-	-	Compliant.

Item No.	Issue	2024	2023	2022	2021	2020	Comments
6	ANZSIC T994 don't know	-	-	-	-	-	Compliant.
7	Incorrect ANZSIC code	-	1	-	-	-	Compliant.
7	Category 9 but "active" with MEP and UML N	-	-	-	-	-	Compliant.
8	ICPs with Distributor unmetered load populated but retail unmetered load is blank	-	-	-	-	-	Compliant, no unmetered load was identified.
9	ICPs with unmetered load flag Y but load is recorded as zero	-	-	-	-	-	Compliant, no unmetered load was identified.
10	ICPs with incorrect shared unmetered load	-	-	-	-	-	Compliant, no unmetered load was identified.
11	ICPs with Distributed Generation indicated but no DG profile	-	-	-	-	2	Compliant, no distributed generation was identified

No profile and/or submission type discrepancies were identified.

Submission data accuracy

Processes for correction of incorrect NHH meter readings are reviewed in **section 8.1**. In this section, I reviewed correction processes where volumes were incorrect, but the readings recorded matched the meter register including multiplier corrections, defective and faulty meters, and "inactive" consumption. No unmetered load is supplied.

Defective meters	Defective meters are typically identified through the meter reading validation process, or from information provided by the MEP or customer. WISE checks with the customer and raises a service order for the meter to be checked and replaced. If the consumption recorded by the meter is confirmed not to be accurate, WISE will estimate the consumption during the faulty period based on the consumption prior to the fault or on the new meter. The estimated consumption will be recorded as an estimated closing reading on the removed meter. WISE provided a list of five potentially faulty meters. All of the issues related to communication or hot water faults, and all consumption was accurately recorded by the meter. The meters were removed on the correct closing reading provided by the MEP.

Bridged meters	Bridged meters are normally identified through notes on reconnection paperwork, and WISE immediately raises a job for the meter to be unbridged. Consumption during the bridged period is estimated based on consumption prior to the bridging if available, or after un-bridging. The estimated consumption is recorded against a virtual meter which opens on the day the meter is bridged, and is closed on the day that the meter is unbridged. WISE provided a list of nine meters which were bridged, and I confirmed that a reasonable estimate of consumption was recorded on the virtual meter and submitted for reconciliation.
Multipliers	No WISE ICPs have meter multipliers, and no ICPs requiring multiplier corrections were identified.
Inactive ICPs with consumption	Consumption is included in reconciliation submissions for days which have an "active" status. The historic estimate process will apportion all consumption in a read-to-read period to the "active" days in that period (if any). WISE continues to attempt to read ICPs which are "vacant" or "disconnected" and a daily email is automatically generated from PEBS showing consumption after ICPs become "vacant" or "disconnected". The ICPs are checked to confirm whether the consumption appears genuine. If it is, WISE contacts the MEP to ask whether the ICP has been reconnected and who requested the reconnection, and the status is updated to "active" for the period with consumption. If the ICP has been reconnected by another trader as part of the switch in process, WISE will follow up with the other trader and request an NT. Otherwise a field service order is raised for the ICP to be disconnected again. WISE provided a list of eight ICPs which had "inactive" consumption recorded between February 2023 and March 2024. All had disconnected volumes of 2 kWh or less, with an average daily kWh of 0.01 kWh or less indicating that the consumption was due to meter creep rather than the ICP having an incorrect status.

HNET

Status updates are managed using the IPBMS Disco Reco Manager. Staff complete a form to request a disconnection or reconnection service order for the MEP including a requested date. A robotic process runs every 30 minutes and sends an email to the MEP requesting the work.

IPBMS receives field services paperwork from the MEPs and Wells which is imported into IPBMS and matched to the original service order. If the job completion status indicates the job was successfully completed, IPBMS updates the ICP status and reason (1,7 for remote disconnections, 1,4 for manual disconnections and 2,0 for reconnections) and event date, and the status updates are sent from IPBMS to the registry. Disconnection and reconnection paperwork is also manually reviewed and compared to IPBMS and the registry.

Disconnection and reconnection readings are entered if they are available, and a query is run to identify disconnections with no reading the day before disconnection and reconnections with no readings on the day of reconnection. Staff will look for missing readings and update them if they are available.

Trader updates are completed manually on the registry, and then imported into IPBMS via an EDA file. MEP nominations are raised at the time a service order is issued to the MEP. Profile changes to add or remove PV1 profile are usually created by a robotic process when an I flow meter register with the settlement indicator set to yes is added or removed. The robotic process applies the current date as the event date, or if the change is made manually the user selects the event date. I found that in some cases the correct event date was not applied:

- 0000546124NR68F was updated to RPS PV1 by the robotic process from the date the MEP updated the registry to include an I flow register; the MEP record was later updated to remove the I flow meter's settlement indicator and HNET corrected the profile,

- 0414128044LC7CD was updated manually with an event date which matched the CS receipt date for an ICP which had a settled I flow register on switch in, but should have been updated from the CS event date, and
- 1000549774PC17C was manually updated to remove an I flow register effective from the previous trader update.

Description	Recommendation	Audited party comment	Remedial action
Event dates for trader updates	**HNET** Ensure that event dates are updated to reflect the correct date that the ICP attributes in the event applied from.	**HNET** Recommendation accepted. HNET will continue to provide internal training and focus on accuracy of event dates.	Identified

Incoming network information is received through the EDA import process, and changes to metering information are processed manually in IPBMS once paperwork is received. Registry acknowledgements are imported into IPBMS and reviewed to identify failed updates.

HNET completes checks of data accuracy, using IPBMS:

- when creating ICP days submissions, HNET checks that the "active" days reported are consistent with the ICP days submission,
- metering attributes recorded in IPBMS are checked against current values in IPBMS three times per month,
- network pricing is checked for consistency with the billing type three times per month, and
- ANZSIC codes are validated against the customer's name and address monthly with any exceptions sent to the switching team for review monthly.

Any discrepancies are investigated and resolved.

There are no checks for additions of distributed generation and unmetered load, HNET relies on the network advising them if these details are changed. Recommendations to check for changes to distributed generation and unmetered load details are made in **sections 6.1** and **3.7**.

Registry data accuracy

The analysis of the list file returned the following findings:

Item No.	Issue	2024	2023	2022	2021	Jan 2020	Comments
1	ICP not managed in HNET's system	-	-	-	-	-	Compliant.
2	Status mismatch between registry and HNET	-	-	-	-	-	Compliant.
3	Active with no MEP	-	-	-	-	-	Compliant.
4	Incorrect submission flag	1	-	-	-	-	The submission type was corrected as soon as the error was identified.

Item No.	Issue	2024	2023	2022	2021	Jan 2020	Comments
5	Active with blank ANZSIC codes	-	-	-	-	-	Compliant.
6	Active with ANZSIC T9.. coded	-	-	-	-	-	Compliant.
7	Active with meter category 9 but MEP and UML N	1	-	-	-	-	Compliant, the ICP was later made "inactive".
8	ICPs with Distributor unmetered load populated but retail unmetered load is blank	-	-	-	-	-	Compliant.
9	ICPs with unmetered load flag Y but load is recorded as zero	-	-	-	-	-	Compliant.
10	ICPs with incorrect shared unmetered load	-	-	-	-	-	Compliant.
11	ICPs with Distributed Generation indicated but no DG profile	-	-	-	-	-	Compliant.

In most cases, data inaccuracies were corrected as soon as they were identified, with the exception of incorrect registry event dates for some trader updates.

Submission data accuracy

Processes for correction of incorrect NHH meter readings are reviewed in **section 8.1**. In this section, I reviewed correction processes where volumes were incorrect, but the readings recorded matched the meter register including multiplier corrections, defective and faulty meters, and "inactive" consumption. No unmetered load is supplied.

Defective meters	Defective meters are typically identified through the meter reading validation process, or from information provided by the MEP or customer. HNET checks with the customer and raises a service order for the meter to be checked and replaced. If the consumption recorded by the meter is confirmed not to be accurate, HNET will estimate the consumption during the faulty period based on the consumption prior to the fault or on the new meter. The estimated consumption is added to the submission records or as an estimated closing read if the meter is replaced. HNET provided a list of ten potentially faulty meters. For nine ICPs the meters were confirmed to be recording accurately and a closing reading was provided on meter removal. One ICP had a genuinely stopped meter and consumption during the faulty period was appropriately estimated.
"Inactive" and "vacant" ICPs with consumption	Consumption is included in reconciliation submissions for days which have an "active" status. The historic estimate process will apportion all consumption in a read-to-read period to the "active" days in that period (if any). HNET continues to attempt to read ICPs which are "vacant" or "disconnected". A daily email is automatically generated showing any "vacant" or "disconnected" ICPs with consumption while they have an "inactive" status from IPBMS. ICPs are checked to confirm whether the consumption appears genuine, and HNET contacts the MEP to ask whether the ICP has been reconnected and

	who requested the reconnection. If the ICP is reconnected by another trader as part of the switch in process, HNET will follow up with the other trader and request an NT. HNET provided a list of 18 ICPs with 136.96 kWh of genuine consumption during "inactive" periods. I checked all ten ICPs with 5 kWh or more of "inactive" consumption and found: • nine ICPs had been moved to "active" status for the days with "inactive" consumption, and the "inactive" volumes were reported, and • the "inactive" consumption recorded for ICP 0000239965UN004 was not genuine; the consumption occurred in between HNET's periods of supply while the ICP was supplied by TRUS.
Bridged meter corrections	Bridged meters are normally identified through notes on reconnection paperwork, and HNET immediately raises a job for the meter to be unbridged. Consumption during the bridged period is estimated based on consumption prior to the bridging (if available) or after un-bridging. The estimated consumption is added to the consumption records in IPBMS and included in submissions. HNET provided two examples of meters which were bridged and confirmed that a reasonable estimate of consumption was submitted for reconciliation. The MEP was notified when a service order was raised to unbridge, and the meters were recertified on un-bridging.
Multiplier corrections	If an incorrect multiplier is discovered, HNET will reverse any invoices, correct the multiplier and rebill. HNET advised that no multiplier corrections occurred during the audit period.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: 10.6, 11.2, 15.2 From: 01-Apr-23 To: 31-May-24	**TODD** Some inaccurate data was not corrected as soon as practicable. **HNET** Some inaccurate data was not corrected as soon as practicable. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are rated as moderate as they are sufficient to mitigate risk most of the time, but there is some room for improvement. The audit risk rating is low as the overall volume of ICPs affected is low. Where statuses are incorrect, the reconciliation process ensures that all consumption is reported. Status inaccuracies can have a minor impact on ICP days submissions.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD:	Ongoing	Identified

Non-Compliance accepted. TODD acknowledges some updates were not made within the required timeframes. Data integrity reporting is now being actively worked but this historically been an issue due to resource constraints internally. • Profile discrepancies on day of meter change – see section 6.1 • Volume corrections for ICPs with defective or bridged meters – see section 2.17 • Two unmetered load corrections applied without virtual boundary reads – see section 3.3 • TODD is unable to gain more accurate information for ARC Meter consumption, but this will be resolved by the removal of ARC Metering. **HNET:** Non-Compliance accepted. • 0000546124NR68F – MEP originally recorded incorrectly, now corrected. • 0414128044LC7CD – updated event date did not match the CS event date. Customer confirmed late that solar system is not being used. • 1000549774PC17C - See section 12.13		
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD: As above this continues to be an area of focus for TODD. **HNET:** HNET will improve the steps for handling profile changes in the automation process. The automation will notify both the customer service team and the switching team about potential profile changes to verify whether the customer is using a solar panel. Profile changes will be carried out manually.	Ongoing Q1 2024	

2.2. Provision of information (Clause 15.35)

Code reference

Clause 15.35

Code related audit information

If an obligation exists to provide information in accordance with Part 15, a participant must deliver that information to the required person within the timeframe specified in the Code, or, in the absence of any

such timeframe, within any timeframe notified by the Authority. Such information must be delivered in the format determined from time to time by the Authority.

Audit observation

Processes to provide information were reviewed and observed throughout the audit.

Audit commentary

This area is discussed in a number of sections in this report.

Audit outcome

Compliant

2.3. Data transmission (Clause 20 Schedule 15.2)

Code reference

Clause 20 Schedule 15.2

Code related audit information

Transmissions and transfers of data related to metering information between reconciliation participants or their agents, for the purposes of the Code, must be carried out electronically using systems that ensure the security and integrity of the data transmitted and received.

Audit observation

I reviewed the method to receive meter reading information and traced a diverse sample of readings from the source files to Nova's systems.

Audit commentary

TODD

NHH settled manual readings

MRS and Wells reads are received via SFTP and imported into Orion from a file directory at 7.30am and 4.30pm. Staff receive an email advising if any errors occurred during the process. I checked a sample of ten readings provided by Wells and five readings provided by MRS from the source files to Orion, and confirmed that they were accurately recorded.

NHH settled AMI readings

AMI reads from MEPs are imported into the Axos database. Each ICP has a scheduled read date in Orion, and reads are extracted from Axos according to this schedule and imported into Orion. If no read has been imported three days after the scheduled read date, Orion will create and enter an estimated read on the scheduled read date + three days. In addition to the scheduled read, a month end read is also loaded into Orion.

Validated and permanent estimate readings (including appropriately validated customer readings) are transferred from Orion to EnergyMarket for use in the historic estimate process.

I traced a diverse sample of readings for five NHH AMI ICPs from the MEP's source files to Orion and EnergyMarket. All the reads in Orion and EnergyMarket matched the source files to zero decimal places and were correctly labelled.

HHR settled AMI readings

Around 10,000 AMI meters are HHR settled. NHH AMI data is provided by IntelliHUB (for IntelliHUB, Metrix and Counties Power meters), and Bluecurrent (for Bluecurrent, Arc and Smartco meters), FCLM, and Nova via SFTP. AMI data is loaded into EnergyMarket, and a daily read file is exported from

EnergyMarket to Orion containing ICPs scheduled to be read on that date. Raw meter data is archived on the network.

I traced a sample of raw HHR data to the aggregates submissions for nine ICPs for a diverse sample of MEPs, and confirmed the process and that the data was recorded accurately.

HHR settled HHR commercial and industrial readings

HHR data is collected by Bluecurrent and EDMI and the data transmission process was confirmed to be compliant during their agent audits.

HHR data is imported into EnergyMarket's EIEP3 table. An output file in standard time format is generated, which is imported into Stark. As part of the import process Stark clears the existing data it holds and replaces it with the new import file. Any estimates or corrections are entered into Stark, and the import process ensures that estimates will be replaced with actual data if it is received at a later date. Stark holds the trading period data with the NZST and NZDT.

Before reconciliation reports are run, Stark data is extracted and imported back into EnergyMarket, which generates the HHR volumes and aggregates submissions.

I traced a sample of raw HHR data to the aggregates submissions for six ICPs for a diverse sample of MEPs, which confirmed the process and that the data was recorded accurately.

Generation data obtained by TODD

The Stark system retrieves meter information from the generation meters every half hour. I reviewed controls over completeness and accuracy, including checks for failed downloads, missing channels, and missing trading periods. Data validation is discussed further in **section 9.6**.

HHR generation data obtained by EMS

EMS directly obtains generation data which they validate and use to create AV130 submissions. Compliance with this clause has been demonstrated by EMS as part of their agent audit.

WISE

All "active" ICPs have AMI or HHR metering, and meter readings are received from the MEPs. The readings are imported into PEBS on receipt. I traced a diverse sample of reads for five NHH ICPs from the source files to PEBS. All the reads in PEBS matched the source files and were correctly labelled.

HNET

NHH

NHH meters have AMI meter readings provided by the MEP or manual meter readings provided by Wells via SFTP. The readings are imported into IPBMS on receipt.

I traced a diverse sample of reads for six NHH AMI ICPs from the MEP's source files to IPBMS, and reads for ten manually read NHH ICPs from Wells' source files to IPBMS. All the reads in IPBMS matched the source files and were correctly labelled.

HHR

HHR data is collected by Bluecurrent and EDMI and the data transmission process was confirmed to be compliant during their agent audits.

TODD manages HNET HHR data using the same processes as for their own ICPs. I traced a sample of raw HHR data to the aggregates submissions for three ICPs for a diverse sample of MEPs, and confirmed the process and that the data was recorded accurately.

Audit outcome

Compliant

2.4. Audit trails (Clause 21 Schedule 15.2)

Code reference

Clause 21 Schedule 15.2

Code related audit information

Each reconciliation participant must ensure that a complete audit trail exists for all data gathering, validation, and processing functions of the reconciliation participant.

The audit trail must include details of information:

- *provided to and received from the registry manager,*
- *provided to and received from the reconciliation manager,*
- *provided and received from other reconciliation participants and their agents.*

The audit trail must cover all archived data in accordance with clause 18.

The logs of communications and processing activities must form part of the audit trail, including if automated processes are in operation.

Logs must be printed and filed as hard copy or maintained as data files in a secure form, along with other archived information.

The logs must include (at a minimum) the following:

- *an activity identifier (clause 21(4)(a)),*
- *the date and time of the activity (clause 21(4)(b)),*
- *the operator identifier for the person who performed the activity (clause 21(4)(c)).*

Audit observation

A complete audit trail was checked for all data gathering, validation and processing functions. I reviewed audit trails for a small sample of events.

Audit commentary

The agent audit reports record compliance with this clause.

TODD

Compliant audit trails are recorded in Orion and Stark. The reconciliation team maintains a spreadsheet containing the details of any corrections.

Users have the ability to edit meter reading and volume data in EnergyMarket but as this data is cleared and reimported daily, any edits will be overwritten. Users perform any required changes to data within Orion which flows through to EnergyMarket overnight, and an immediate update can be triggered manually.

WISE

Compliant audit trails are recorded in PEBS.

HNET

Compliant audit trails are recorded in IPBMS.

Audit outcome

Compliant

2.5. Retailer responsibility for electricity conveyed - participant obligations (Clause 10.4)

Code reference

Clause 10.4

Code related audit information

If a participant must obtain a consumer's consent, approval, or authorisation, the participant must ensure it:

- *extends to the full term of the arrangement,*
- *covers any participants who may need to rely on that consent.*

Audit observation

I reviewed the current terms and conditions for Nova Energy (TODD), Wise (WISE) and Megatel (HNET) to assess compliance with this clause.

Audit commentary

The terms and conditions for each brand include consent to access for authorised parties for the duration of the agreement.

Audit outcome

Compliant

2.6. Retailer responsibility for electricity conveyed - access to metering installations (Clause 10.7(2),(4),(5) and (6))

Code reference

Clause 10.7(2),(4),(5) and (6)

Code related audit information

The responsible reconciliation participant must, if requested, arrange access for the metering installation to the following parties:

- *the Authority,*
- *an ATH,*
- *an auditor,*
- *an MEP,*
- *a gaining metering equipment provider.*

The trader must use its best endeavours to provide access:

- *in accordance with any agreements in place,*
- *in a manner and timeframe which is appropriate in the circumstances.*

If the trader has a consumer, the trader must obtain authorisation from the customer for access to the metering installation, otherwise it must arrange access to the metering installation.

The reconciliation participant must provide any necessary facilities, codes, keys or other means to enable the party to obtain access to the metering installation by the most practicable means.

Audit observation

I reviewed the current terms and conditions for Nova Energy (TODD), Wise (WISE) and Megatel (HNET) to assess compliance with this clause. The process to support other parties to obtain access to metering was discussed.

Audit commentary

The terms and conditions for each brand include consent to access for authorised parties for the duration of the agreement. Nova supports other parties to obtain access to installations by providing customer contact information and liaising with customers and MEPs as necessary.

TODD

TODD provided three examples where it was difficult to arrange meter access for the MEP, and in all cases access was eventually obtained and the meters were replaced.

WISE

WISE confirmed that there have been no instances where access could not be arranged.

HNET

HNET confirmed that there have been no instances where access could not be arranged.

The previous audit identified one instance where access could not be arranged for the MEP, which was for a meter inspection for ICP 0436764334LC885. HNET has continued to work with the MEP to confirm whether access is still required, and the customer to arrange access, but has not received a response from either.

Audit outcome

Compliant

2.7. Physical location of metering installations (Clause 10.35(1)&(2))

Code reference

Clause 10.35(1)&(2)

Code related audit information

A reconciliation participant responsible for ensuring there is a category 1 metering installation or category 2 metering installation must ensure that the metering installation is located as physically close to a point of connection as practical in the circumstances.

A reconciliation participant responsible for ensuring there is a category 3 or higher metering installation must:

- *a) if practical in the circumstances, ensure that the metering installation is located at a point of connection; or*
- *b) if it is not practical in the circumstances to locate the metering installation at the point of connection, calculate the quantity of electricity conveyed through the point of connection using a loss compensation process approved by the certifying ATH.*

Audit observation

The physical meter location point is not specifically mentioned in the terms and conditions, but the existing practices in the electrical industry achieve compliance. Nova was asked to provide details of any installations with loss compensation.

Audit commentary

The physical meter location point is not specifically mentioned in the Terms and Conditions, but the existing practices in the electrical industry achieve compliance. There are currently no error or loss compensation arrangements in place for TODD, HNET or WISE.

Audit outcome

Compliant

2.8. Trader contracts to permit assignment by the Authority (Clause 11.15B)

Code reference

Clause 11.15B

Code related audit information

A trader must at all times ensure that the terms of each contract between a customer and a trader permit:

- *the Authority to assign the rights and obligations of the trader under the contract to another trader if the trader commits an event of default under paragraph (a) or (b) or (f) or (h) of clause 14.41 (clause 11.15B(1)(a)); and*
- *the terms of the assigned contract to be amended on such an assignment to—*
- *the standard terms that the recipient trader would normally have offered to the customer immediately before the event of default occurred (clause 11.15B(1)(b)(i)); or*
- *such other terms that are more advantageous to the customer than the standard terms, as the recipient trader and the Authority agree (clause 11.15B(1)(b)(ii); and*
- *the terms of the assigned contract to be amended on such an assignment to include a minimum term in respect of which the customer must pay an amount for cancelling the contract before the expiry of the minimum term (clause 11.15B(1)(c)); and*
- *the trader to provide information about the customer to the Authority and for the Authority to provide the information to another trader if required under Schedule 11.5 (clause 11.15B(1)(d)); and*
- *the trader to assign the rights and obligations of the trader to another trader (clause 11.15B(1)(e)).*

The terms specified in sub-clause (1) must be expressed to be for the benefit of the Authority for the purposes of the Contracts (Privacy) Act 1982, and not be able to be amended without the consent of the Authority (clause 11.15B(2)).

Audit observation

I reviewed the current terms and conditions for Nova Energy (TODD), Wise (WISE) and Megatel (HNET) to assess compliance with this clause.

Audit commentary

The terms and conditions for each brand are compliant with clause 11.15B.

Audit outcome

Compliant

2.9. Connection of an ICP (Clause 10.32)

Code reference

Clause 10.32

Code related audit information

A reconciliation participant must only request the connection of a point of connection if they:

- *accept responsibility for their obligations in Parts 10, 11 and 15 for the point of connection; and*

- *have an arrangement with an MEP to provide one or more metering installations for the point of connection.*

Audit observation

The new connection process was examined in detail to evaluate the strength of controls.

Audit commentary

TODD

In 2023 TODD stopped completing mass market new connections and now only completes new connections for owner occupier ICPs and commercial ICPs. New connections are completed by TODD using SalesForce, SharePoint and Orion. The metering team manages the new connection process and all liaison with the MEP and network, and the Auckland team liaises with the customer for commercial new connections.

The new connection process varies by network.

- Where ICPs are directly requested from the network by the customer or their agent, the network sends through a notification and which TODD accepts or declines via email or through the network's portal. TODD contacts the customer to arrange a customer supply agreement if it has not already been completed and raises a service order to complete the connection and install metering if the ICP is to be metered.
- For ICPs requested by applying to TODD an application for a new ICP is raised with the network (usually Wellington Electricity) and a service order is raised to complete the connection and install metering if the ICP is to be metered.

The ICP is created in Orion once the network moves it to "ready" status on the registry, and TODD is advised through email or the network's portal that the ICP is ready to claim. The ICP is entered into the SharePoint file so that actions can be tracked, and SalesForce where a job for meter installation is raised. Metering details are loaded into Orion once paperwork is received; new meters will fail the automated meter change process and be loaded manually.

A daily report of open service requests from the SalesForce JIT (job issue tracking) system is monitored, and overdue paperwork is followed up. New connections are also monitored using the SharePoint file which records expected due dates and progress, and SalesForce service orders. Orion is no longer used to record and schedule activities.

Discrepancy reports are produced for new connections:

- ICPs at "ready" status with TODD as the proposed trader but not claimed, and ICPs "inactive - new connection in progress" status are reviewed daily, and
- discrepancies between the IECD vs trader status date and IECD vs meter cert date are intended to be reviewed weekly but are reviewed as workloads allow.

A report of new connections in progress for more than two years is available, but is not reviewed regularly.

TODD intends to review its reporting to streamline the new connection discrepancy management process. I recommend increasing the efficiency of identification of mismatch between the initial electrical connection date, "active" status date and meter certification date using the AC020 report rather than the current process which uses two reports.

Description	Recommendation	Audited party comment	Remedial action
Identification of new connection date discrepancies	**TODD** Instead of using the IECD vs trader status date and IECD vs meter cert date reports I recommend using the AC020 trader compliance report to identify "active" date discrepancies for new connections in particular: AC020Trader14 – "inactive" status with new connection in progress reason, or "ready" status with Initial Electrically Connected Date AC020Trader21 - Accuracy of status "active" event date, which identifies discrepancies between the "active" status date, initial electrical connection date and meter certification date on one report.	**TODD** Recommendation accepted. TODD will utilise the AC020 reporting to improve Active Date discrepancy reporting. This will be embedded Q3 2024	Identified

The AC020 report recorded eight "active" ICPs with metering category 9, null, or zero which did not have unmetered load indicated. Seven ICPs now have metering event records present in the registry which align with the "active" status date. ICP 0234172045LCFD4 had its MEP nomination accepted in November 2022, but still does not have metering details recorded on the registry. TODD has confirmed that metering is present and are receiving readings and submitting volumes for reconciliation. They are working with the MEP to confirm the metering details so that the MEP can update the registry.

A sample of 27 new connections were checked which confirmed the process. Findings on the accuracy of data for the sample are recorded in **section 3.5**.

WISE

WISE does not normally complete new connections, but completed a new connection for ICP 1000613331PC317 because the customer was an existing customer at another address. An MEP nomination was made and the meter was installed before initial electrical connection.

The AC020 report did not identify any data discrepancies relating to new connection information, or any "active" ICPs with metering category 9, null, or zero.

HNET

HNET usually only completes new connections for new ICPs for existing customers. ICPs are manually claimed on the registry at 1,12 "inactive - new connection in progress" status and the MEP is nominated at the same time. Once HNET receives field services paperwork confirming that the ICP is connected, it is moved to "active" status manually on the registry and the metering details are loaded into IBPMS from paperwork. The status updates are imported into IBPMS through the registry synchronisation process.

Progress with new connections is monitored manually using diary events and metering work in progress at least weekly. A sample of seven new connections were checked to confirm the process, and no late updates or inaccurate information was identified.

The AC020 report recorded that "active" ICP 0001423159UN590 had a metering category of 9, and no unmetered load or MEP nomination recorded. The ICP has since been disconnected as it is no longer in use.

Audit outcome

Compliant

2.10. Temporary Electrical Connection of an ICP that is not an NSP (Clause 10.33(1))

Code reference

Clause 10.33(1)

Code related audit information

A reconciliation participant may temporarily electrically connect a point of connection, or authorise a MEP to temporarily electrically connect a point of connection, only if:

- *for a point of connection to the grid – the grid owner has approved the connection,*
- *for an NSP that is not a point of connection to the grid - the relevant distributor has approved the connection,*
- *for a point of connection that is an ICP, but is not as NSP:*
- *the reconciliation participant is recorded in the registry as the trader responsible for the ICP,*
- *if the ICP has metered load, one or more certified metering installations are in place,*
- *if the ICP has not previously been electrically connected, the relevant distributor has given written approval of the temporary electrical connection.*

Audit observation

The new connection process was examined in detail to evaluate the strength of controls. WISE do not normally complete new connections.

Audit commentary

For all three codes new ICPs are claimed at the "inactive - new connection in progress" status, and the MEP is nominated at the same time.

TODD

One temporary electrical connection was identified, where a change of retailer occurred part way through the connection process and the initial connection was approved by the other trader. The ICP was disconnected again before TODD claimed the ICP and then made it "active" from the permanent connection date. Compliance is recorded because the temporary connection was not within TODD's period of responsibility.

WISE

No temporary electrical connections were identified.

HNET

No temporary electrical connections were identified.

Audit outcome

Compliant

2.11. Electrical Connection of Point of Connection for an ICP that is not an NSP (Clause 10.33A)

Code reference

Clause 10.33A(1)

Code related audit information

A reconciliation participant may electrically connect or authorise the electrical connection of a point of connection only if:

- *for a point of connection to the grid – the grid owner has approved the connection,*
- *for an NSP that is not a point of connection to the grid - the relevant distributor has approved the connection.*
- *for a point of connection that is an ICP, but is not as NSP:*
    - *the trader is recorded in the registry as the trader responsible for the ICP or has an arrangement with the customer and initiates a switch within two business days of electrical connection,*
    - *if the ICP has metered load, one or more certified metering installations are in place,*
    - *if the ICP has not previously been electrically connected, the relevant distributor has given written approval of the electrical connection.*

Audit observation

The new connection process was examined in detail to evaluate the strength of controls. The registry list file and AC020 report were examined to confirm process compliance.

Audit commentary

TODD

Metering information for "active" ICPs

The AC020 report recorded eight "active" ICPs with metering category 9, null, or zero which did not have unmetered load indicated. Seven ICPs now have metering event records present in the registry which align with the "active" status date. ICP 0234172045LCFD4 had its MEP nomination accepted in November 2022, but still does not have metering details recorded on the registry. TODD has confirmed that metering is present and are receiving readings and submitting volumes for reconciliation. They are working with the MEP to confirm the metering details so that the MEP can update the registry.

New Connections

The new connection process ensures that an MEP is nominated at the time the ICP is claimed at "inactive – new connection in progress" status. The AC020 report recorded that ICP 1002189393LC202 did not have its meter certified within five business days of new connection. This was not a genuine new connection and is compliant. The ICP was decommissioned in error by Vector as part of a meter relocation and a new ICP needed to be created.

Reconnections

The daily ExpiredMeterCert_WithReconnection report identifies any ICPs which have been reconnected which do not have current full meter certification. The report was temporarily not reviewed during the audit period but has been reinstated. ICPs on the report are allocated to a smart metering team member who determines whether the meter is already scheduled to be replaced or recertified by the MEP, and if not raises a job.

The AC020 report recorded 55 ICPs which did not have full certification within five business days of reconnection. A sample of ten were reviewed and found they were recertified late or not recertified during the period where the ExpiredMeterCert_WithReconnection report was not being reviewed.

Meter recertification for bridged meters

TODD provided a list of 27 ICPs with potentially bridged meters, and 25 of those were confirmed to have been bridged:

- 17 ICPs had their meters certified on un-bridging,
- seven ICPs switched out before their meters could be unbridged, and
- ICP 0000009536CP5A7 remains bridged.

Compliance is recorded in this section because the unbridged meters were certified on un-bridging.

WISE

Metering information for "active" ICPs

The AC020 report did not identify any "active" ICPs with metering category 9, null, or zero.

New connections

WISE does not normally complete new connections, but completed a new connection for ICP 1000613331PC317 because the customer was an existing customer at another address. The meter was certified on the initial electrical connection date.

Reconnected ICPs

PEBS generates a daily list of ICPs with expired meter certification. The ICPs are checked with the customer and then meter replacement jobs raised.

The AC020 report recorded three ICPs which were not fully certified within five business days of reconnection. One was reconnected by the previous trader and the other two were certified late due to access issues after WISE raised a meter replacement job.

Bridged meters

WISE provided a list of nine meters which were bridged. The MEP was notified when a service order was raised to unbridge, and the meters were recertified on un-bridging.

Compliance is recorded in this section because the unbridged meters were certified on un-bridging.

HNET

Metering information for "active" ICPs

The AC020 report recorded that "active" ICP 0001423159UN590 had a metering category of 9, and no unmetered load or MEP nomination recorded. The ICP has since been disconnected as it is no longer in use.

Reconnected ICPs

IPBMS generates reports of ICPs gained with expired meter certification. The ICPs are checked with the customer and then meter replacement jobs raised. There is no separate process for ICPs being reconnected, or ICPs which have their meter certifications expire during HNET's period of supply.

The AC020 report recorded seven ICPs which were not fully certified within five business days of reconnection. These were reviewed and found one was not genuine, the meter was certified on time but the registry was updated late. The other six were genuinely certified late and three were recertified after the report was run.

New Connections

The AC020 report did not record any ICPs which were not fully certified within five business days of initial electrical connection.

Bridged meters

HNET provided two ICPs which had bridged meters during the audit period, and both were recertified on un-bridging.

Compliance is recorded in this section because the unbridged meters were certified on un-bridging.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.11 With: 10.33A From: 14-Mar-23 To: 08-Mar-24	**TODD** 55 ICPs did not have full certification within five business days of reconnection. **WISE** Three ICPs did not have full certification within five business days of reconnection. **HNET** Six ICPs did not have full certification within five business days of reconnection. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are strong, reporting is in place to identify meters which have been initially electrically connected or reconnected without full meter certification and advise the MEP. The audit risk rating is low as a small proportion of ICPs were affected. Uncertified meters may have unidentified accuracy issues, but other validation processes will help to identify these.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. 0234172045LCFD4 has now been corrected on the registry. 55 ICPs late or no current certification • TODD continues to work with MEPs on deployment program(s), BAU field jobs, turn downs due to additional electrical work required and consumer contact challenges. • Current development work to identify uncertified ICPs at time of sign up, particularly when a reconnection is	Ongoing	Identified

requested, is in progress to improve immediate identification of sites and raise work to be corrected. **WISE:** Non-Compliance accepted. • Three ICPs have since been recertified. **HNET:** Non-Compliance accepted. • Three ICPs have since been recertified. • Three ICPs still have work being undertaken to resolve. HNET continues to work with customers and external partners to resolve as quickly as possible.	June 2024 Ongoing	
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD: As above. **WISE:** WISE will strengthen controls by extending the monitoring of meter certification expiration from the existing 7 days prior to 30 days prior to prevent reconnections from occurring after meter certifications have expired. **HNET:** HNET will continue to work with MEPs to meet the code timeframes.	Ongoing	

2.12. Arrangements for line function services (Clause 11.16)

Code reference

Clause 11.16

Code related audit information

Before providing the registry manager with any information in accordance with clause 11.7(2) or clause 11.18(4), a trader must ensure that it, or its customer, has made any necessary arrangements for the provision of line function services in relation to the relevant ICP.

Before providing the registry manager with any information in accordance with clause 11.7(2) or clause 11.18(4), a trader must have entered into an arrangement with an MEP for each metering installation at the ICP.

Audit observation

The process to ensure an arrangement is in place before trading commences on a network was examined.

Audit commentary

TODD

As part of the application process, SalesForce confirms that TODD can supply an ICP with the network and meter owner listed on the registry. If an exception is identified a service order is raised for the switching team to investigate.

TODD has previously demonstrated that arrangements in place with all networks for their ICPs, and TODD did not begin trading on any new networks during the audit period.

WISE

As part of the application process, WISE confirms that it can supply an ICP with the network and meter owner listed on the registry. If an exception is identified the application is declined. WISE is covered by TODD's network arrangements, and did not begin trading on any new networks during the audit period.

HNET

As part of the application process, IPBMS confirms that HNET can supply an ICP with the network and meter owner listed on the registry. If an exception is identified it is checked with TODD to determine whether the ICP can be supplied. HNET is covered by TODD's network arrangements, and did not begin trading on any new networks during the audit period.

Audit outcome

Compliant

2.13. Arrangements for metering equipment provision (Clause 10.36)

Code reference

Clause 10.36

Code related audit information

A reconciliation participant must ensure it has an arrangement with the relevant MEP prior to accepting responsibility for an installation.

Audit observation

The process to ensure an arrangement is in place with the metering equipment provider before an ICP can be created or switched in was checked.

Audit commentary

TODD

As part of the application process, SalesForce confirms that TODD can supply an ICP with the network and meter owner listed on the registry. If an exception is identified a service order is raised for the switching team to investigate.

TODD confirmed that they now have an arrangement in place with WASN and has previously demonstrated that arrangements in place with all other MEPs for their ICPs. TODD did not begin using any new MEPs during the audit period.

WISE

As part of the application process, WISE confirms that it can supply an ICP with the network and meter owner listed on the registry. WISE is covered by TODD's MEP arrangements and did not begin using any MEPs where arrangements were not in place during the audit period.

HNET

As part of the application process, IPBMS confirms that it can supply an ICP with the network and meter owner listed on the registry. If an exception is identified it is checked with TODD to determine whether the ICP can be supplied. HNET is covered by TODD's MEP arrangements and did not begin using any new MEPs during the audit period.

Audit outcome

Compliant

2.14. Connecting ICPs then withdrawing switch (Clause 10.33A(5))

Code reference

Clause 10.33B

Code related audit information

If a trader connects an ICP it is in the process of switching and the switch does not proceed or is withdrawn the trader must:

- *restore the disconnection, including removing any bypass and disconnecting using the same method the losing trader used,*
- *reimburse the losing trader for any direct costs incurred.*

Audit observation

The process for reconnecting ICPs in the process of switching in was examined, including review of reports used in the process. Traders are only able to update ICP status for event dates where they are responsible for the ICP on the registry.

Audit commentary

If any ICPs reconnected as part of a switch in are then withdrawn the gaining trader is expected to disconnect using the same methodology as the losing trader used.

TODD, WISE and HNET ensure that where ICPs are reconnected as part of the switch in process, they will re-disconnect or reimburse the other trader for direct costs on request if the switch is withdrawn.

Audit outcome

Compliant

2.15. Electrical disconnection of ICPs (Clause 10.33B)

Code reference

Clause 10.33B

Code related audit information

Unless the trader is recorded in the registry or is meeting its obligation under 10.33A(5) it must not disconnect or electrically disconnect the ICP or authorise the metering equipment provider to disconnect or electrically disconnect the ICP.

Audit observation

The disconnection process was examined. Traders are only able to update ICP status for event dates where they are responsible for the ICP on the registry.

Audit commentary

Nova has a good understanding of this requirement and disconnections do not occur where an NT has been received for TODD, WISE or HNET.

Audit outcome

Compliant

2.16. Removal or breakage of seals (Clause 48(1C), 48 (1D), 48 (1E), 48 (1F) of Schedule 10.7)

Code reference

Clause 48(1C), 48 (1D), 48 (1E), 48 (1F) of Schedule 10.7

Code related audit information

A trader can remove or break a seal without authorisation from the MEP to:

- *reset a load control switch, bridge or un-bridge a load control switch – if the load control switch does not control a tome block meter channel,*
- *electrically connect load or generation, of the load or generation has been disconnected at the meter,*
- *electrically disconnect load or generation, if the trader has exhausted all other appropriate methods of electrical disconnection,*
- *bridge the meter.*

A trader that removes or breaks a seal in this way must:

- *ensure personal are qualified to remove the seal and perform the permitted work and they replace the seal in accordance with the Code,*
- *replace the seal with its own seal,*
- *have a process for tracing the new seal to the personnel,*
- *update the registry (if the profile code has changed),*
- *notify the metering equipment provider.*

Audit observation

Policies and processes for removal and breakage of seals were reviewed.

A sample of disconnections, reconnections, additions of export metering, and bridged meters were checked for compliance.

Audit commentary

Most disconnections and reconnections are usually completed remotely by the MEP, and most work that requires meter seals to be removed or broken is also completed by the MEP. Manual disconnections and reconnections after hours may be completed by Wells.

Nova receives work completion paperwork from the MEPs and Wells and uses this information to confirm the ICP attributes including status and profile and event date, before updating their systems and the registry.

If Nova becomes aware that a meter has missing or broken seals a job is raised for the MEP to check the meter and replace the seals. Nova typically becomes aware of missing or broken seals through information provided by the customer, network, or meter condition information provided by Wells or MRS when meters are read.

TODD

I saw evidence of the processes to identify missing or broken seals and arrange for them to be replaced. Five examples of jobs raised where meters were believed to have had their seals removed or broken by

another party were reviewed. Returned paperwork confirmed that the seals were found to be intact, or were replaced by the MEP.

WISE

I saw evidence of the processes to identify missing or broken seals and arrange for them to be replaced, and one example of a meter reseal was reviewed.

HNET

HNET confirmed their process to raise jobs where a meter requires resealing but no examples were available.

Audit outcome

Compliant

2.17. Meter bridging (Clause 10.33C and 2A of Schedule 15.2

Code reference

Clause 10.33C and 2A of Schedule 15.2

Code related audit information

A trader, or a distributor or MEP which has been authorised by the trader, may only electrically connect an ICP in a way that bypasses a meter that is in place (bridging) if, despite best endeavours:

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

If the trader bridges a meter, the trader must:

- *determine the quantity of electricity conveyed through the ICP for the period of time the meter was bridged,*
- *submit that estimated quantity of electricity to the reconciliation manager,*
- *within one business day of being advised that the meter is bridged, notify the MEP that they are required to reinstate the meter so that all electricity flows through a certified metering installation.*

The trader must determine meter readings as follows:

- *by substituting data from an installed check meter or data storage device,*
- *if a check meter or data storage device is not installed, by using half hour data from another period where the trader considers the pattern of consumption is materially similar to the period during which the meter was bridged,*
- *if half hour data is not available, a non-half hour estimated reading that the trader considers is the best estimate during the bridging period must be used.*

Audit observation

The process for bridging meters was discussed and a sample of bridged meters were reviewed.

Audit commentary

TODD

TODD never authorises meter bridging, but field service providers may elect to bridge a meter where they cannot be reconnected remotely, and leaving the ICP disconnected would cause hardship for the

customer. Bridged meters are normally identified through notes on reconnection paperwork, the bridged meter report or customer enquiries.

- SalesForce field services jobs are filtered for keywords relating to bridging, including bypass and misspellings and variations of bridge and bypass. The jobs are checked to make sure service orders have been issued to unbridge the meter and been completed.
- The bridged meter report is generated daily and shows ICPs with read-to-read periods with no consumption. The report is reviewed weekly, and matched to the previous report so that any notes can be reviewed. The ICPs are checked with the customer to determine whether the zero consumption is valid, and if not a field services job is raised.
- Customers or their electricians may contact TODD to advise that their meter is bridged.

The reports are worked through as time allows, and requests to unbridge the meter are issued as soon as the bridged meter is identified.

Consumption during the bridged period is estimated based on consumption prior to the bridging if available, or consumption during the month after un-bridging. The estimated consumption is calculated using a template which allows for seasonal adjustment. All corrections are peer reviewed before being added into Orion.

If the meter is replaced, the estimated consumption is added to the meter removal reading to create an estimated closing read. If the meter is unbridged without replacement, TODD completes an internal meter replacement where the meter is closed on an estimated closing reading capturing the estimated consumption during the bridged period and reopened on the read on the meter when it was unbridged. Audit trails are automatically created in Orion when readings are loaded and meters are closed. A reference note is added to the read indicating it is a CRR (compliance read) so that any staff viewing the read history will be aware that it is a correction.

SalesForce SFI records supporting information relating to the correction, including service requests, paperwork, supporting information, and calculations for the correction. Orion activities are no longer used to record supporting information for corrections.

TODD provided a list of 27 ICPs with potentially bridged meters, and 25 of those were confirmed to have been bridged. 24 meters were later unbridged, or switched out before un-bridging was able to be completed. ICP 0000009536CP5A7 is believed to have been bridged when it was reconnected on 7 February 2023 and has not been unbridged. The ICP may have been disconnected sometime between 7 February 2023 and 2 May 2023 due to adverse weather events. TODD has had difficulty arranging a site visit with the customer and MEP and is following up with the MEP every few days in an effort to resolve the issue. Compliance is recorded because the MEP was notified on time.

Of the 24 meters which were unbridged, or switched out before un-bridging was able to be completed:

- Six ICPs were unbridged and had accurate corrections processed before the audit, and a further 12 ICPs had accurate corrections processed during the audit.
- Two ICPs were unbridged and had corrections calculated but are awaiting peer review before being entered into Orion; the meters were unbridged between 26 June 2023 and 27 July 2023.

ICP	Date bridged	Date unbridged	Estimated consumption during the bridged period
0006408150RNAD7	1 March 2023	26 June 2023	1238
0000137223UN454	2 June 2023	27 July 2023	1253

- Four ICPs[2] switched out while bridged, or before a correction was processed. TODD has since updated their process to estimate consumption during their bridged period of supply where ICPs have switched.

The previous audit recorded that ICP 0000542837TU334 was bridged between 22 July 2022 to 11 January 2023 with no correction applied, and this issue has still not been resolved.

WISE

Meters are only bridged where they cannot be reconnected remotely, and leaving the ICP disconnected would cause hardship for the customer. Bridged meters are normally identified through notes on reconnection paperwork, and WISE immediately raises a job for the meter to be unbridged.

Consumption during the bridged period is estimated based on consumption prior to the bridging if available), or after un-bridging. The estimated consumption is calculated using a template, and recorded against a virtual meter which opens on the day the meter is bridged, and is closed on the day that the meter is unbridged.

WISE provided a list of nine meters which were bridged, and I confirmed that a reasonable estimate of consumption was recorded on the virtual meter and submitted for reconciliation. The MEP was notified when a service order was raised to unbridge, and the meters were recertified on un-bridging.

HNET

Meters are only bridged where they cannot be reconnected remotely, and leaving the ICP disconnected would cause hardship for the customer. Bridged meters are normally identified through notes on reconnection paperwork, and HNET immediately raises a job for the meter to be unbridged.

Consumption during the bridged period is estimated based on consumption prior to the bridging if available or after un-bridging. The estimated consumption is added to the consumption records in IPBMS and included in submissions.

HNET provided two examples of meters which were bridged, and I confirmed that a reasonable estimate of consumption was submitted for reconciliation. The MEP was notified when a service order was raised to unbridge, and the meters were recertified on un-bridging.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.17 With: Clause 10.33C and 2A of Schedule 15.2 From: 01-Mar-23 To: 31-May-24	**TODD** Two ICPs have had their meters unbridged but corrections are still to be peer reviewed before being added in Orion. The meters were unbridged between 26 June 2023 and 27 July 2024. Four ICPs switched out before bridged meter corrections were processed. Potential impact: Medium Actual impact: Unknown Audit history: Once Controls: Moderate Breach risk rating: 2

[2] 0000110488EN175, 0000983016LN57F, 0011005980PC3D1 and 1000009987BP916.

Audit risk rating	Rationale for audit risk rating
Low	The controls are moderate. TODD has improved their processes to identify bridged meters and intends to develop a process to estimate consumption for ICPs which switch out while bridged, or before a correction is able to be processed. The audit impact is low based on the kWh impact. Corrections are in progress for two ICPs and revised submission data will be washed up.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. Two ICPs have now had the corrections processed and consumption will be washed up.	June 2024	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD: TODD has improved processes and therefore compliance outcomes in this area over the last 12 months, with further improvements in development.	Q4 2024	

2.18. Use of ICP identifiers on invoices (Clause 11.30)

Code reference

Clause 11.30

Code related audit information

Each trader must ensure the relevant ICP identifier is printed on every invoice or document relating to the sale of electricity.

Audit observation

I reviewed the invoices and correspondence relating to the sale of electricity for Nova Energy (TODD), Wise (WISE) and Megatel (HNET) to assess compliance with this clause.

Audit commentary

ICP identifiers are included on invoices and in correspondence relating to the sale of electricity for TODD, WISE and HNET.

Audit outcome

Compliant

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

Code reference

Clause 11.30A

Code related audit information

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

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

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

Audit observation

The process to ensure that information on Utilities Disputes is provided to customers was checked, including review of websites, terms and conditions, invoices and communications for Nova Energy (TODD), Wise (WISE) and Megatel (HNET).

Audit commentary

TODD

Clear and prominent information on Utilities Disputes is provided for Nova Energy (TODD) customers:

- on invoices,
- on email footers,
- on hardcopy and PDF letters,
- in the footer of each website page,
- in the terms and conditions, and
- on Nova's interactive voice recording welcome message.

WISE

Clear and prominent information on Utilities Disputes is provided for Wise (WISE) customers:

- on statements,
- on email footers,
- on hardcopy and PDF letters,
- in the terms and conditions,
- in the footer on the WISE website apart from the landing page, and
- on the WISE interactive voice recording welcome message.

WISE's terms and conditions referred to the Complaints Commissioner Scheme rather than Utilities Disputes. If a customer googles Complaints Commissioner Scheme the first result is for Utilities Disputes and compliance is recorded. During the audit, WISE updated the terms and conditions to correctly refer to Utilities Disputes.

HNET

Clear and prominent information on Utilities Disputes is provided for Megatel (HNET) customers:

- on statements,
- on email footers,
- on hardcopy and PDF letters,
- in the terms and conditions,
- in the footer on the WISE website apart from the landing page, and
- on the Megatel interactive voice recording welcome message.

Audit outcome

Compliant

2.20. Provision of information on electricity plan comparison site (Clause 11.30B)

Code reference

Clause 11.30B

Code related audit information

A retailer that trades at an ICP recorded on the registry must provide clear and prominent information about Powerswitch:

- *on their website,*
- *in outbound communications to residential consumers about price and service changes,*
- *to residential consumers on an annual basis,*
- *in directed outbound communications about the consumer's bill.*

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

Audit observation

The process to ensure that information on Powerswitch is provided to customers was checked, and websites, terms and conditions, invoices and communications were reviewed.

Audit commentary

TODD

Clear and prominent information on Powerswitch is provided for Nova Energy (TODD) customers:

- on invoices,
- in email footers,
- on hardcopy and PDF letters,
- in the footer of each website page, and
- on Nova's interactive voice recording welcome message.

Inclusion of information on Powerswitch on invoices achieves compliance with the requirement for annual notification to residential consumers, and an annual letter is also sent.

WISE

Clear and prominent information on Powerswitch is provided for Wise (WISE) customers:

- on statements,
- on email footers,
- on hardcopy and PDF letters,
- in the footer on the WISE website apart from the landing page, and
- on the WISE interactive voice recording welcome message.

Inclusion of information on Powerswitch on statements achieves compliance with the requirement for annual notification to residential consumers.

HNET

Clear and prominent information on Utilities Disputes is provided for Megatel (HNET) customers:

- on statements,
- on email footers,
- on hardcopy and PDF letters,
- in the footer on the WISE website apart from the landing page, and
- on the Megatel interactive voice recording welcome message.

Inclusion of information on Powerswitch on invoices achieves compliance with the requirement for annual notification to residential consumers.

Audit outcome

Compliant

3. MAINTAINING REGISTRY INFORMATION

3.1. Obtaining ICP identifiers (Clause 11.3)

Code reference

Clause 11.3

Code related audit information

The following participants must, before assuming responsibility for certain points of connection on a local network or embedded network, obtain an ICP identifier for the point of connection:

- *a) a trader who has agreed to purchase electricity from an embedded generator or sell electricity to a consumer,*
- *b) an embedded generator who sells electricity directly to the clearing manager,*
- *c) a direct purchaser connected to a local network or an embedded network,*
- *d) an embedded network owner in relation to a point of connection on an embedded network that is settled by differencing,*
- *e) a network owner in relation to a shared unmetered load point of connection to the network owner's network,*
- *f) a network owner in relation to a point of connection between the network owner's network and an embedded network.*

ICP identifiers must be obtained for points of connection at which any of the following occur:

- *a consumer purchases electricity from a trader 11.3(3)(a),*
- *a trader purchases electricity from an embedded generator 11.3(3)(b),*
- *a direct purchaser purchases electricity from the clearing manager 11.3(3)(c),*
- *an embedded generator sells electricity directly to the clearing manager 11.3(3)(d),*
- *a network is settled by differencing 11.3(3)(e),*
- *there is a distributor status ICP on the parent network point of connection of an embedded network or at the point of connection of shared unmetered load 11.3(3)(f).*

Audit observation

The new connections process was examined in detail to confirm compliance with the requirement to obtain ICP identifiers for points of connection to local or embedded networks.

Audit commentary

The requirements of this clause are understood and managed. There were no examples identified where points of connection did not have ICPs.

Audit outcome

Compliant

3.2. Providing registry information (Clause 11.7(2))

Code reference

Clause 11.7(2)

Code related audit information

Each trader must provide information to the registry manager about each ICP at which it trades electricity in accordance with schedule 11.1.

Audit observation

The registry list and audit compliance reports were examined to confirm process compliance. Late updates to "active" for new connections are discussed in **section 3.5**.

Audit commentary

The new connection processes are detailed in **section 2.9**, and the accuracy and timeliness of registry updates is discussed in **section 3.5**. The processes in place ensure that the trader required information is populated as required by this clause.

I walked through the registry update process for all new connections for WISE, and a sample of new connections for HNET and TODD.

Audit outcome

Compliant

3.3. Changes to registry information (Clause 10 Schedule 11.1)

Code reference

Clause 10 Schedule 11.1

Code related audit information

If information provided by a trader to the registry manager about an ICP changes, the trader must provide written notice to the registry manager of the change no later than five business days after the change.

Audit observation

The process to manage status changes is discussed in detail in **sections 3.8** and **3.9** below. The process to manage MEP nominations and trader updates was discussed.

The AC020 reports for each code were reviewed. A sample of late status updates, trader updates and MEP nominations were checked as described in the audit commentary, and I considered the impact of late updates to registry information on reconciliation submission data.

Audit commentary

TODD

Status updates

Disconnection and reconnection service orders and paperwork are managed using SalesForce's JIT (job issue tracking) system. A daily report of open service requests is monitored, and overdue paperwork is followed up.

The RFS team extracts successfully completed disconnections and reconnections from SalesForce to create a file of status updates which are sent to the registry, and then checked to determine whether the updates are successful. The process has logic to determine the correct reason code for disconnections. Remote disconnections have the 1,7-reason code applied and "vacant" disconnections have 1,4. All other disconnections are processed manually. The status updates are manually entered into Orion from the paperwork. Disconnection reads are usually entered into Orion, but reconnection reads are rarely entered and are ignored by the historic estimate process. A system change is currently being tested which will allow disconnection and reconnection reads to be entered more efficiently.

Where a late update is required a metering compliance activity is recorded in SalesForce. This explains the non-compliance, why it occurred, who was responsible and any actions which could have been taken to prevent the breach.

The timeliness of status updates to "active" (for reconnections) is set out in the table below.

Status	Review period end	ICPs notified greater than five days	Percentage on time	Average Business Days between Status Event and Status Input Dates
Active	2015	419	73%	9.91
	2016	455	91%	3.4
	2017	652	80%	5
	2018	784	95%	3
	2020	165	89.20%	4.19
	2021	95	93.83%	3.10
	2022	195	82.45%	16.50
	2023	217	84.25%	15.4
	2024	**208**	**87.15%**	**11.42**

66 of the late updates were within ten business days of the event date, 56 were within 30 business days, 166 were within 100 business days, and 181 were within 200 business days of the event date. The latest update was made 1,146 business days of the event date.

The 15 latest updates and five late updates between 20 and 40 business days after the event date were reviewed and found to be caused by:

- delays in investigating and resolving "inactive" consumption exceptions; the report used to monitor "inactive" consumption includes any reconciliation period/month where the ICP has "inactive" status for one or more days and there is consumption, and contains a large number of ICPs which do not have genuine "inactive" consumption, making it difficult to check,
- backdated switches where the registry could not be updated until TODD was recorded as the trader,
- delays in receiving confirmation that the ICP had been reconnected, and
- delays in processing paperwork for reconnections which coincided with meter installation, or meter relocations.

The late updates were accurately processed from the correct event date, and had no impact on submission because all volumes are reported regardless of status.

The timeliness of status updates to "inactive" is set out in the table below.

Status	Review period end	ICPs notified greater than 5 days	Percentage on time	Average Business Days between Status Event and Status Input Dates
Inactive	2015	260	77.47%	7.53
	2016	118	90.67%	8.62
	2017	283	83.58%	12.73
	2018	87	96.28%	3.00

Status	Review period end	ICPs notified greater than 5 days	Percentage on time	Average Business Days between Status Event and Status Input Dates
	2020	39	98.34%	3.95
	2021	29	98.64%	1.91
	2022	146	94.54%	5.41
	2023	62	96.81%	3.15
	2024	**97**	**94.24%**	**7.08**

I checked all ten late updates to "inactive - new connection in progress" status. Three of the updates were made prior to the initial electrical connection date and are considered to be on time. Seven occurred after the initial electrical connection date and were genuinely late. Of those, four records were added as part of an "active" status date correction, and three were created when the ICP could have moved straight to "active" status and were not necessary.

The other 87 late updates were reviewed. 20 of the late updates were within ten business days of the event date, 41 were within 30 business days, 59 were within 100 business days, and 66 were within 200 business days of the event date. The latest update was made 714 business days of the event date. The five latest (or all late) status updates to each disconnection status reason code and were reviewed and found to be caused by:

- late notice of the disconnection, especially for safety disconnections by networks following storm or fire damage,
- corrections following incorrect or incomplete updates being processed, and
- two updates were delayed by heavy workloads.

The late status updates had the correct status reason and event date applied.

I rechecked updates which were found to be incorrect during the previous audit, and confirmed that the ICP statuses are now correct.

Trader updates

The timeliness of trader updates is set out in the table below.

Review period end	ICPs notified greater than 5 days	Percentage on time	Average Business Days between Status Event and Status Input Dates
2018	393	91.59%	15.37
2020	430	96.04%	6.56
2021	5,585	58.52%	111.16
2022	4,008	77.99%	57.74
2023	464	97.73%	3.65
2024	**495**	**98.40%**	**1.92**

123 of the late updates were within ten business days of the event date, 285 were within 30 business days, 395 were within 100 business days, and 441 were within 200 business days of the event date. The

latest update was made 2,535 business days of the event date. I checked a sample of late updates as described in the table below.

ANZSIC updates - changes	The AC020 report identified 86 late ANZSIC code updates, and the latest was 2,535 business days after the event date. I checked the ten latest updates and found they were all applied from the date of the last trader update, because the event date was not updated on entry. For ICPs 0005049620CN28D and 0001401646TU787 the ANZSIC code had changed due to a customer change and should not have been backdated to the last trader event date. The two late updates with inaccurate event dates are recorded as non-compliance in **section 2.1**.
Unmetered load	The AC020 report identified 19 late unmetered kWh updates, and the latest was 2,037 business days after the event date. The ten latest updates were checked. Four removed a space after the profile and were not genuine unmetered load changes. The other six were changes to the number of decimal places recorded in the unmetered load field or the unmetered kWh. Four of the ICPs had unexpected event dates: • 0000377735TUBD5 changed from 1.5 kWh to 1.486 kWh effective from 19 November 2021 (the last trader event date) but switched in on 17 November 2021, • 0000540969TU2E3 changed from no unmetered load to 2.76 kWh effective from 17 October 2022 (the last trader event date) but unmetered load was added by the network on 16 January 2024, • 0000223456WE4D4 changed from no unmetered load to 0.025 kWh effective 1 February 2023 but unmetered load was added by the network on 2 February 2023, and • 0000067578CPE01 changed from 0.372 to 0.3 effective 17 November 2022 (the last trader event date) but unmetered load was changed by the network on 7 June 2023. The AC020 report identified 14 late unmetered load details updates, and the latest was 691 business days after the event date. The five latest updates were checked and four removed a space after the profile and were not genuine unmetered load changes. ICP 0000370068TU7E4 was updated from 25 November 2020 (the last trader event date) but the network updated the unmetered load details effective 25 November 2020. The five late updates with inaccurate event dates are recorded as non-compliance in **section 2.1**.
MEP nominations	The AC020 report identified 300 late MEP nominations, and the latest was 544 business days after the event date. I checked the 11 latest MEP nominations, including all more than 200 business days after the event date. I found two were ANZSIC code corrections backdated to the customer's start date and the other nine were delayed by: • late advice that an MEP nomination was required from the MEP, • corrections following an incorrect MEP being recorded on meter exchange paperwork, and • trader events being replaced as part of a backdated switch or switch withdrawal.
Profile updates	The AC020 report identified 62 late profile changes from RPS to RPS PV1, and the latest was 155 business days after the event date. The five latest updates were caused by backdated additions of settled EG meters on the registry.
Submission type updates	The AC020 report identified 14 late submission type and profile changes, and the latest was 1,478 business days after the event date. I checked the five latest updates and found that the three latest were changes to ANZSIC codes or unmetered load descriptions, where

	last trader event date was applied and there was no impact on attributes affecting submission. The other two latest updates (124 and 266 business days after the event date) were a profile correction to align the change dates with a pricing change, and a backdated profile change where metering details needed to be confirmed with the MEP before making the change.

The AC020 report recorded 314 ANZSIC code updates more than 20 business days after initial electrical connection or switch in. I checked the ten latest updates and found nine were delayed by backdated new connections or switch completion and one was an ANZSIC code correction after a backdated switch in was completed.

WISE

Status updates

Most ICPs are disconnected and reconnected remotely. Disconnection and reconnection data is provided via SFTP by the MEPs and imported into PEBS. If the job completion status indicates the job was successfully completed, PEBS updates the ICP status and reason (1,7 for remote disconnections and 2,0 for reconnections) and event date, and the status updates are sent from PEBS to the registry. Disconnections are held for one day before update to determine whether there is a reconnection the same day. Manual disconnections and reconnections are entered into PEBS manually.

An email is automatically generated following each update showing the ICPs updated, any ICPs which could not be updated, and any ICPs with exceptions such as consumption after becoming inactive. WISE staff manually check all paperwork received against PEBS and the registry, and enter any reads provided which are not already in PEBS. Any daily reads received during disconnected periods continue to be loaded. Statuses are validated between PEBS and the registry daily.

The timeliness of status updates to "active" (for reconnections) is set out in the table below.

Status	Review period end	ICPs notified greater than 5 days	Percentage on time	Average Business Days between Status Event and Status Input Dates
Active	May 2019	26	85%	3.6
	Jan 2020	25	89.5%	3.0
	Jan 2021	21	96.53%	1.59
	Jan 2022	1	99.84%	0.72
	Jan 2023	10	99.02%	0.87
	Mar 2024	**16**	**98.75%**	**1.5**

Ten of the late updates were within 30 business days of the event date, 13 were within 100 business days of the event date and 15 were within 200 business days of the event date. The latest update was made 344 business days of the event date. I checked the ten latest updates including all more than nine business days after the event date and found they were caused by:

- corrections to "active" status after identifying consumption after disconnection, or corrections to status event dates after errors were found,
- backdated switch ins where the status could not be updated until the switch was complete, and

- confusion about the ICP address and paperwork which needed to be resolved before the update occurred.

All of the status updates checked had the correct status and event date.

The timeliness of status updates to "inactive" is set out in the table below.

Status	Review period end	ICPs notified greater than 5 days	Percentage on time	Average Business Days between Status Event and Status Input Dates
Inactive	May 2019	19	95%	3.6
	Jan 2020	6	98.44%	2.94
	Jan 2021	4	99.45%	1.36
	Jan 2022	4	99.64%	0.92
	Jan 2023	5	99.66%	0.68
	Mar 2024	**10**	**99.41%**	**0.99**

Six of the late updates were within 30 business days of the event date, seven were within 100 business days of the event date and eight were within 200 business days of the event date. The latest update was made 286 business days of the event date. I checked all ten late updates and found they were caused by corrections, or late notification of disconnection due to a fire or weather damage. All of the status updates checked had the correct status and event date.

Trader updates

Trader updates are completed manually on the registry, and then imported into PEBS via an EDA file. MEP nominations are raised at the time a service order is issued to the MEP. The timeliness of trader updates is set out in the table below.

Review period end	ICPs notified greater than 5 days	Percentage on time	Average Business Days between Status Event and Status Input Dates
May 2019	13	87%	2.9
Jan 2020	1	98.53%	1.35
Jan 2021	-	100%	1.75
Jan 2022	-	-	-
Jan 2023	1	0	7
Mar 2024	**8**	**46.67%**	**5.27**

All of the late updates were MEP nominations processed 7 - 15 business days after the event date because notification of the MEP change and/or correct MEP was received late.

The AC020 report recorded three ANZSIC code updates more than 20 business days after switch in. All were caused by backdated switches.

HNET

Status updates

Status updates are managed using the IPBMS Disco Reco Manager. Staff complete a form to request a disconnection or reconnection service order for the MEP including a requested date. A robotic process runs every 30 minutes and sends an email to the MEP requesting the work.

IPBMS receives field services paperwork from the MEPs and Wells which is imported into IPBMS and matched to the original service order. If the job completion status indicates the job was successfully completed, IPBMS updates the ICP status and reason (1,7 for remote disconnections, 1,4 for manual disconnections and 2,0 for reconnections) and event date, and the status updates are sent from IPBMS to the registry. Disconnection and reconnection paperwork is also manually reviewed and compared to IPBMS and the registry.

The timeliness of status updates to "active" (for reconnections) is set out in the table below.

Status	Review period end	ICPs notified greater than 5 days	Percentage on time	Average Business Days between Status Event and Status Input Dates
Active	Jan 2019	8	94%	3
	May 2019	3	96%	4.9
	Jan 2020	4	96.64%	3.5
	Jan 2021	3	98.89%	0.81
	Jan 2022	3	98.31%	0.89
	Jan 2023	2	99.30%	0.78
	Mar 2024	**8**	**97.75%**	**1.21**

Six of the late updates were within 30 business days of the event date. The latest update was made 43 business days of the event date. I checked all eight late updates and found they were caused by:

- backdated switch ins and withdrawals where the status could not be updated until the switch was complete,
- corrections following another trader's backdated update for a date prior to HNETs period of supply, and
- a correction where two reconnection orders were issued on one day, creating confusion.

The late updates were processed accurately with the correct event date.

The timeliness of status updates to "inactive" is set out in the table below.

Status	Review period end	ICPs notified greater than 5 days	Percentage on time	Average Business Days between Status Event and Status Input Dates
Inactive	May 2019	11	95%	6.34
	Jan 2020	3	98.55%	1.83
	Jan 2021	1	99.66%	0.19
	Jan 2022	3	99.29%	0.20

Status	Review period end	ICPs notified greater than 5 days	Percentage on time	Average Business Days between Status Event and Status Input Dates
	Jan 2023	0	100%	0.10
	Mar 2024	**12**	**96.57%**	**1.41**

All of the late status updates were made on 13 June 2023 effective from 19 April 2023 because the ICPs were temporarily supplied through a generator due to a supply fault, and the network provided late notice. The correct status event dates and reasons were applied.

Trader updates

Trader updates are made manually on the registry and then imported into IPBMS using the synchronisation process. The timeliness of trader updates is set out in the table below.

Review period end	ICPs notified greater than 5 days	Percentage on time	Average Business Days between Status Event and Status Input Dates
May 2019	2	94.29%	3
Jan 2020	10	61.54%	221.35
Jan 2021	2	95.65%	0.54
Jan 2022	3	98.76%	0.76
Jan 2023	16	92.16%	2.66
Mar 2024	**44**	**99.30%**	**0.19**

The late updates were processed 6 - 138 business days after the event date. I checked the ten latest updates and found they were caused by:

- late notification from the MEP of meter changes that required an MEP nomination,
- profile and submission type corrections backdated to the correct change date, and
- backdated ANZSIC code corrections where there were delays in confirming the correct ANZSIC code.

The AC020 report recorded six ANZSIC code updates more than 20 business days after switch in. Four were caused by backdated switches, or delays in confirming the correct ANZSIC code after the customer switched in.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.3 With: 10 Schedule 11.1 From: 16-Aug-23 To: 14-Mar-24	**TODD** 208 late updates to "active" status for reconnections. 94 late status updates to **"**inactive**"** status. 495 late trader updates. 314 ANZSIC code updates were made more than 20 business days after the ICP start date. **WISE** 16 late updates to "active" status for reconnections. Ten late status updates to **"**inactive**"** status. Eight late trader updates. Three ANZSIC code updates were made more than 20 business days after the ICP start date. **HNET** Eight late updates to "active" status for reconnections. 12 late status updates to **"**inactive**"** status. 44 late trader updates. Six ANZSIC code updates were made more than 20 business days after the ICP start date. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls for the timeliness and accuracy of status and trader updates are moderate. The majority of updates were on time but there is some room for improvement, particularly when selecting event dates for trader updates. The audit risk rating is low this as the impact on submission accuracy is minor, and the late updates had no impact on submission or were made in time for revised submission information to be washed up.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. 314 late ANZSIC updates were made up of backdated switch, late corrections due to customer contact and some updates made late due to human error. TODD has halved the non-compliances in this area from last audit period and continues to make this a focus.	Ongoing	Identified

See sections 3.5 and 3.8. In all instances exception reporting identified the errors. **WISE:** Non-Compliance accepted. • 16 late "active" statuses were due to incorrect information from the MEP, customer meter tampering, or backdated switching. • 10 late "inactive" statuses occurred during the process of correcting the Registry's status or were reported late due to meter damage from fire. • All of the late updates were MEP nominations processed 7 - 15 business days after the event date because notification of the MEP change and/or correct MEP was received late. • All ANZSIC Code updates were a result of backdated switch ins and therefore updated as soon as practicable. **HNET:** Non-Compliance accepted. Some registry information was not updated on correct date of the event. • Incorrect event date update regarding ANZSIC code were caused by human error. • Correction has been done after switching in for late reconnection status.		
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD: TODD is currently developing improvements to the sign-up process to capture more accurate ANZSIC codes from the sign-up process. TODD has redistributed internal workflows to improve resource availability to this area. **WISE:** WISE has a high level of automation for updating the Registry, and most delayed updates were result of rare events that require further investigation. Focus continues to be providing full and accurate information of event dates. **HNET:**	Q4 2024 Ongoing Ongoing	

HNET will continue with on-going refresher training, review processes and where possible identify improvement on accuracy of event dates and complete accurate information. However, realistically, late status updates are impossible to be not found due to current HNET business logic.		

3.4. Trader responsibility for an ICP (Clause 11.18)

Code reference

Clause 11.18

Code related audit information

A trader becomes responsible for an ICP when the trader is recorded in the registry as being responsible for the ICP.

A trader ceases to be responsible for an ICP if:

- *another trader is recorded in the registry as accepting responsibility for the ICP (clause 11.18(2)(a)); or*
- *the ICP is decommissioned in accordance with clause 20 of Schedule 11.1 (clause 11.18(2)(b)).*
- *if an ICP is to be decommissioned, the trader who is responsible for the ICP must (clause 11.18(3)):*
    - *arrange for a final interrogation to take place prior to or upon meter removal (clause 11.18(3)(a)); and*
    - *advise the MEP responsible for the metering installation of the decommissioning (clause 11.18(3)(b)).*

A trader who is responsible for an ICP (excluding UML) must ensure that an MEP is recorded in the registry for that ICP (clause 11.18(4)).

A trader must not trade at an ICP (excluding UML) unless an MEP is recorded in the registry for that ICP (clause 11.18(5)).

Audit observation

The new connection, MEP nomination and decommissioning processes were reviewed, and the registry list and audit compliance reports were examined to confirm process compliance. A sample of MEP nomination rejections and decommissioned ICPs were examined.

Audit commentary

TODD

Retailers Responsibility to Nominate and Record MEP in the Registry

For new connections, MEP nomination occurs when the ICP is at "inactive - new connection in progress" status as part of the service request process, and all new connections had an MEP nominated. For existing ICPs undergoing MEP changes, an MEP nomination is processed at the time the service order is raised.

Trader updates including MEP nominations are usually created manually using the registry user interface, but files are prepared and uploaded to the registry where large groups of ICPs require MEP nominations at the same time. The proposed MEP is not stored in Orion.

All of the 31,077 MEP nominations made during the audit period were accepted. There is currently no monitoring to identify rejected MEP nominations.

Description	Recommendation	Audited party comment	Remedial action
Monitor rejected MEP nominations	**TODD** Monitor incoming MN responses which indicate the MEP has rejected the MEP nomination, so that errors can be identified, and nominations reissued as necessary.	**TODD** Recommendation accepted. TODD will investigate controls to identify rejected MEP notifications in Q3 2024	Identified

The AC020 report recorded eight "active" ICPs with metering category 9, null, or zero which did not have unmetered load indicated. Seven ICPs now have metering event records present in the registry which align with the "active" status date. ICP 0234172045LCFD4 had its MEP nomination accepted in November 2022, but still does not have metering details recorded on the registry. TODD has confirmed that metering is present and are receiving readings and submitting volumes for reconciliation. They are working with the MEP to confirm the metering details so that the MEP can update the registry.

ICP Decommissioning

ICPs which are vacant, "inactive" or decommissioned continue to be maintained within Orion and revision submissions are provided for any periods where the ICP has been "active".

When TODD becomes aware that an ICP has been decommissioned or should be decommissioned, they raise a service request for the MEP to remove their meter and provide a final reading and move the ICP's status to "inactive - ready for decommissioning". Once received the meter removal reading is entered in Orion, and this read date does not always align with the decommission or disconnection date. The scenarios for meter removal reads are:

- **Meter removal read before the "inactive" or decommission date:** no consumption is expected after a closing meter removal read but if the meter is closed prior to the "inactive" or decommission date zero consumption will be reported after the removal reading because there is no open meter to generate forward estimate.
- **No closing meter reading:** forward estimate will be calculated based on the ICP's average daily consumption until it becomes "inactive" or "decommissioned", and when an ICP becomes "inactive" the average daily consumption is set to zero, preventing forward estimate, and
- **Meter removal read after the "inactive" or decommission date:** Orion will use the closing reading to calculate consumption, and the full volume will be reported; no consumption is expected after the ICP is decommissioned.

A sample of ten ICPs were examined and confirmed that an attempt to read the meter was made at the time of removal, and the MEP was notified. The meters for the ten ICPs were removed on an estimated or actual closing read, but in three cases the removal reading was after the decommissioning date and consumption was correctly reported.

WISE

Retailers Responsibility to Nominate and Record MEP in the Registry

All ICPs have an MEP recorded and no "active" ICPs had metering category 9, null, or zero.

All 15 MEP nominations issued during the audit period were accepted. There is currently no monitoring to identify rejected MEP nominations.

Description	Recommendation	Audited party comment	Remedial action
Monitor rejected MEP nominations	**WISE** Monitor incoming MN responses which indicate the MEP has rejected the MEP nomination, so that errors can be identified, and nominations reissued as necessary.	**WISE** Recommendation accepted. WISE will implement controls to identify rejected MEP notifications in Q3 2024	Identified

ICP Decommissioning

ICPs which are vacant, "inactive" or decommissioned continue to be maintained within PEBS and revision submissions are provided for any periods where the ICP has been "active".

ICPs are normally remotely disconnected before they are decommissioned. When WISE becomes aware that an ICP has been decommissioned or should be decommissioned, they raise a service request for the MEP to remove their meter and provide a final reading and move the ICP's status to "inactive - ready for decommissioning". If the meter has been removed by a party other than the MEP, and a decommissioning read is unavailable, WISE will estimate a closing reading based on the read history.

A sample of ten ICPs were examined and confirmed that an attempt to read the meter was made at the time of removal, and the MEP was notified. The meter was removed on an estimated or actual closing read.

HNET

Retailers Responsibility to Nominate and Record MEP in the Registry

The new connection process ensures that all ICPs are moved to 1,12 "inactive - new connection in progress" and the MEP nomination is sent at the same time. All ICPs have an MEP recorded.

The AC020 report recorded that "active" ICP 0001423159UN590 had a metering category of 9, and no unmetered load or MEP nomination recorded. The ICP has since been disconnected as it is no longer in use.

When an MEP change is required, HNET nominates the MEP on the registry and logs a service request for meter replacement at the same time. All meter change requests are tracked through the WIP file through to completion. This will capture any MEP rejections received. All 6,403 MEP nominations issued during the audit period were accepted. Meter mismatches are also identified through the registry discrepancy process.

ICP Decommissioning

ICPs which are vacant, "inactive" or decommissioned continue to be maintained within IPBMS and revision submissions are provided for any periods where the ICP has been "active".

When HNET becomes aware that an ICP has been decommissioned or should be decommissioned, they raise a service request for the MEP to remove their meter and provide a final reading and move the ICP's status to "inactive - ready for decommissioning".

If the meter has been removed by a party other than the MEP, and a decommissioning read is unavailable, HNET will estimate a closing reading based on the read history.

A sample of ten ICPs were examined and confirmed that an attempt to read the meter was made at the time of removal, and the MEP was notified. The meter was removed on an estimated or actual closing read.

Audit outcome

Compliant

3.5. Provision of information to the registry manager (Clause 9 Schedule 11.1)

Code reference

Clause 9 Schedule 11.1

Code related audit information

Each trader must provide the following information to the registry manager for each ICP for which it is recorded in the registry as having responsibility:

- *a) the participant identifier of the trader, as approved by the Authority (clause 9(1)(a)),*
- *b) the profile code for each profile at that ICP, as approved by the Authority (clause 9(1)(b)),*
- *c) the metering equipment provider for each category 1 metering or higher (clause 9(1)(c)),*
- *d) the type of submission information the trader will provide to the RM for the ICP (clause 9(1)(ea),*
- *e) if a settlement type of UNM is assigned to that ICP, either:*
  - *the code ENG if the load is profiled through an engineering profile in accordance with profile class 2.1 (clause 9(1)(f)(i)); or*
  - *in all other cases, the daily average kWh of unmetered load at the ICP (clause 9(1)(f)(ii)),*
  - *the type and capacity of any unmetered load at each ICP (clause 9(1)(g)),*
  - *the status of the ICP, as defined in clauses 12 to 20 (clause 9(1)(j)),*
  - *except if the ICP exists for the purposes of reconciling an embedded network or the ICP has distributor status, the trader must provide the relevant business classification code applicable to the customer (clause 9(1)(k)).*

The trader must provide information specified in (a) to (j) above within five business days of trading (clause 9(2)).

The trader must provide information specified in 9(1)(k) no later than 20 business days of trading (clause 9(3)).

Audit observation

The new connection processes were examined in detail to evaluate the strength of controls, and the registry list and audit compliance reports were examined to confirm process compliance.

Audit commentary

TODD

<u>New connection information timeliness</u>

The new connection process is described in detail in **section 2.9**. MEP nomination occurs when the ICP is at "inactive - new connection in progress" status as part of the service request process.

The timeliness of status updates to "active" (for new connections) is set out in the table below.

Review period end	ICPs notified greater than 5 days	Percentage on time	Average Business Days between Status Event and Status Input Dates
2015	183	11%	21.7
2016	6	94%	2.3
2017	7	97%	2.0

Review period end	ICPs notified greater than 5 days	Percentage on time	Average Business Days between Status Event and Status Input Dates
2018	7	97%	2.3
2019	34	96.21%	2.18
2020	55	95.41%	2.20
2022	254	78.85%	7.00
2023	249	61.69%	9.87
2024	**163**	**68.00%**	**6.95**

I checked the 15 latest updates, which were made between 29 and 226 business days after the event date because:

- the ICP was incorrectly decommissioned by Vector as part of a relocation and a new ICP needed to be created,
- paperwork was late or contained some incorrect information which needed to be checked before the update could be processed, including some instances where the registry was updated by the MEP or distributor before paperwork was provided and the ICP was identified through exception reporting, and
- late processing of an exception identified in exception reporting.

All of the late updates had the correct status and event date applied.

As discussed in **section 3.3** I checked all ten late updates to "inactive - new connection in progress" identified on the AC020 report. Three of the updates were made prior to the initial electrical connection date and are considered to be on time. Seven occurred after the initial electrical connection date and were genuinely late. Of those, four records were added as part of an "active" status correction, and three were created when the ICP could have moved straight to "active" status and were not necessary.

The AC020 report recorded all new ICPs had an MEP nomination accepted by the MEP within 14 business days.

New connection information accuracy

Discrepancy reports are produced for new connections:

- ICPs at "ready" with TODD as the proposed trader but not claimed, and ICPs at new connection in progress status are reviewed daily, and
- discrepancies between the IECD vs trader status date and IECD vs meter cert date are intended to be reviewed weekly but are reviewed as workloads allow.

TODD intends to review its reporting to streamline the new connection discrepancy management process, and a recommendation is raised in **section 2.9** in relation to this.

The AC020 report recorded two ICPs which had an initial electrical connection date populated and which remained at "inactive - new connection in progress" status. Both were timing differences and the ICPs were updated to "active" after the report was run.

"Active" dates for new connections were compared to the distributor's initial electrical connection date, and MEP's certification date using the AC020 report. The AC020 report identified 30 ICPs with date discrepancies:

Exception type	Quantity	Sample checked	Quantity incorrect	Commentary
IECD ≠ "active" date and MCD = "active" date	2	2	-	
IECD ≠ "active" date and MCD ≠ "active" date	3	3	2	Incorrect status event dates were entered in error and corrected during the audit.
IECD = "active" date and no MCD	3	3	-	
No IECD and MCD = "active" date	20	15	-	
No IECD and no MCD	2	2	-	
Total	30	25	2	

WISE

WISE does not normally complete new connections, but completed a new connection for ICP 1000613331PC317 because the customer was an existing customer at another address. An MEP nomination was made and the meter was installed before initial electrical connection. The "active" date was correct and consistent with the meter certification date and initial electrical connection date.

The AC020 report did not identify any data discrepancies relating to new connection information, or any "active" ICPs with metering category 9, null, or zero.

HNET

HNET usually only completes new connections for new ICPs for existing customers. ICPs are manually claimed on the registry at "inactive - new connection in progress" status and the MEP is nominated at the same time. Once HNET receives field services paperwork confirming that the ICP is connected, it is moved to "active" status manually on the registry and the metering details are loaded into IBPMS. The status updates are imported into IBPMS through the registry synchronisation process.

Progress with new connections is monitored manually using diary events and metering work in progress at least weekly.

The timeliness of status updates to "active" (for new connections) is set out in the table below.

Review period end	ICPs notified greater than 5 days	Percentage on time	Average Business Days between Status Event and Status Input Dates
Mar 18	1	50%	24
Jan 19	0	100%	4
Jan 20	1	66.67%	8.33
Jan 21	1	90%	8.8
Jan 22	2	78.85%	7

Review period end	ICPs notified greater than 5 days	Percentage on time	Average Business Days between Status Event and Status Input Dates
Jan 23	3	81.25%	4.25
Mar 24	**0**	**100.00%**	**2.53**

New connection information accuracy

The AC020 report did not record any ICPs which had an initial electrical connection date populated and which remained at "inactive - new connection in progress", or "ready" status.

"Active" dates for new connections were compared to the distributor's initial electrical connection date, and MEP's certification date using the AC020 report, and I found HNET's dates were correct.

A sample of seven new connections were checked and no inaccurate information was identified.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.5 With: 9 of schedule 11.1 From: 14-Apr-23 To: 06-Mar-24	**TODD** 163 late updates to "active" status for new connections. Seven late updates to **"**inactive **-** new connection in progress" status and late MEP nominations for new connections. Two of a sample of 25 new connections with date discrepancies had an incorrect "active" date and were corrected during the audit. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are moderate because around 2/3 of updates were on time, and improvements to validation processes are likely to improve submission accuracy. The impact is low because the late updates were processed in time for revised submission information to be provided through the revision process, and all errors were corrected during the audit.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. • As reflected in last year's audit, TODD completing compliant registry updates is impacted by MEPs providing accurate paperwork outside of retailer	Ongoing	Identified

timeframes. This is compounded by EA rules requiring retailers to update ICP within 5 days, while allowing MEPs 10 days. • TODD has developed an improved method to track paperwork delays and reasons, to support closer management of MEP and contractor delivery. • Dedicated resource to the processing of new connection paperwork was implemented in February 2023.		
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD: TODD will continue to identify, develop, and implement processes to improve timely and accurate registry updates, and to work with our industry stakeholders to reduce the instances of late paperwork	Ongoing	

3.6. ANZSIC codes (Clause 9 (1(k) of Schedule 11.1)

Code reference

Clause 9 (1(k) of Schedule 11.1

Code related audit information

Traders are responsible to populate the relevant ANZSIC code for all ICPs for which they are responsible.

Audit observation

The process to capture and manage ANZISC codes was examined. The registry list and AC020 reports were reviewed and ANZSIC codes were checked for a sample of ICPs to determine compliance.

Audit commentary

TODD

Customer industry information is obtained on application, and account managers have been asked to record business trading name and industry information where this is available. When a customer application is loaded into Orion the ANZSIC code is recorded. TODD checks this ANZSIC code matches the registry using the daily Switching_CommANZSIC switches report, which compares Orion and registry ANZSIC codes for any ICPs with an expected or actual switch in date within the last ten days with an "active" account status. If a discrepancy is found, the code is checked by reviewing the application and trading name information and updated in Orion where the switch is in progress, or Orion and the registry where the switch is complete. Once the switch is complete differences between the Orion and registry ANZSIC codes will be identified using the daily OrionVsRegistry_FullANZSICMismatch report, which identifies ICPs with:

- different ANZSIC code values in Orion and the registry,
- blank or T9 series ANZSIC codes in Orion or the registry,
- codes less than six digits in Orion or the registry,
- commercial price plans with residential ANZSIC codes, and
- residential price plans with non-residential ANZSIC codes.

Exceptions are reviewed to confirm the correct code and updated in Orion and on the registry. The report includes all ICPs with a current "active" account and price plan with "active" or "inactive" status (except "inactive - new connection in progress" and "inactive - ready for decommissioning" status).

The validity of ANZSIC codes was checked using the AC020 report, and I found:

- one ICP had a T9 series ANZSIC code which was identified and corrected through the discrepancy reporting process,
- seven ICPs with metering category 2 correctly had residential ANZSIC codes, and
- no ICPs with metering category three or above had residential ANZSIC codes.

To confirm the validity of the ANZSIC codes I checked a diverse sample of 100 "active" ICPs across the 15 most popular ANZSIC codes. 98 were confirmed to be correct and one incorrect code was updated during the audit. ICP 0000004887TRA33 is under investigation, it has L671200 non-residential property operators applied but appears to be for a recruitment company and is being checked with the customer.

WISE

New ICPs switching in are expected to have residential ANZSIC codes. The validity of ANZSIC codes was checked, and I found no ICPs with T99 series or blank ANZSIC codes. No ICPs with metering category two or above are supplied.

All but three "active" ICPs have residential ANZSIC codes. I checked a sample of 30 including all ICPs with non-residential codes and found they were correct.

The previous audit found ICP 0000563170UNFD4 was rural and has shed in the property name. WISE has attempted to follow up with the customer but has not been able to confirm whether the shed is used for non-residential purposes. Compliance is recorded because the customer is residential.

HNET

ANZSIC codes are validated against the customer name and address monthly and any exceptions are sent to the switching team for review monthly.

ANZSIC codes are checked on application as part of the credit check process, and the company register is reviewed for business customers. An automated check compares company names against key words and assigns proposed ANZSIC codes. The Digital Operations Manager checks the validity of the codes before they are updated in Orion and on the registry.

The validity of ANZSIC codes was checked, and I found:

- no ICPs with T99 series or blank ANZSIC codes, and
- two ICPs with metering category 2 correctly had residential ANZSIC codes.

To confirm the validity of the ANZSIC codes selected I checked a diverse sample of 50 "active" ICPs across the ten most popular ANZSIC codes. One was incorrect and was corrected during the audit.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.6 With: 9 (1(k) Schedule 11.1	**TODD** One of a sample of 100 ICPs had an incorrect ANZSIC code applied and was corrected during the audit. **HNET**

From: 09-Nov-20 To: 13-May-24	One of a sample of 50 ICPs had an incorrect ANZSIC code applied and was corrected during the audit. Potential impact: None Actual impact: None Audit history: Three times Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are strong. There is good validation and a very small number of exceptions were identified. Incorrect ANZSIC codes have no direct impact on reconciliation therefore the audit risk rating is low. There is an impact on reporting by the Electricity Authority.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. One ICP was identified and corrected in the audit period. The ICP was under the companies ANZSIC code rather than reflecting what the site is used for. **HNET:** Non-Compliance accepted. One incorrect ICP identified and corrected within the audit period	May 2024	Cleared
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD: TODD has several exception reports to ensure the correct ANZSIC codes are assigned upon switch in and captures existing sites where new customers take over. TODD has seen continuous improvement in compliance in this area and are working on further improvements in the sign-up process to gain the correct ANZSIC code for the site, rather than the consumer. **HNET:** HNET will implement an additional check when updating ANZSIC codes by validating the business name using the company register and monitoring if the registered address and business address is identical.	Ongoing	

3.7. Changes to unmetered load (Clause 9(1)(f) of Schedule 11.1)

Code reference

Clause 9(1)(f) of Schedule 11.1

Code related audit information

If a settlement type of UNM is assigned to that ICP, the trader must populate:

- *the code ENG if the load is profiled through an engineering profile in accordance with profile class 2.1 (clause 9(1)(f)(i)); or*
- *the daily average kWh of unmetered load at the ICP in all other cases (clause 9(1)(f)(ii)).*

Audit observation

The process to manage unmetered load was examined. The registry list and AC020 reports were examined to identify:

- any ICPs where unmetered load is recorded by the distributor but not the trader, and
- any ICPs where the trader's unmetered load is not within ±1 kWh of the distributor's figure (where it is possible to calculate this if the Distributor is using the recommended format).

Audit commentary

TODD

TODD supplies 228 ICPs with unmetered load connected. 68 have shared unmetered load and 228 have standard unmetered load. No distributed unmetered load is supplied.

When unmetered load is discovered a dummy unmetered load meter register is created with an average daily consumption of the daily unmetered kWh. An opening read of zero is added followed by an actual reading of the opening reading + the daily unmetered kWh the next day. After that Orion automatically inserts an estimated reading equal based on the average daily kWh on the scheduled read date.

The billing team is responsible for ensuring that unmetered load is correctly recorded in Orion and on the registry. Unmetered load is validated using the following reports which are emailed to the billing team daily for action:

- **Registry_UML_LoadCheck_action_required** which shows differences between the trader/Orion average daily kWh and the value calculated from the distributor information,
- **Registry_UML_OnRegistry_NotInOrion** which shows ICPs with unmetered load recorded on the registry but not in Orion, and
- **OrionActiveUML_WithNoReads** which shows unmetered load registers which do not have readings recorded.

The previous audit recommended that a periodic manual comparison of trader unmetered load details and distributor unmetered load details be completed for ICPs where the distributor unmetered load details are not in the recommended format, and this has been adopted. The last review was in December 2023.

<u>"Active" ICPs with no metering or unmetered load recorded by TODD</u>

The AC020 report recorded eight "active" ICPs with metering category 9, null, or zero which did not have unmetered load indicated. Seven ICPs now have metering event records present in the registry which align with the "active" status date. ICP 0234172045LCFD4 had its MEP nomination accepted in November 2022, but still does not have metering details recorded on the registry. TODD has confirmed that metering is present and are receiving readings and submitting volumes for reconciliation. They are working with the MEP to confirm the metering details so that the MEP can update the registry.

Accuracy of trader unmetered load information

All unmetered ICPs have daily unmetered kWh recorded, and all ICPs with distributor unmetered load recorded also had trader unmetered load recorded. No ICPs have unmetered load recorded by TODD but not by the distributor.

The AC020 report recorded five ICPs where the report calculation based on the distributor unmetered load details differed from the retailer value by more than ±0.1 kWh. One was a report calculation error, and the other four had incorrect trader unmetered details which were corrected during the audit.

Three errors were caused by confusion about the distributor unmetered load details for shared unmetered ICPs. The unmetered wattage listed against the child ICPs was the parent load divided by the number of ICPs sharing it, but TODD did not realise and divided the child load by the number of ICPs sharing again. TODD intends to change their process to check the load on the parent ICP when calculating shared unmetered daily kWh. The other ICP appeared to have a calculation error, which was corrected during the audit.

I rechecked previous audit submission and registry inaccuracy issues and found they had been cleared.

Unmetered BTS

There are no "active" unmetered BTS supplies.

WISE

WISE has not supplied any ICPs with distributor or trader unmetered load details recorded during the audit period and does not intend to supply unmetered load. No unmetered load discrepancies were found on the AC020 report.

Validation is in place to prevent ICPs switching in with unmetered load, and daily exception reporting identifies any ICPs with changes to their registry unmetered load details. If unmetered load is found, the customer is advised that WISE can no longer supply this property and the customer needs to find a new retailer.

HNET

ICPs are checked for unmetered load on switch in and any applications for unmetered load are declined. HNET does not have a process to identify existing ICPs which have unmetered load added by the distributor, and they rely on the distributor notifying them if this occurs.

HNET has not supplied any ICPs with distributor or trader unmetered load details recorded during the audit period and does not intend to supply unmetered load. No unmetered load discrepancies were found on the AC020 report.

The AC020 report recorded that "active" ICP 0001423159UN590 had a metering category of 9, and no unmetered load or MEP nomination recorded. The ICP has since been disconnected as it is no longer in use.

Description	Recommendation	Audited party comment	Remedial action
Identification of additions of unmetered load	**HNET** Check for ICPs where the distributor has added unmetered load at least monthly.	**HNET** Recommendation accepted. HNET will generate a monthly check report for metering category of 9 and check for unmetered load ICPs by Q3 2024	Identified

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.7 With: 9(1)(f) of Schedule 11.1 From: 21-Jul-21 To: 25-Mar-24	**TODD** Four of the 228 ICPs with unmetered load had incorrect daily unmetered kWh recorded and were corrected during the audit. Potential impact: Low Actual impact: Low Audit history: Twice previously Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are strong. For three of the four errors confusion had arisen because of the way the network had recorded the shared unmetered load against the child ICPs. The impact is low because the differences were small and the data has been corrected so that revised submission information can be provided.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. All incorrect ICPs were corrected during the audit session.	June 2024	Cleared
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD: During staff transition the daily monitoring of the exception reporting identifying inconsistencies was not reassigned. This has now had resource allocated and is being managed daily.	June 2024	

3.8. Management of "active" status (Clause 17 Schedule 11.1)

Code reference

Clause 17 Schedule 11.1

Code related audit information

The ICP status of "active" is be managed by the relevant trader and indicates that:

- *the associated electrical installations are electrically connected (clause 17(1)(a)),*
- *the trader must provide information related to the ICP in accordance with Part 15, to the reconciliation manager for the purpose of compiling reconciliation information (clause 17(1)(b)).*

Before an ICP is given the "active" status, the trader must ensure that:

- *the ICP has only one customer, embedded generator, or direct purchaser (clause 17(2)(a)),*
- *the electricity consumed is quantified by a metering installation or a method of calculation approved by the Authority (clause 17(2)(b)).*

Audit observation

The new connection processes were examined in detail as discussed in **sections 2.9** and **3.5**.

The reconnection process was examined using the AC020 and event detail reports.

- The timeliness and accuracy of data for new connections is assessed in **section 3.5**.
- The timeliness of data for reconnections is assessed in **section 3.3**, and a sample of 35 updates were checked for accuracy.

For new connections which had been electrically connected during the audit period, the initial electrical connection date, earliest "active" date, and meter certification date were compared to determine the accuracy of the connection dates.

Audit commentary

TODD

Requirements for "active" ICPs

Orion requires at least one meter to be created for each ICP. If an ICP is unmetered, a dummy meter is created. TODD's policy is only to allow one customer account per ICP on a particular date.

Reconnections

Disconnection and reconnection service orders and paperwork are managed using SalesForce's JIT (job issue tracking) system. A daily report of open service requests is monitored, and overdue paperwork is followed up.

The RFS team extracts successfully completed reconnections from SalesForce to create a file of status updates which are sent to the registry, and then checked to determine whether the updates are successful. The status updates are manually entered into Orion from the paperwork. Reconnection reads are rarely entered and are ignored by the historic estimate process. A system change is currently being tested which will allow disconnection and reconnection reads to be entered more efficiently.

The accuracy of updates for reconnections was checked by reviewing a sample of 20 updates to confirm that the correct status and dates were applied. All were confirmed to be correct.

Review of the GR090 ICP missing report found ICP 1001155450CK45C had consumption reported during an "inactive" period. It was disconnected on 5 October 2022 and recorded consumption from 17 September 2024 before switching out on 2 October 2024. It is believed that the ICP was reconnected by the gaining trader, but its status was not updated prior to switch out. All volumes were submitted.

New connections

The new connection process is discussed in **section 2.9**. The AC020 report recorded two ICPs which had an initial electrical connection date populated and which remained at "inactive - new connection in progress" status. Both were timing differences and the ICPs were updated to "active" after the report was run.

"Active" dates for new connections were compared to the distributor's initial electrical connection date, and MEP's certification date using the AC020 report. 30 ICPs with date discrepancies were identified and I found two of the sample of 25 dates checked were incorrect. Both exceptions were corrected during the audit.

WISE

Requirements for "active" ICPs

PEBS requires at least one meter to be created for each ICP, and WISE does not supply unmetered load. WISE's policy is only to allow one customer account per ICP on a particular date.

Reconnections

Most ICPs are disconnected and reconnected remotely. Disconnection and reconnection data is provided via SFTP by the MEPs and imported into PEBS. If the job completion status indicates the job was successfully completed, PEBS updates the ICP status, status reason and event date, and the status updates are sent from PEBS to the registry. Disconnections are held for one day before update to determine whether there is a reconnection the same day. Manual disconnections and reconnections are entered into PEBS manually.

An email is automatically generated following each update showing the ICPs updated, any ICPs which could not be updated, and any ICPs with exceptions such as consumption after becoming "inactive". WISE staff manually check all paperwork received against PEBS and the registry, and enter any reads provided which are not already in PEBS. Any daily reads received during disconnected periods continue to be loaded. Statuses are validated between PEBS and the registry daily.

A typical sample of ten reconnections were checked, all had the correct status and date applied.

New connections

WISE does not normally complete new connections, but completed a new connection for ICP 1000613331PC317 because the customer was an existing customer at another address. An MEP nomination was made and the meter was installed before initial electrical connection. The "active" date was correct and consistent with the meter certification date and initial electrical connection date.

The AC020 report did not identify any data discrepancies relating to new connection information, or any "active" ICPs with metering category 9, null, or zero.

HNET

Requirements for "active" ICPs

HNET requires at least one meter to be created for each ICP, and does not supply unmetered load. HNET's policy is only to allow one customer account per ICP on a particular date.

Reconnections

Status updates are managed using the IPBMS Disco Reco Manager. Staff complete a form to request a disconnection or reconnection service order for the MEP including a requested date. A robotic process runs every 30 minutes and sends an email to the MEP requesting the work.

IPBMS receives field services paperwork from the MEPs and Wells which is imported into IPBMS and matched to the original service order. If the job completion status indicates the job was successfully completed, IPBMS updates the ICP status, status reason and event date, and the status updates are sent from IPBMS to the registry. Disconnection and reconnection paperwork is also manually reviewed and compared to IPBMS and the registry.

Reconnection readings are entered if they are available, and a query is run to identify reconnections with no readings on the day of reconnection. Staff will look for missing readings and update them if they are available.

A typical sample of ten reconnections were checked, all had the correct status and date applied.

New connections

HNET usually only completes new connections for new ICPs for existing customers. ICPs are manually claimed on the registry at "inactive - new connection in progress" status and the MEP is nominated at the same time. Once HNET receives field services paperwork confirming that the ICP is connected, it is moved to "active" status manually on the registry and the metering details are loaded into IBPMS from paperwork. The status updates are imported into IBPMS through the registry synchronisation process.

The AC020 report did not record any ICPs which had an initial electrical connection date populated and which remained at "inactive - new connection in progress", or "ready" status.

"Active" dates for new connections were compared to the distributor's initial electrical connection date, and MEP's certification date using the AC020 report, and I found HNET's dates were correct.

A sample of seven new connections were checked and no inaccurate information was identified.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.8 With: 17 Schedule 11.1 From: 26-Oct-23 To: 09-Feb-24	**TODD** ICP 1001155450CK45C is believed to have been reconnected by the gaining trader, but its status was not updated to "active" prior to switch out. Two of a sample of 25 new connections with date discrepancies had an incorrect "active" date and were corrected during the audit. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are strong because a very small number of "active" status date discrepancies were identified, and good validation processes are in place for all codes. TODD is planning to improve and refine its validation processes. The audit risk rating is low. There were all small number of discrepancies and the ICPs have been corrected or switched out.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. ICP 1001155450CK45C was not reconnected by TODD, reads were being obtained in late September but not processed in time to have the status corrected ahead of the site switching out on 1 October.	Ongoing	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
TODD: TODD has seen improved compliance in this area in the last 12 months. This is a continued area of focus and additional resourcing has been assigned to the exception reports that identify discrepancies.	Ongoing	

3.9. Management of "inactive" status (Clause 19 Schedule 11.1)

Code reference

Clause 19 Schedule 11.1

Code related audit information

The ICP status of "inactive" must be managed by the relevant trader and indicates that:

- *electricity cannot flow at that ICP (clause 19(a)); or*
- *submission information related to the ICP is not required by the reconciliation manager for the purpose of compiling reconciliation information (clause 19(b)).*

Audit observation

The disconnection process was examined using the AC020 and event detail reports. The timeliness of data for disconnections is assessed in **section 3.3**, and a sample of updates were checked for accuracy.

The registry list file was examined to identify any ICPs that had been at the "inactive - new connection in progress" status for more than 24 months.

Audit commentary

TODD

<u>"Inactive - new connection in progress"</u>

The status "inactive - new connection in progress" is used by TODD to claim new ICPs as soon as they become ready. ICPs at "inactive - new connection in progress" status and service orders to complete connections are monitored using SalesForce and SharePoint.

As discussed in **section 3.3**, I checked all ten late updates to "inactive - new connection in progress" status identified on the AC020 report. Three of the updates were made prior to the initial electrical connection date and are considered to be on time. Seven occurred after the initial electrical connection date and were genuinely late. Of those, four records were added as part of an "active" status correction, and three were created when the ICP could have moved straight to "active" status and were not necessary.

I checked all 22 ICPs which have been at "inactive - new connection in progress" status for more than two years:

- four have been decommissioned and a further four are expected to be decommissioned as they are no longer needed,
- four have become "active",
- five are confirmed to be still in progress and are being tracked using SalesForce and SharePoint; one ICP was temporarily removed from the SharePoint list when a job was closed, but has been re-added, and

- five ICPs are being followed up with the network and/or TODD's last customer to determine whether they are still required.

Compliance is recorded because all the ICPs remaining at "inactive - new connection in progress" status are believed to have the correct status.

"Inactive" Status (excluding new connection in progress)

Disconnection and reconnection service orders and paperwork are managed using SalesForce's JIT (job issue tracking) system. A daily report of open service requests is monitored, and overdue paperwork is followed up.

The RFS team extracts successfully completed disconnections and reconnections from SalesForce to create a file of status updates which are sent to the registry, and then checked to determine whether the updates are successful. The process has logic to determine the correct reason code for disconnections. Remote disconnections have the 1,7-reason code applied and "vacant" disconnections have 1,4. All other disconnections are processed manually. The status updates are manually entered into Orion from the paperwork, and disconnection reads are usually entered. A system change is currently being tested which will allow disconnection and reconnection reads to be entered more efficiently.

The accuracy of "inactive" status information was checked:

- the AC020 report recorded 86 ICPs with status reason indicating they were remotely disconnected by AMI metering, but the AMI flag was set to no; 12 of those had their status updated by TODD during the audit period and the ICP was HHR metered at the time of the disconnection, and
- a diverse sample of 27 updates to disconnected status were checked; the updates had the correct status reason and event date applied.

I rechecked "inactive" status updates which were found to be incorrect during the previous audit and confirmed that the ICP statuses are now correct.

"Inactive" consumption

All "inactive" and "vacant" consumption is reported for reconciliation regardless of ICP status, and TODD continues to attempt to obtain readings for "vacant" and "disconnected" ICPs.

"Vacant" ICPs are identified through Power BI reporting and the "vacant" disconnection process is managed using SalesForce. Three letters are sent to the customer advising that the ICP will be disconnected if they do not sign up. After ensuring compliance with the customer care guidelines and ensuring that no applications or switches are in progress the ICP will be disconnected according to TODD's disconnection policy.

A Power BI report is available for "inactive" consumption, which records consumption at reconciliation period level. The historic estimate process ignores the ICP status and uses the seasonal adjusted shape values to apportion the consumption across the days in the read-to-read period, so some consumption will be recorded against "inactive" days if there is a difference between the current and previous reading. This means that ICPs are likely to invalidly appear on the report for any month which falls within a read-to-read period with some consumption, even if that consumption only occurred while the ICP had "active" status.

The number of false positives has made the report difficult and time consuming to review, and not all exceptions are resolved with each weekly review. TODD is working to improve the report so that only genuine consumption while "inactive" will be reported. Where genuine "inactive" consumption is found, TODD corrects the ICP to "active" status in Orion and the registry from the day after the last static reading.

TODD provided a list of 38 ICPs with 12,103 kWh of "inactive" consumption. I checked a sample of all 20 ICPs with "inactive" consumption over 42 kWh, totalling 11,889 kWh and found:

- 12 ICPs did not have genuine "inactive" consumption and were included on the report because the reconciliation period contained some "active" consumption as well as an "inactive" period, and
- eight ICPs had 7,972 kWh of genuine "inactive" consumption and their statuses were corrected to "active" for the consumption period.

I rechecked "inactive" consumption exceptions identified during the previous audit which had not been corrected and confirmed that none had genuine consumption during "inactive" periods. They all invalidly appeared on the exception report because the reconciliation period contained some "active" consumption as well as an "inactive" period**.**

WISE

"Inactive - new connection in progress"

One new ICP had "inactive - new connection in progress" status correctly applied during the audit period. No ICPs currently have "inactive - new connection in progress" status.

"Inactive" Status (excluding new connection in progress)

Most ICPs are disconnected and reconnected remotely. Disconnection and reconnection data is provided via SFTP by the MEPs and imported into PEBS. If the job completion status indicates the job was successfully completed, PEBS updates the ICP status and reason (1,7 for remote disconnections) and event date, and the status updates are sent from PEBS to the registry. Disconnections are held for one day before update to determine whether there is a reconnection the same day. Manual disconnections and reconnections are entered into PEBS manually.

An email is automatically generated following each update showing the ICPs updated, any ICPs which could not be updated, and any ICPs with exceptions such as consumption after becoming inactive. WISE staff manually check all paperwork received against PEBS and the registry, and enter any reads provided which are not already in PEBS. Any daily reads received during disconnected periods continue to be loaded. Statuses are validated between PEBS and the registry daily.

A sample of at least three disconnections per status reason code were checked, and all were confirmed to have the correct status reason and event date applied.

The AC020 report recorded 42 ICPs with status reason indicating they were remotely disconnected by AMI metering, but the AMI flag was set to no. All were correct and the ICP was subsequently updated to non-communicating after the disconnection.

"Inactive" consumption

Consumption is included in reconciliation submissions for days which have an "active" status. The historic estimate process will apportion all consumption in a read-to-read period to the "active" days in that period (if any).

WISE continues to attempt to read ICPs which are "vacant" or "disconnected", and ICPs are normally disconnected within five days of becoming "vacant" after completing welfare checks to determine whether it is safe to do so. A daily email is automatically generated from PEBS showing consumption after ICPs become "vacant" or "disconnected". The ICPs are checked to confirm whether the consumption appears genuine. If it is, WISE contacts the MEP to ask whether the ICP has been reconnected and who requested the reconnection, and the status is updated to "active" for the period with consumption. If the ICP has been reconnected by another trader as part of the switch in process, WISE will follow up with the other trader and request an NT. Otherwise a field service order is raised for the ICP to be disconnected again.

If a disconnected ICP is not communicating, WISE will send letters to the vacant site to check whether it is occupied including one delivered by courier which requires a signature. If no customer signs up, they arrange a site visit to check that the ICP remains disconnected.

WISE provided a list of eight ICPs which had "inactive" consumption recorded between February 2023 and March 2024. All had disconnected volumes of 2 kWh or less, with an average daily kWh of 0.01 kWh or less indicating that the consumption was due to meter creep rather than the ICP having an incorrect status.

HNET

"Inactive - new connection in progress"

One ICP is currently at "inactive - new connection in progress" status and has been at the status since December 2023. Progress with new connections is monitored manually using diary events and metering work in progress at least weekly.

"Inactive" Status (excluding new connection in progress)

Status updates are managed using the IPBMS Disco Reco Manager. Staff complete a form to request a disconnection or reconnection service order for the MEP including a requested date. A robotic process runs every 30 minutes and sends an email to the MEP requesting the work.

IPBMS receives field services paperwork from the MEPs and Wells which is imported into IPBMS and matched to the original service order. If the job completion status indicates the job was successfully completed, IPBMS updates the ICP status and reason (1,7 for remote disconnections and 1,4 for manual disconnections) and event date, and the status updates are sent from IPBMS to the registry. Disconnection and reconnection paperwork is also manually reviewed and compared to IPBMS and the registry.

Disconnection readings are entered if they are available, and a query is run to identify disconnections with no reading the day before disconnection. Staff will look for missing readings and update them if they are available.

The AC020 report recorded 18 ICPs with status reason indicating they were remotely disconnected by AMI metering, but the AMI flag was set to no. All were correct and the ICP was subsequently updated to non-communicating after the disconnection.

I reviewed the reason codes and disconnection dates for a diverse sample of 23 disconnections and found all had the correct status date and code applied.

"Inactive" consumption

Consumption is included in reconciliation submissions for days which have an "active" status. The historic estimate process will apportion all consumption in a read-to-read period to the "active" days in that period (if any).

HNET continues to attempt to read ICPs which are "vacant" or "disconnected". A daily email is automatically generated showing any "vacant" or "disconnected" ICPs with consumption while they have an "inactive" status from IPBMS. ICPs are checked to confirm whether the consumption appears genuine, and HNET contacts the MEP to ask whether the ICP has been reconnected and who requested the reconnection. If the ICP is reconnected by another trader as part of the switch in process, HNET will follow up with the other trader and request an NT.

If a disconnected ICP is not communicating, HNET schedules the ICP to be read by Wells.

HNET provided a list of 18 ICPs with 136.96 kWh of genuine consumption during "inactive" periods. I checked all ten ICPs with 5 kWh or more of "inactive" consumption and found:

- nine ICPs had been moved to “active” status for the days with “inactive” consumption, and the “inactive” volumes were reported, and
- the “inactive” consumption recorded for ICP 0000239965UN004 was not genuine; the consumption occurred in between HNET’s periods of supply while the ICP was supplied by TRUS.

Audit outcome

Compliant

3.10. ICPs at “new” or “ready” status for 24 months (Clause 15 Schedule 11.1)

Code reference

Clause 15 Schedule 11.1

Code related audit information

If an ICP has had the status of “new” or “ready” for 24 calendar months or more, the distributor must ask the trader whether it should continue to have that status and must decommission the ICP if the trader advises the ICP should not continue to have that status.

Audit observation

Whilst this is a distributor’s code obligation, I investigated whether any queries had been received from distributors in relation to ICPs at the new or “ready” status for more than 24 months and what process is in place to manage and respond to such requests.

I analysed a registry list of ICPs with “new” or “ready” status.

Audit commentary

TODD

Once the distributor has provided an ICP at “ready” status, it is entered into Orion and the registry is updated to “inactive - new connection in progress” status.

TODD monitors a report of ICPs at “ready” status with TODD as the proposed trader which have not been claimed daily. A report of new connections in progress for more than two years is available, but is not reviewed regularly. No ICPs have been at “new” or “ready” status for more than two years.

Any requests from distributors on ICPs which have been at ”new” or “ready” status for more than two years are investigated and responded to when they are received, and none have been received during the audit period.

WISE

WISE does not normally complete new connections, but completed a new connection for ICP 1000613331PC317 because the customer was an existing customer at another address. No ICPs have “new” or “ready” status.

HNET

HNET usually only completes new connections for new ICPs for existing customers. Progress with new connections is monitored manually using diary events and metering work in progress at least weekly, and no ICPs have “new” or “ready” status.

Audit outcome

Compliant

4. PERFORMING CUSTOMER AND EMBEDDED GENERATOR SWITCHING

4.1. Inform registry of switch request for ICPs - standard switch (Clause 2 Schedule 11.3)

Code reference

Clause 2 Schedule 11.3

Code related audit information

The standard switch process applies where a trader and a customer or embedded generator enters into an arrangement in which the trader commences trading electricity with the customer or embedded generator at a non-half hour or unmetered ICP at which another trader supplies electricity, or the trader assumes responsibility for such an ICP.

If the uninvited direct sale agreement applies to an arrangement described above, the gaining trader must identify the period within which the customer or embedded generator may cancel the arrangement in accordance with section 36M of the Fair Trading Act 1986. The arrangement is deemed to come into effect on the day after the expiry of that period.

A gaining trader must advise the registry manager of a switch no later than two business days after the arrangement comes into effect and include in its advice to the registry manager that the switch type is TR and one or more profile codes associated with that ICP.

Audit observation

The switch gain process was examined to determine when Nova deem all conditions to be met. A typical sample of NTs were checked for each trader code to confirm that these were notified to the registry within two business days, and that the correct switch type was selected.

Audit commentary

TODD

Customer applications are received by phone, from a customer account manager, or a web-based form. Information on whether the customer is moving into the address is collected during the application process. Information for all applications is loaded directly into SalesForce which performs a customer credit check, and validates the application to confirm that the network, MEP, pricing and metering are valid for TODD to supply. If an customer fails the credit check or the ICP fails validation, a service order is created for review by a staff member.

Once the application passes the SalesForce validation, the premises is automatically created in Orion within 30 minutes. NT files are triggered to be sent from Orion each afternoon once switching validations have been completed for the day including:

- the switch on hold report (run daily), which identifies ICPs with incomplete information or non-compliant event dates which require update or resolution,
- the switch tab issues report (run daily), which overlaps with the switch on hold report, and
- the pre switch error report (run every two days), which is used to identify potentially non-compliant event dates and switch types, including switches which are backdated more than four months and future dated switches where Orion cannot issue the NT until the issue is resolved.

Review of the event detail and registry list reports found 1,954 transfer switch NTs were issued, and all had metering category 1, 2 or 9. The ten NT files checked were sent within two business days of pre-conditions being cleared, and the correct switch type was selected.

WISE

Customer applications are received by phone, or a web-based form. Information for web-based applications is automatically entered into PEBS, and call centre staff key the information into PEBS for

phone applications. Information on whether the customer is moving into the address is collected during the application process, which is used to determine the switch type.

PEBS automatically issues the NT once the application information is complete and an activation payment is received. The switch type and event date are determined from the customer application information, and all WISE customers are expected to have residential ANZSIC codes.

WISE's processes are compliant with the requirements of Section 36M of the Fair Trading Act 1986, and the withdrawal process is used if the customer changes their mind. A spreadsheet is used to monitor incoming and outgoing switches in progress.

Review of the event detail and registry list reports found 293 transfer switch NTs were issued, and all had metering category 1. The five NT files checked were sent within two business days of pre-conditions being cleared or were reissues of NTs following withdrawals, and the correct switch type was selected.

HNET

Customer applications are received by phone, or a web-based form. Information for web-based applications is automatically entered into IPBMS, and sales agents key the information into IPBMS for phone applications. Information on whether the customer is moving into the address and their ANZSIC code is collected during the application process. A robot also checks that the ICP meets HNET's supply requirements and is connected. If the ICP requires reconnection on switch in, an email is automatically generated for the switching team who submit a reconnection order which the robot then processes.

A robot automatically issues the NT once the application information is complete, and the switch type and event date are determined from the customer application information. As part of meeting the pre-conditions, the robot holds transfer switch NTs until the proposed switch date is reached and switch move NTs until three days before the proposed switch date.

HNET's processes are compliant with the requirements of Section 36M of the Fair Trading Act 1986, and the withdrawal process is used if the customer changes their mind.

Registry acknowledgement errors are monitored to identify failed updates, and staff closely monitor the robot processes to ensure that all required NT files are issued.

Review of the event detail and registry list reports found 1,472 transfer switch NTs were issued, and all had metering category 1 or 2. The five NT files checked were sent within two business days of pre-conditions being cleared, and the correct switch type was selected.

Audit outcome

Compliant

4.2. Losing trader response to switch request and event dates - standard switch (Clauses 3 and 4 Schedule 11.3)

Code reference

Clauses 3 and 4 Schedule 11.3

Code related audit information

Within three business days after receiving notice of a switch from the registry manager, the losing trader must establish a proposed event date. The event date must be no more than ten business days after the date of receipt of such notification, and in any 12-month period, at least 50% of the event dates must be no more than five business days after the date of notification. The losing trader must then:

- *provide acknowledgement of the switch request by (clause 3(a) of schedule 11.3):*

- *providing the proposed event date to the registry manager and a valid switch response code (clause 3(a)(i) and (ii) of schedule 11.3); or*
- *providing a request for withdrawal of the switch in accordance with clause 17 (clause 3(c) of schedule 11.3).*

When establishing an event date for clause 4, the losing trader may disregard every event date established by the losing trader for an ICP for which when the losing trader received notice from the registry manager under clause 22(a) the losing trader had been responsible for less than 2 months.

Audit observation

The event detail reports were reviewed to:

- identify AN files issued by Nova during the audit period,
- assess compliance with the requirement to meet the setting of event dates requirement, and
- a diverse sample ANs were checked for each trader code to determine whether the codes had been correctly applied.

The switch breach history reports were examined for the audit period.

Audit commentary

TODD

AN files are automatically issued by Orion following receipt of an NT. Response codes are applied according to a hierarchy, with AA selected if no other codes apply. The gaining trader's proposed event date is applied as the AN proposed event date. The switch breach history report is reviewed daily to identify ANs which are due but have not been sent.

AN timeliness

The switch breach history report did not record any late AN files for transfer switches.

AN content

I compared the AN response codes applied to the latest ICP attributes on the registry list with history for the 6,684 ANs which had the AA (acknowledge and accept) or AD (advanced metering) code applied, and the 15 ANs with the CO (contracted customer), OC (occupied premises) or PD (premises electrically disconnected) codes applied. 6,694 ANs (99.9%) had correct response codes and there were five exceptions:

- four ANs[3] had the AA response code applied because they were vacant, but the AD code should have applied because they had AMI metering; a bug in the Orion logic resulted in the incorrect code being applied, and a ticket has been raised to resolve this; and
- ICP 0273157280LC292 AN-8232575 28 February 2024 had the PD code applied when it was not disconnected, due to a discrepancy between the Orion and registry status.

The event detail report was reviewed for 7,469 transfer ANs to assess compliance with the setting of event dates requirements:

- 4,234 (56.69%) had proposed event dates within five business days of the NT receipt date, and
- all ANs had proposed event dates within ten business days of the NT receipt date.

[3] 0003240757HB6AF AN-7818934 18 April 2023, 1000007326BPF86 AN-7884412 6 June 2023, 0000014080WE98C AN-7846087 9 May 2023, 0000100451DE0C9 AN-8202863 5 February 2024 and 0000380587TU219 AN-7994486 25 August 2023.

WISE

Incoming NT files are imported into PEBS. Staff review each NT within PEBS switching management – NT screen. They manually select the response code and can edit the expected transfer date which defaults to the proposed transfer date. Once they click submit, PEBS sends the AN to the registry. Alternatively staff can issue an NW from PEBS.

A spreadsheet is used to monitor incoming and outgoing switches in progress, and the switch breach history report is reviewed twice daily.

AN timeliness

The switch breach history report did not record any late AN files for transfer switches.

AN content

I compared the AN response codes applied to the latest ICP attributes on the registry list with history for the 541 ANs which had the AA (acknowledge and accept), AD (advanced metering), or PD (premises electrically disconnected) code applied, and the one AN with the CO (contracted customer) code applied. 541 ANs (99.8%) had correct response codes and there was one exception: ICP 1002166602LC0B8 AN-8001494 31 August 2023 was sent with AA (acknowledge and accept) but had AMI metering installed at the time the AN file was issued. The error occurred while a new staff member was being trained.

The event detail report was reviewed for 549 transfer ANs to assess compliance with the setting of event dates requirements:

- 547 (99.64%) had proposed event dates within five business days of the NT receipt date, and
- all ANs had proposed event dates within ten business days of the NT receipt date.

HNET

AN files are automatically issued twice daily from IPBMS by a robot following receipt of an NT. Response codes are applied according to a hierarchy, with AA selected if no other codes apply. The gaining trader's proposed event date is applied as the AN proposed event date.

Registry acknowledgement errors are monitored to identify failed updates, and staff closely monitor the robot processes to ensure that all required AN files are issued. The switch breach history report is also reviewed twice daily.

AN timeliness

The switch breach history report did not record any late AN files for transfer switches.

AN content

I compared the AN response codes applied to the latest ICP attributes on the registry list with history for the 772 ANs which had the AA (acknowledge and accept), AD (advanced metering), or PD (premises electrically disconnected) code applied, and five ICPs with the CO (contracted customer) code applied. 776 ANs (99.9%) had correct response codes and there was one exception: ICP 0006448160RN6BA AN-8086243 2 November 2023 was sent with AA (acknowledge and accept) but was disconnected and had AMI metering installed at the time the AN file was issued, but was in the process of having the status record reversed.

The event detail report was reviewed for 1,092 transfer ANs to assess compliance with the setting of event dates requirements:

- 1,081 (98.99%) had proposed event dates within five business days of the NT receipt date, and
- all ANs had proposed event dates within ten business days of the NT receipt date.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.2 With: 3 and 4 Schedule 11.3 From: 31-Aug-23 To: 02-Nov-23	**TODD** Four ANs had the AA response code applied because they were vacant, but the AD code should have applied because they had AMI metering. A bug in the report logic resulted in the incorrect code being applied. ICP 0273157280LC292 AN-8232575 28 February 2024 had the PD code applied when it was not disconnected due to a discrepancy between the Orion and registry status. **WISE** One AN file had an incorrect response code manually selected. **HNET** One AN file had an incorrect response code applied. Potential impact: Low Actual impact: Low Audit history: Three times Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are moderate overall. Most files have the correct codes applied but under some circumstances incorrect codes are selected manually or by the systems due to a bug or ICPs having their attributes changed around the time of AN generation. The impact is assessed as low as because the late files were issued in time for revised submission data to be provided through the revision process. The incorrect response codes may have a minor impact on the other party.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. TODD has hierarchy logic built into our Billing platform to support generate the AN code. • Current logic uses the site reader route code to determine if AA or AD should be used which has resulted in some inaccurate AN codes. • One instance of a PD being sent due to a timing issue following the reconnection of a site being processed on the Registry but not in the Billing platform at time of AN creation.	Ongoing	Identified

WISE: Non-Compliance accepted. One AA response code was incorrectly sent during new staff training sessions. **HNET:** Non-Compliance accepted. One AA response code sent incorrectly due to a system issue. All AN response codes are applied by hierarchy logic which failed in this isolated incident.		
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD: TODD is investigating enhancement of the AN logic to ensure the AA or AD decision is as accurate as possible. **WISE:** Refresher training will be provided to all staff on the conditions under which each AN code should be applied. **HNET:** The AN response code hierarchy logic has been reviewed and confirmed to be correct, no further instances of errors have been identified.	Ongoing	

4.3. Losing trader must provide final information - standard switch (Clause 5 Schedule 11.3)

Code reference

Clause 5 Schedule 11.3

Code related audit information

If the losing trader provides information to the registry manager in accordance with clause 3(a) of schedule 11.3 with the required information, no later than five business days after the event date, the losing trader must complete the switch by:

- *providing event date to the registry manager (clause 5(a)); and*
- *provide to the gaining trader a switch event meter reading as at the event date, for each meter or data storage device that is recorded in the registry with accumulator of C and a settlement indicator of Y (clause 5(b)); and*
- *if a switch event meter reading is not a validated reading, provide the date of the last meter reading (clause 5(c)).*

Audit observation

The event detail reports were reviewed to identify CS files issued by Nova during the audit period. The accuracy of the content of CS files was confirmed by checking a sample of records per trader code. The content checked included:

- correct identification of meter readings and correct date of last meter reading,
- accuracy of meter readings, and
- accuracy of average daily consumption.

CS files with average daily kWh that was negative, zero, or over 200 kWh were identified. A sample of these CS files were checked to determine whether the average daily consumption was correct.

The process to manage the sending of the CS file within five business days of the event date was examined, and the switch breach history reports for the audit period were reviewed to identify late CS files.

Audit commentary

TODD

CS files are triggered to be sent from Orion each afternoon once switching validations have been completed including:

- the switch out issues to fix report, which identifies future dated switch moves which require date corrections and vacant accounts where the average daily consumption needs to be checked and updated, and
- an exception report which is run to identify ICPs with actual readings after transfer date which are updated to misreads so that they are excluded from the last actual read date and average daily kWh calculations.

As part of the CS generation process, Orion searches for an AMI or manual actual read on the day before the switch event date which is added as a closing reading and applied as the switch event reading. If no actual read is available, Orion calculates an estimated closing read using the average daily kWh for the meter.

The average daily kWh is calculated based on the daily average kWh between the last two actual readings and is updated to zero when the ICP becomes "inactive" or "vacant". For ICPs which have switched in, but not yet received any actual readings, the incoming CS value is applied.

The switch breach history report is monitored to identify CS files which are due but have not been sent.

CS timeliness

The switch breach history report did not record any transfer switch breaches.

CS content

I checked the average daily kWh transfer switch CS files and found:

- no CS had negative average daily kWh,
- 63 CS had zero average daily kWh, and
- 121 CS had average daily kWh over 200.

I checked five CS files with zero and the three CS files with the highest average daily kWh. All were correct except 0007180217RNFF4 CS-4835341 26 June 2023 which had average daily consumption of 1,085 kWh recorded but the actual average daily consumption was 583 kWh. TODD are investigating to determine why the consumption appears to be doubled.

I checked a sample of 6,621 transfer switch CS files and did not identify any inconsistencies between last actual read dates and switch event dates. I checked the accuracy for a random sample of five CS files and did not find any exceptions.

WISE

CS files are generated in PEBS once the switch event date is reached.

Staff review each ICP within PEBS switching management – CS screen and check if an actual read is available for the last day of supply, which is entered if it is not already present and made a final reading. If there is no actual reading available an estimated closing read will be entered. Staff complete the CS switching form in PEBS and select the switch event read type. PEBS automatically enters the actual transfer date and last actual read date (which can be edited) and applies the closing read and average daily consumption and submits the CS file to the registry. Average daily consumption is calculated from the last two validated actual readings.

A spreadsheet is used to monitor incoming and outgoing switches in progress, and the switch breach history report is reviewed twice daily.

CS timeliness

The switch breach history report recorded 15 CS breaches where the CS event date was more than five business days after the transfer date. The files were issued up to four days late, because the event date was made earlier where the customer was in debt, and a new staff member accidentally calculated the required event date from the AN date instead of the NT receipt date.

CS content

I checked the average daily kWh transfer switch CS files and found:

- no CS had negative average daily kWh,
- five CS had zero average daily kWh, and
- no CS had average daily kWh over 200.

All five CS files with zero were checked and confirmed to be accurate.

I checked a sample of 665 transfer switch CS files for inconsistencies between last actual read dates and switch event dates. ICP 0497540274LCB49 CS-4834715 22 June 2023 had a last actual read date one day after the event date because the incorrect last actual read date was accidentally entered manually.

I checked the accuracy for a random sample of five CS files and did not find any exceptions.

HNET

CS files are generated in IPBMS once the switch event date is reached. Staff work through each ICP due to switch out in the switching console, and check if an actual read is available for the last day of supply which is entered if it is not already present and made a final reading. If there is no actual reading available a staff member will estimate a closing read. The CS is then approved by the staff member who enters the transfer date, and IBPMS automatically enters the closing reading and type, calculates the average daily consumption and identifies the last actual read date.

Average daily consumption is calculated from the last two validated actual readings prior to the switch out reading. The rationale for excluding actual switch out readings from the calculation is that they are out of cycle readings and using the previous two scheduled readings will cover a longer period and give a better estimate. Estimated switch gain reads are treated as validated readings by the process if there are less than two validated actual readings.

Registry acknowledgement errors are monitored to identify failed updates, and the switch breach history report is also reviewed twice daily.

CS timeliness

The switch breach report did not record any late files for transfer switches.

CS content

I checked the average daily kWh for transfer switch CS files and found:

- no CS had negative average daily kWh,

- 11 CS had zero average daily kWh, and
- four CS had average daily kWh over 200.

A sample of five CS files with zero and the four CS files with over 200 kWh were checked and found to be accurate except 1000616455PC5CF CS-5364430 17 December 2023 which was a new connection which had no reads between the meter installation and actual switch out reading and zero was applied. The correct average daily kWh was 3.5.

Description	Recommendation	Audited party comment	Remedial action
Estimated daily consumption for ICPs with less than two actual reads before switch out.	**HNET** Ensure that new connections and switch ins with less than two actual readings before switch out have an accurate estimate of average daily consumption applied.	**HNET** Recommendation acknowledged HNET is investigating potential options for CS consumption calculation to increase accuracy for sites without two actual reads.	Investigating

I checked a sample of 947 transfer switch CS files for inconsistencies between last actual read dates and switch event dates. Two ICPs had a last actual read date one day before the event date with an estimated switch event read type. One of the switches was withdrawn and I was unable to confirm whether any information was incorrect, and ICP 0006110590WM304 CS-5354112 7 December 2023 had an incorrect last actual read date, 6 December 2023 was recorded but it should have been 24 October 2023.

I checked the accuracy for a random sample of five CS files and did not find any exceptions.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.3 With: 5 Schedule 11.3	**TODD** 0007180217RNFF4 CS-4835341 26 June 2023 had an incorrect average daily consumption recorded. **WISE** 15 CS breaches. ICP 0497540274LCB49 CS-4834715 22 June 2023 had an incorrect last actual read date. **HNET** Average daily consumption was incorrect for 1000616455PC5CF CS-5364430 17 December 2023. ICP 0006110590WM304 CS-5354112 7 December 2023 had an incorrect last actual read date. Potential impact: Low Actual impact: Low Audit history: Multiple times

From: 22-Jun-23 To: 08-Mar-24	Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are strong overall. A relatively small proportion of files contained incorrect content. The audit risk rating is assessed to be low overall based on the proportion of files with incorrect information, and that no reading information was incorrect.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. ICP 0007180217RNFF4 had incorrect consumption recorded in the CS file due to an isolated system issue. This is currently being investigated. **WISE:** Non-Compliance accepted. • 15 ICPs had late CS files due to human error in taking the AN date instead of NT date. This has been addressed through refresher training. • ICP 0497540274LCB49 had an incorrect read manually entered. **HNET:** Non-Compliance accepted. • 1000616455PC5CF is a new ICP and switched out within a month so gaining two actual reads was not possible. • 0006110590WM304 recorded an incorrect last actual read date.	Ongoing	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD: As above **WISE:** WISE is providing ongoing refresher training to staff to reduce risk of recurrence. **HNET:**	Ongoing	

Following the auditor's recommendation, HNET is investigating solutions for in creating estimated consumption for sites where two actual reads are not able to be gained		

4.4. Retailers must use same reading - standard switch (Clause 6(1) and 6A Schedule 11.3)

Code reference

Clause 6(1) and 6A Schedule 11.3

Code related audit information

6A Gaining trader disputes reading.
(1) If a gaining trader disputes a switch event meter reading under clause 6(1)(b), the gaining trader must, no later than four months after the event date, provide to the losing trader a revised switch event meter reading supported by two validated meter readings.
(2) On receipt of a revised switch event meter reading from the gaining trader under subclause (1), the losing trader must either—
(a) if the losing trader accepts the revised switch event meter reading, or does not respond to the gaining trader, use the revised switch event meter reading; or

(b) if the losing trader does not accept the revised switch event meter reading, advise the gaining trader (giving all relevant details) no later than five business days after receiving the revised switch event meter reading.

Audit observation

The process for the management of read change requests was examined.

The event detail reports were analysed to identify all read change requests and acknowledgements during the audit period. A sample of RR and AC files issued for transfer switches were checked to confirm that the content was correct, and that Nova's systems reflected the outcome of the RR process.

I also checked for CS files with estimated readings provided by other traders where no RR was issued, to determine whether the correct readings were recorded in Nova's systems.

The switch breach history reports for the audit period were reviewed.

Audit commentary

TODD

RR

ICPs requiring RRs are generally identified through the billing validation process or customer enquiries, and passed to the energy connections team who review AMI readings or obtain special readings to confirm whether a read renegotiation is required. A spreadsheet is used to calculate estimated RR readings, and the RR is raised by entering an RR request estimate or RR request actual reading into Orion and then issuing the RR from Orion. The RR request readings are ignored by the billing and reconciliation processes.

When an AC response is received from the other trader it is imported into Orion. If the RR is accepted the RR request reading is made the opening read and the original CS reading is made a misread. If the RR is rejected the energy connections team reviews the reasons for the rejection and determines whether the RR needs to be reissued.

TODD issued 20 RR files for transfer switches, which were all accepted. I checked a sample of three RRs. In all cases there was a genuine reason for TODD's RR, the file content was accurate and supported by two actual reads, and the reads recorded in Orion reflected the outcome of the RR process.

No RR breaches were recorded for transfer switches on the switch breach history report.

AC

Incoming RR files are imported into Orion. The energy connections team reviews the RR readings against historic readings and reviews correspondence from the other trader to determine whether the RR should be accepted. The AC response is issued from Orion, and Orion automatically updates the event readings as necessary when the file is generated.

TODD issued 430 AC files for transfer switches. 41 (9.5%) were rejected and 389 (90.5%) were accepted. I checked a sample of five accepted and five rejected files and confirmed that the correct switch event readings were recorded in Orion and the rejections were for valid reasons.

The switch breach history report did not record any AC breaches.

CS files with estimated reads where no RR is issued.

Review of five transfer CS files with estimated reads where no RR was issued confirmed that the correct readings were recorded in Orion.

WISE

RR

ICPs requiring RRs are generally identified through the daily read validation process or customer enquiries. ICPs with daily usage below 2 kWh, over 70 kWh or over 20 kWh for new switch ins are checked. WISE contacts the customer to advise them of the high/low bill and its cause (e.g., an estimated switch read) and determines whether an RR is required.

A spreadsheet template which requires at least two validated actual reads is used to calculate estimated RR readings, and the RR is raised from PEBS using the RR switching form. The staff member selects the switch event which requires an RR and then enters the proposed reading and read type recorded in the template, and provides the information to the other trader via email. A spreadsheet is used to monitor read renegotiations in progress.

When an AC response is received from the other trader it is imported into PEBS. If the RR is accepted the switching team manually updates the reads and rebills the customer as necessary. If the RR is rejected the switching team reviews the reasons for the rejection and determines whether the RR needs to be reissued.

WISE issued four RR files for transfer switches. Three were accepted and one was rejected. In all cases there was a genuine reason for WISE's RR, the file content was accurate and supported by two actual reads, and the reads recorded in PEBS reflected the outcome of the RR process.

The switch breach history report did not record any RR breaches.

The previous audit noted that not all incoming switch event readings reflect all volume up to 11.59pm on the losing trader's last day of supply where the losing trader has applied an estimated switch event read, or an actual switch event read taken earlier in the day on their last day of supply. In these cases WISE as a NHH trader cannot raise an RR under clause 6(2) and (3) schedule 11.3 like a HHR trader could. An issue was raised for the Authority's consideration, but no response has been received.

AC

Incoming RR files are imported into PEBS. The switching team reviews the RR readings against historic readings and reviews correspondence from the other trader to determine whether the RR should be

accepted. The AC response is issued from PEBS. If the RR is accepted the switching team manually updates the reads and rebills the customer as necessary.

A spreadsheet is used to monitor read renegotiations in progress, and the switch breach history report is reviewed twice daily. The switch breach history report did not record any AC breaches.

WISE issued three AC files for transfer switches. All were validly rejected because the readings were inconsistent with WISE's actual readings, and the correct readings were recorded in PEBS.

CS files with estimated reads where no RR is issued.

Review of five transfer CS files with estimated reads where no RR was issued confirmed that the correct readings were recorded.

HNET

RR

ICPs requiring RRs are generally identified through the billing validation process or customer enquiries, and passed to the switching team who review AMI readings or obtain Wells special readings to confirm whether a read renegotiation is required. A spreadsheet is used to calculate estimated RR readings, and the RR is raised from the IPBMS switching management page. Registry acknowledgement errors are monitored to identify failed updates.

When an AC response is received from the other trader it is imported into IBPMS. If the RR is accepted the switching team manually updates the reads and rebills the customer as necessary. If the RR is rejected the switching team reviews the reasons for the rejection and determines whether the RR needs to be reissued.

HNET issued ten RR files for transfer switches. Nine were accepted and one was rejected. I checked a sample of three accepted RRs and the rejected RR. In all cases there was a genuine reason for HNET's RR, the file content was accurate and supported by two actual reads obtained by HNET (or was as requested by the other trader), and the reads recorded in IPBMS reflected the outcome of the RR process.

The switch breach history report did not record any RR breaches.

AC

Incoming RR files are imported into IPBMS and viewed in the switching console. The switching team reviews the RR readings against historic readings and reviews correspondence from the other trader to determine whether the RR should be accepted. The AC response is issued from IPBMS. Registry acknowledgement errors are monitored to identify failed updates, and the switch breach history report is also reviewed twice daily.

If the RR is accepted the switching team manually updates the reads and rebills the customer as necessary.

HNET issued three AC files for transfer switches. All were validly rejected because the readings were inconsistent with HNET's actual readings, and the correct readings were recorded in IPBMS.

The switch breach history report did not record any AC breaches.

CS files with estimated reads where no RR is issued.

Review of five transfer CS files with estimated reads where no RR was issued confirmed that the correct readings were recorded in IPBMS.

Audit outcome

Compliant

4.5. Non-half hour switch event meter reading - standard switch (Clause 6(2) and (3) Schedule 11.3)

Code reference

Clause 6(2) and (3) Schedule 11.3

Code related audit information

If the losing trader trades electricity from a non-half hour meter, with a switch event meter reading that is not from an AMI certified meter flagged Y in the registry: and

- *the gaining trader will trade electricity from a meter with a half hour submission type in the registry (clause 6(2)(b);*
- *the gaining trader within five business days after receiving final information from the registry manager, may provide the losing trader with a switch event meter reading from that meter. The losing trader must use that switch event meter reading.*

Audit observation

The process for the management of read requests was examined. The event detail report was analysed to identify read change requests issued and received under clause 6(2) and (3) schedule 11.3 and determine compliance.

Audit commentary

These RR requests are processed in the same way as those received for greater than 200 kWh except emails are not normally exchanged in advance for these. Each request is evaluated and validated against the ICP information. If the request is within validation requirements these are accepted.

TODD, WISE and HNET did not issue any RR requests under clause 6(2) and (3) of schedule 11.3, and did not issue any non-compliant AC responses for any RRs issued to them under these clauses.

Audit outcome

Compliant

4.6. Disputes - standard switch (Clause 7 Schedule 11.3)

Code reference

Clause 7 Schedule 11.3

Code related audit information

A losing trader or gaining trader may give written notice to the other that it disputes a switch event meter reading provided under clauses 1 to 6. Such a dispute must be resolved in accordance with clause 15.29 (with all necessary amendments).

Audit observation

I confirmed with Nova whether any disputes have needed to be resolved in accordance with this clause.

Audit commentary

There were no examples of disputes that needed to be resolved under this clause for TODD, HNET or WISE.

Audit outcome

Compliant

4.7. Gaining trader informs registry of switch request - switch move (Clause 9 Schedule 11.3)

Code reference

Clause 9 Schedule 11.3

Code related audit information

The switch move process applies where a gaining trader has an arrangement with a customer or embedded generator to trade electricity at an ICP using non-half-hour metering or an unmetered ICP, or to assume responsibility for such an ICP, and no other trader has an agreement to trade electricity at that ICP, this is referred to as a switch move and the following provisions apply:

If the uninvited direct sale agreement applies, the gaining trader must identify the period within which the customer or embedded generator may cancel the arrangement in accordance with section 36M of the Fair Trading Act 1986. The arrangement is deemed to come into effect on the day after the expiry of that period.

In the event of a switch move, the gaining trader must advise the registry manager of a switch and the proposed event date no later than two business days after the arrangement comes into effect.

In its advice to the registry manager the gaining trader must include:

- *a proposed event date (clause 9(2)(a)); and*
- *that the switch type is MI (clause 9(2)(b); and*
- *one or more profile codes of a profile at the ICP (clause 9(2)(c)).*

Audit observation

The switch gain process was examined to determine when Nova deem all conditions to be met. A typical sample of NTs were checked for each trader code to confirm that these were notified to the registry within two business days, and that the correct switch type was selected.

Audit commentary

TODD

Customer applications are received by phone, from a customer account manager, or a web-based form. Information on whether the customer is moving into the address is collected during the application process. Information for all applications is loaded directly into SalesForce which performs a customer credit check, and validates the application to confirm that the network, MEP, pricing and metering are valid for TODD to supply. If an customer fails the credit check or the ICP fails validation, a service order is created for review by a staff member.

Once the application passes the SalesForce validation, the premises is automatically created in Orion within 30 minutes. NT files are triggered to be sent from Orion each afternoon once switching validations have been completed for the day including:

- the switch on hold report (run daily), which identifies ICPs with incomplete information or non-compliant event dates which require update or resolution,
- the switch tab issues report (run daily), which overlaps with the switch on hold report, and
- the pre switch error report (run every two days), which is used to identify potentially non-compliant event dates and switch types, including switches which are backdated more than four months and future dated switches where Orion cannot issue the NT until the issue is resolved.

Review of the event detail and registry list reports found 7,194 switch move NTs were issued, and all had metering category 1, 2 or 9. The ten NT files checked were sent within two business days of pre-conditions being cleared or were reissues of NTs following withdrawals, and the correct switch type was selected.

WISE

Customer applications are received by phone, or a web-based form. Information for web-based applications is automatically entered into PEBS, and call centre staff key the information into PEBS for phone applications. Information on whether the customer is moving into the address is collected during the application process, which is used to determine the switch type.

PEBS automatically issues the NT once the application information is complete and an activation payment is received. The switch type and event date are determined from the customer application information, and all new WISE customers are expected to have residential ANZSIC codes.

WISE's processes are compliant with the requirements of Section 36M of the Fair Trading Act 1986, and the withdrawal process is used if the customer changes their mind. A spreadsheet is used to monitor incoming and outgoing switches in progress.

Review of the event detail and registry list reports found 1,196 switch move NTs were issued, and all had metering category 1. The ten NT files checked were sent within two business days of pre-conditions being cleared or were reissues of NTs following withdrawals, and the correct switch type was selected.

HNET

Customer applications are received by phone, or a web-based form. Information for web-based applications is automatically entered into IPBMS, and sales agents key the information into IPBMS for phone applications. Information on whether the customer is moving into the address and their ANZSIC code is collected during the application process. A robot also checks that the ICP meets HNET's supply requirements and is connected. If the ICP requires reconnection on switch in, an email is automatically generated for the switching team who submit a reconnection order which the robot then processes.

A robot automatically issues the NT once the application information is complete, and the switch type and event date are determined from the customer application information. As part of meeting the pre-conditions, the robot holds transfer switch NTs until the proposed switch date is reached and switch move NTs until three days before the proposed switch date.

HNET's processes are compliant with the requirements of Section 36M of the Fair Trading Act 1986, and the withdrawal process is used if the customer changes their mind.

Registry acknowledgement errors are monitored to identify failed updates, and staff closely monitor the robot processes to ensure that all required NT files are issued.

Review of the event detail and registry list reports found 1,534 switch move NTs were issued, and all had a metering category of 1 or 2. The five NT files checked were sent within two business days of pre-conditions being cleared, and the correct switch type was selected.

Audit outcome

Compliant

4.8. Losing trader provides information - switch move (Clause 10(1) Schedule 11.3)

Code reference

Clause 10(1) Schedule 11.3

Code related audit information

10(1) Within five business days after receiving notice of a switch move request from the registry manager—

- *10(1)(a) If the losing trader accepts the event date proposed by the gaining trader, the losing trader must complete the switch by providing to the registry manager:*

- *confirmation of the switch event date; and*
- *a valid switch response code; and*
- *final information as required under clause 11; or*

- *10(1)(b) If the losing trader does not accept the event date proposed by the gaining trader, the losing trader must acknowledge the switch request to the registry manager and determine a different event date that—*
  - *is not earlier than the gaining trader's proposed event date, and*
  - *is no later than ten business days after the date the losing trader receives notice, or*
- *10(1)(c) request that the switch be withdrawn in accordance with clause 17.*

Audit observation

The event detail reports were reviewed to:

- identify AN files issued by Nova during the audit period,
- assess compliance with the requirement to meet the setting of event dates requirement, and
- a diverse sample ANs were checked for each trader code to determine whether the codes had been correctly applied.

The switch breach history reports were examined for the audit period.

Audit commentary

TODD

CS files are triggered to be sent from Orion each afternoon once switching validations have been completed, and the switch breach history report is monitored to identify CS files which are due but have not been sent.

AN file content

I compared the AN response codes applied to the latest ICP attributes on the registry list with history for the 7,661 ANs which had the AA (acknowledge and accept), MU (unmetered supply), PD (premises electrically disconnected) or AD (advanced metering) code applied, and ten ANs with the CO (contracted customer) or OC (occupied premises) codes applied. 7,644 ANs (99.6%) had correct response codes and there were 27 exceptions:

- 13 ANs[4] had the AA response code applied because they were vacant, but the AD code should have applied because they had AMI metering; a bug in the report logic resulted in the incorrect code being applied, and a ticket has been raised to resolve this,
- four ANs[5] had the AA response code applied but should have had PD because they were disconnected; the incorrect code was applied because there was a status discrepancy between Orion and the registry at the time the file was generated; and
- ten ANs[6] had the AD response code applied when the AMI flag was set to no, because Orion determines whether the AD code applies from whether the ICP is on an AMI meter route or a manual meter route rather than the metering information.

[4]0003240757HB6AF AN-7827791, 0900090608PC5E4 AN-7949053, 0000016782CPD99 AN-7946199, 0000511519CE799 AN-8067624, 0753148482LCAC7 AN-8111334, 0001802942EN306 AN-8108268, 0000370315MPCA0 AN-7905374, 0000150083TRAAC AN-7922225, 0001802942EN306 AN-8092518, 0009521103LNF90 AN-8179259, 1002162477LC42D AN-8012131, 0125453868LCA64 AN-8229334 and 0000000443CP811 AN-8240354.

[5]0005308208RND08 AN-8034085, 0036717000WR3BF AN-7970963, 0000780423TUBB7 AN-8206423 and 0000011504CP73B AN-8109955.

[6] 1002042166LCA61 AN-8204795, 0077130746WEF5E AN-8219049, 0000014304HB881 AN-8132733, 0000050828HR074 AN-7975980, 0666002061PC0A8 AN-7974179, 0000063830CPD38 AN-8000449,

The event detail report was reviewed for all 9,217 switch move ANs to assess compliance with the setting of event dates requirements:

- all ANs had proposed event dates within ten business days of the NT receipt date,
- no ANs had a proposed event date before the gaining trader's requested date, and
- all AN proposed event dates matched the gaining trader's proposed event date.

AN and CS timeliness

The switch breach history report recorded one E2 breach where the CS event date was prior to the gaining trader's proposed event date. It was issued in error when an NW should have been issued for a non-compliant event date, and was later corrected through the withdrawal process.

WISE

Incoming NT files are imported into PEBS. Staff review each NT within PEBS switching management – NT screen. They manually select the response code and can edit the expected transfer date which defaults to the proposed transfer date as necessary. Once they click submit, PEBS sends the AN to the registry. Alternatively staff can issue an NW from PEBS.

A spreadsheet is used to monitor incoming and outgoing switches in progress, and the switch breach history report is reviewed twice daily.

AN file content

I compared the AN response codes applied to the latest ICP attributes on the registry list with history for the 303 ANs which had the AD (advanced metering) or PD (premises electrically disconnected) code applied, and the three ANs with the OC (occupied premises) code applied and found all were correctly applied.

The event detail report was reviewed for 509 switch move ANs to assess compliance with the setting of event dates requirements:

- all had proposed event dates within ten business days of the NT receipt date,
- no ANs had a proposed event date before the gaining trader's requested date, and
- all AN proposed event dates matched the gaining trader's proposed event date.

AN and CS timeliness

The switch breach history report recorded:

- two E2 breaches where the CS event date was prior to the gaining trader's proposed event date; both errors occurred during training of a new user, and
- one WR breach where the CS was issued more than two business days after completion of a withdrawal, due to heavy workloads; the file was two days overdue.

HNET

AN files are automatically issued twice daily from IPBMS by a robot following receipt of an NT. AN response codes are applied according to a hierarchy, with AA selected if no other codes apply. The gaining trader's proposed event date is applied as the AN proposed event date.

CS files are generated in IPBMS once the switch event date is reached. Staff work through each ICP due to switch out in the switching console, and check if an actual read is available for the last day of supply which is entered if it is not already present and made a final reading. If there is no actual reading available a staff member will estimate a closing read. The CS is then approved by the staff member who

0000812384HB37A AN-8120232, 0000055205WE1BB AN-8108228, 0000055210WE659 AN-8108233 and 0000033782TRD3F AN-7907183.

enters the transfer date, and IBPMS automatically enters the closing reading and type, calculates the average daily kWh and identifies the last actual read date.

Registry acknowledgement errors are monitored to identify failed updates, and staff closely monitor the robot processes to ensure that all required AN and CS files are issued. The switch breach history report is also reviewed twice daily.

AN file content

I compared the AN response codes applied to the latest ICP attributes on the registry list with history for the 718 ANs which had the AA (acknowledge and accept), AD (advanced metering), or PD (premises electrically disconnected) code applied, and five ICPs with the OC (occupied premises) code applied. All had the correct response codes.

The event detail report was reviewed for all 1,391 switch move ANs to assess compliance with the setting of event dates requirements:

- all ANs had proposed event dates within ten business days of the NT receipt date, and
- no ANs had a proposed event date before the gaining trader's requested date.

AN and CS timeliness

The switch breach history report for the audit period recorded no late AN or CS files for switch moves.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.8 With: Clause 10(1) Schedule 11.3 From: 03-Apr-23 To: 01-Dec-232	**TODD** 13 ANs had the AA response code applied because they were vacant, but the AD code should have applied because they had AMI metering. Four ANs had the AA response code applied but should have had PD because they were disconnected. Ten ANs had the AD response code applied when the AMI flag was set to no. One E2 breach. **WISE** Two E2 breaches. One WR breach. Potential impact: Low Actual impact: Low Audit history: Twice previously Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are moderate overall. Most files have the correct codes applied but under some circumstances incorrect codes are selected by Orion due to a bug or a discrepancy between Orion and the registry.

	The impact is assessed as low as because the late files were issued in time for revised submission data to be provided through the revision process. The incorrect response codes may have a minor impact on the other party.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. • 13 ANs had the AA response code applied – see section 4.2 • Four ANs had the AA response code applied but should have had PD – see section 4.2 same timing issue. • Ten ANs had the AD response code applied when the AMI flag was set to no. – see section 4.2 same logic issue in the AN hierarchy. • One E2 breach – Human error. NWDF should have been triggered instead of changing the effective date in the AN. **WISE:** Non-Compliance accepted. • Two E2 breaches due to human error when training new staff. • One WR breach due to human error due to a high volume of switch requests.	Ongoing	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD: For the AA, AD and PD issues see section 4.2. E2 breach has not recurred since the completion of training of new staff. Refresher training will continue to be provided to all staff responsible for this process. **WISE:** Refresher training will continue to be provided to all staff responsible for the processes.	Ongoing	

4.9. Losing trader determines a different date - switch move (Clause 10(2) Schedule 11.3)

Code reference

Clause 10(2) Schedule 11.3

Code related audit information

If the losing trader determines a different event date under subclause (1)(b), the losing trader must, no later than ten business days after receiving the notice referred to in sub-clause (1), also

complete the switch by providing to the registry manager the information described in subclause (1)(a), but in that case the event date is the event date determined by the losing trader.

Audit observation

The event detail reports were reviewed to identify AN files issued by Nova during the audit period, and assess compliance with the requirement to meet the setting of event dates requirement. The switch breach history report was reviewed.

Audit commentary

All proposed event dates for switch moves were compliant, and switches were completed as required by this clause.

Audit outcome

Compliant

4.10. Losing trader must provide final information - switch move (Clause 11 Schedule 11.3)

Code reference

Clause 11 Schedule 11.3

Code related audit information

The losing trader must provide final information to the registry manager for the purposes of clause 10(1)(a)(ii), including—

- *the event date (clause 11(a)); and*
- *a switch event meter reading as at the event date for each meter or data storage device that is recorded in the registry with an accumulator type of C and a settlement indicator of Y (clause 11(b)); and*
- *if the switch event meter reading is not a validated meter reading, the date of the last meter reading of the meter or storage device (clause (11(c)).*

Audit observation

The event detail reports were reviewed to identify CS files issued by Nova during the audit period. The accuracy of the content of CS files was confirmed by checking a sample records per trader code. The content checked included:

- correct identification of meter readings and correct date of last meter reading,
- accuracy of meter readings, and
- accuracy of average daily consumption.

CS files with average daily kWh that was negative, zero, or over 200 kWh were identified. A sample of these CS files were checked to determine whether the average daily consumption was correct.

Audit commentary

TODD

CS files are triggered to be sent from Orion each afternoon once switching validations have been completed including:

- the switch out issues to fix report, which identifies future dated switch moves which require date corrections and vacant accounts where the average daily consumption needs to be checked and updated, and

- an exception report which is run to identify ICPs with actual readings after transfer date which are updated to misreads so that they are excluded from the last actual read date and average daily kWh calculations.

As part of the CS generation process, Orion searches for an AMI or manual actual read on the day before the switch event date which is added as a closing reading and applied as the switch event reading. If no actual read is available, Orion calculates an estimated closing read using the average daily kWh for the meter.

The average daily kWh is calculated based on the daily average kWh between the last two actual readings and is updated to zero when the ICP becomes "inactive" or "vacant". For ICPs which have switched in but not yet received any actual readings, the incoming CS value is applied.

I checked the average daily kWh switch move CS files and found:

- no CS had negative average daily kWh,
- 859 CS had zero average daily kWh, and
- 77 CS had average daily kWh over 200.

I checked five CS files with zero and the three CS files with the highest average daily kWh. All were correct except 0000103127TRB29 CS-4939305 2 June 2023 which had average daily consumption of 2,040 kWh recorded but the actual average daily consumption was 1,610 kWh. The error occurred because an estimated read was applied instead of using the available actual read. The reading was corrected as part of the pre-switch checks, but the average daily kWh was not updated at the same time.

I checked a sample of 8,984 switch move CS files for inconsistencies between last actual read dates and switch event dates:

- 44 CS files had an event date before the last actual read date, because actual readings after the switch event date had not been made misreads before the CS files were issued; this occurred because the reporting environment was refreshed overnight and readings loaded into production on the day of the switch were not identified due to timing and/or not all exceptions were resolved before the CS files were issued,
- 142 CS files had an event date the day after the last actual read date, but the switch event read type was estimated; ICP 1001153568UN909 CS-4744665 14 April 2023 switched out the day after it switched in and had an incorrect last actual read date, and 0000000443CP811 CS-5455330 12 February 2024 should have had an actual read type but the reading was mislabelled when it was moved to an occupier account,
- 84 ICPs had their last actual read date on the switch event date. I checked a sample of three ICPs and found the CS files contained incorrect information because they had been moved to an occupier account on the day of the switch, creating discrepancies that were not identified or resolved before the CS files were issued that afternoon; I have repeated the previous audit recommendation for the billing team to check and not move ICPs in the process of switching out to occupier accounts - the ICPs with incorrect information were:
    - ICP 0000001515UNDA1 CS-4813830 6 June 2023 should have switched out on 42214/27150 A which are the reads for 5 June 2023 but switched out on 42215/27152 A which are the reads for 6 June 2023,
    - ICP 0000037455CP67F CS-5161256 16 October 2023 should have switched out with an estimated read type but actual was applied, and the last actual read date was incorrect,
    - ICP 0000500900CAE05 CS-5441096 12 February 2024 should have switched out with an estimated read type but actual was applied, and the last actual read date was incorrect,
- five ICPs had a last actual read date more than one day before the switch event date with an actual read type applied; I checked a sample of three and found:

- ICP 0900086046PCFFD CS-4908312 7 August 2023 had an actual read type applied but should have been estimated, and the average daily kWh was incorrect,
- ICPs 0000538407NR066 CS-5368107 7 December 2023 and 0000007850UN283 CS-5454042 1 March 2024 had incorrect last actual read dates applied. For ICP 0000538407NR066 the average daily kWh was also incorrect, and

- 37 CS files had missing CSMETERINSTALL, CSMETERCOMP or CSMETERCHANNEL rows because they were HHR metered ICP with the AMI flag set to no.

I checked the accuracy for a random sample of five CS files and did not find any exceptions.

Description	Recommendation	Audited party comment	Auditor comments
Creation of occupier accounts	**TODD** The billing team should consistently check whether a switch is in progress before transferring ICPs to occupier accounts.	**TODD** Recommendation acknowledged. TODD will investigate and implement a solution to remove the impacts of sites being changed to different accounts mid-switch process Q4 2024	Investigating

WISE

CS files are generated in PEBS once the switch event date is reached.

Staff review each ICP within PEBS switching management – CS screen and check if an actual read is available for the last day of supply, which is entered if it is not already present and made a final reading. If there is no actual reading available an estimated closing read will be entered. Staff complete the CS switching form in PEBS and select the switch event read type. PEBS automatically enters the actual transfer date and last actual read date (which can be edited) and applies the closing read and average daily kWh and submits the CS file to the registry. Average daily consumption is calculated from the last two validated actual readings.

A spreadsheet is used to monitor incoming and outgoing switches in progress, and the switch breach history report is reviewed twice daily.

I checked the average daily kWh switch move CS files and found:

- no CS had negative average daily kWh,
- 673 CS had zero average daily kWh, and
- four CS had average daily kWh over 200.

A sample of five CS files with zero and four CS files with over 200 kWh were checked. The four CS files with high average daily consumption were incorrect[7], because the same final readings were entered into PEBS against two channels. The readings were corrected through the RR process, or the switches were withdrawn.

I checked a sample of 1,044 switch move CS files for inconsistencies between last actual read dates and switch event dates and did not identify any exceptions. I also checked the accuracy for a random sample of five CS files and did not find any exceptions.

[7] 0000020455CPAFE CS-4749772 20 April 2023, 0000481005HBE9C CS-5298751 7 November 2023, 0001595081CN838 CS-4836472 23 June 2023 and 0036882000WRD21 CS-5084932 3 October 2023.

HNET

CS files are generated in IPBMS once the switch event date is reached. Staff work through each ICP due to switch out in the switching console, and check if an actual read is available for the last day of supply which is entered if it is not already present and made a final reading. If there is no actual reading available a staff member will estimate a closing read. The CS is then approved by the staff member who enters the transfer date, and IBPMS automatically enters the closing reading and type, calculates the average daily kWh and identifies the last actual read date.

Average daily consumption is calculated from the last two validated actual readings prior to the switch out reading. The rationale for excluding actual switch out readings from the calculation is that they are out of cycle readings and using the previous two scheduled readings will cover a longer period and give a better estimate. Estimated switch gain reads are treated as validated readings by the process if there are less than two validated actual readings.

I checked the average daily kWh switch move CS files and found:

- no CS had negative average daily kWh,
- 73 CS had zero average daily kWh, and
- one CS had average daily kWh over 200.

A sample of five CS files with zero and the four the CS file with over 200 kWh were checked and found to be accurate.

I checked a sample of 1,313 switch move CS files for inconsistencies between last actual read dates and switch event dates. Three CS files had missing CSMETERINSTALL, CSMETERCOMP or CSMETERCHANNEL rows because they were HHR metered ICP with the AMI flag set to no.

I checked the accuracy for a random sample of five CS files and found ICP 0000543613TU8C0 CS-4732186 5 April 2023 had an incorrect last actual read date and average daily kWh because reads after disconnection were not loaded against the ICP. The correct switch event read was applied.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.10 With: 11 Schedule 11.3	**TODD** 0000103127TRB29 CS-4939305 2 June 2023 had an incorrect average daily kWh applied. 44 CS files had an event date before the last actual read date, because reads after the event date were not made misreads. ICP 0000000443CP811 CS-5455330 12 February 2024 should have had an actual read type but the reading was mislabeled when it was moved to an occupier account. ICP 0000001515UNDA1 CS-4813830 6 June 2023 should have switched out on 42214/27150 A which are the reads for 5 June 2023 but switched out on 42215/27152 A which are the reads for 6 June 2023. ICP 0000037455CP67F CS-5161256 16 October 2023 should have switched out with an estimated read type but actual was applied, and the last actual read date was incorrect.

From: 02-Apr-23 To: 12-Feb-24	ICP 0000500900CAE05 CS-5441096 12 February 2024 should have switched out with an estimated read type but actual was applied, and the last actual read date was incorrect. ICP 0900086046PCFFD CS-4908312 7 August 2023 had an actual read type applied but should have been estimated, and the average daily kWh was incorrect. ICPs 0000538407NR066 CS-5368107 7 December 2023 and 0000007850UN283 CS-5454042 1 March 2024 had incorrect last actual read dates applied. For ICP 0000538407NR066 the average daily kWh was also incorrect. **WISE** Four CS files contained incorrect average daily kWh and readings, because the closing readings were entered incorrectly for some meter registers. The readings were corrected through the RR process, or the switches were withdrawn. **HNET** ICP 0000543613TU8C0 CS-4732186 5 April 2023 had an incorrect last actual read date and average daily kWh because reads after disconnection were not loaded against the ICP. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2

Audit risk rating	Rationale for audit risk rating
Low	The controls are moderate overall. A relatively small proportion of files contained incorrect content. Most of the errors for TODD related to ICPs which were moved to occupier accounts on the day that the switch was completed, causing data discrepancies. The audit risk rating is assessed to be low overall based on the proportion of files with incorrect information, and the kWh differences identified.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. • 44 ICPs had inaccurate last read dates applied due to timing issues where the import of meter reads was the same day as the CS creation file, therefore the reads were not updated. • ICP 0000001515UNDA1 - see section 4.16. • Five other ICPs were sent without correct read information due to sites being moved accounts mid switch process. TODD is currently reviewing options to address this issue **WISE:**		Investigating

Non-Compliance accepted. WISE daily average consumption is calculated by the system based on the two most recent actual reads; the four instances of incorrect daily average consumption occurred due to an error when updating the final reading values for disconnected meters. These have all been corrected through RR and NW. **HNET:** Non-Compliance accepted. Current system logic for CS generation uses disconnection reads as estimates instead of the last actual read.		
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD: TODD is investigating solutions to address the inaccuracy of read information provided in the CS files due to timing issues of account changes and read importation. **WISE:** WISE will automate the process of entering final reading values for disconnected meters to minimise errors. **HNET:** HNET will improve the system logic for the creation of CS files so the last actual read is used instead of the disconnection read.	Ongoing July 2024 Q1 2025	

4.11. Gaining trader changes to switch meter reading - switch move (Clause 12 Schedule 11.3)

Code reference

Clause 12 Schedule 11.3

Code related audit information

(1) The gaining trader may use the switch event meter reading supplied by the losing trader or may, at its own cost, obtain its own switch event meter reading.

(2) If the gaining trader elects to use the new switch event meter reading, the gaining trader must advise the losing trader of the new switch event meter reading and the event date to which it refers as follows:

(a) if the switch event meter reading established by the gaining trader differs by less than 200 kWh from that provided by the losing trader, both traders must use the switch event meter reading provided by the gaining trader, or

(b) if the switch event meter reading provided by the losing trader differs by 200 kWh or more from a value established by the gaining trader, the gaining trader may dispute the switch event meter reading.

(2A) Despite sub-clauses (1) and (2), subclause (2B) applies if—

(a) the losing trader trades electricity at the ICP through a metering installation with a submission type of non-half hour in the registry; and

(b) the gaining trader will trade electricity at the ICP through a metering installation with a submission type of half hour in the registry, as a result of the gaining trader's arrangement with the customer or embedded generator; and

(c) a switch event meter reading provided by the losing trader under subclause (1) has not been obtained from an interrogation of a certified metering installation with an AMI flag of Y in the registry.

(2B) No later than five business days after receiving final information from the registry manager under clause 22(d)—

(a) the gaining trader may provide the losing trader with a switch event meter reading obtained from an interrogation of a certified metering installation with an AMI flag of Y in the registry; and

(b) the losing trader must use that switch event meter reading

(3) If the gaining trader disputes a switch event meter reading under subclause (2)(b), the gaining trader must, no later than four months after the actual event date, provide to the losing trader a changed validated meter reading or a permanent estimate supported by two validated meter readings, and the losing trader must either—

(a) no later than five business days after receiving the switch event meter reading from the gaining trader, the losing trader, if it does not accept the switch event meter reading, must advise the gaining trader (giving all relevant details), and the losing trader and the gaining trader must use reasonable endeavours to resolve the dispute in accordance with the dispute procedure contained in clause 15.29 (with all necessary amendments); or

(b) if the losing trader advises its acceptance of the switch event meter reading received from the gaining trader, or does not provide any response, the losing trader must use the switch event meter reading supplied by the gaining trader.

Audit observation

The process for the management of read change requests was examined.

The event detail reports were analysed to identify all read change requests and acknowledgements during the audit period. A sample of RR and AC files issued for transfer switches were checked to confirm that the content was correct, and that Nova's systems reflected the outcome of the RR process.

I also checked for CS files with estimated readings provided by other traders where no RR was issued, to determine whether the correct readings were recorded in Nova's systems.

The switch breach history reports for the audit period were reviewed.

Audit commentary

TODD

RR

ICPs requiring RRs are generally identified through the billing validation process or customer enquiries, and passed to the energy connections team who review AMI readings or obtain special readings to confirm whether a read renegotiation is required. A spreadsheet is used to calculate estimated RR readings) and the RR is raised by entering an RR request estimate or RR request actual reading into Orion and then issuing the RR from Orion. The RR request readings are ignored by the billing and reconciliation processes.

When an AC response is received from the other trader it is imported into Orion. If the RR is accepted the RR request reading is made the opening read and the original CS reading is made a misread. If the RR is rejected the energy connections team reviews the reasons for the rejection and determines whether the RR needs to be reissued.

TODD issued 309 RR files for switch moves, 231 (74.8%) were accepted and 78 (25.2%) were rejected. I checked a sample of eight RRs including three which were rejected. In all cases there was a genuine reason for TODD's RR, the file content was accurate and supported by two actual reads, and the reads recorded in Orion reflected the outcome of the RR process.

11 RR breaches were recorded for switch moves on the switch breach history report. The files were delayed while TODD obtained two actual readings to confirm that an RR was required.

AC

Incoming RR files are imported into Orion. The energy connections team reviews the RR readings against historic readings and reviews correspondence from the other trader to determine whether the RR should be accepted. The AC response is issued from Orion, and Orion automatically updates the event readings as necessary when the file is generated.

TODD issued 289 AC files for switch moves. 54 (18.7%) were rejected and 235 (81.3%) were accepted. I checked a sample of five accepted and five rejected files and confirmed that the correct switch event readings were recorded in Orion and the rejections were for valid reasons.

The switch breach history report did not record any AC breaches.

CS files with estimated reads where no RR is issued.

Review of five switch move CS files with estimated reads where no RR was issued confirmed that the correct readings were recorded in Orion.

WISE

RR

ICPs requiring RRs are generally identified through the daily read validation process or customer enquiries. ICPs with daily usage below 2 kWh, over 70 kWh or over 20 kWh for new switch ins are checked. WISE contacts the customer to advise them of the high/low bill and its cause (e.g., estimated switch read) and determines whether an RR is required.

A spreadsheet template which requires at least two validated actual reads is used to calculate an estimated RR reading(s), and the RR is raised from PEBS using the RR switching form. The staff member selects the switch event which requires an RR and then enters the proposed reading and read type recorded in the template, and provides the information to the other trader via email.

When an AC response is received from the other trader it is imported into PEBS. If the RR is accepted the switching team manually updates the reads and rebills the customer as necessary. If the RR is rejected the switching team reviews the reasons for the rejection and determines whether the RR needs to be reissued.

WISE issued 35 RR files for switch moves. 26 were accepted and nine were rejected. I checked a sample of three accepted and three rejected files. In all cases there was a genuine reason for WISE's RR, the file content was accurate and supported by two actual reads, and the reads recorded in PEBS reflected the outcome of the RR process.

A spreadsheet is used to monitor read renegotiations in progress. The switch breach history report did not record any RR breaches.

AC

Incoming RR files are imported into PEBS. The switching team reviews the RR readings against historic readings and reviews correspondence from the other trader to determine whether the RR should be accepted. The AC response is issued from PEBS. If the RR is accepted the switching team manually updates the reads and rebills the customer as necessary.

WISE issued five AC files for transfer switches. Four were validly rejected because the readings were inconsistent with WISE's actual readings, and the correct readings were recorded in PEBS for all five.

A spreadsheet is used to monitor read renegotiations in progress, and the switch breach history report is reviewed twice daily. The switch breach history report did not record any AC breaches.

CS files with estimated reads where no RR is issued

Review of five switch move CS files with estimated reads where no RR was issued confirmed that the correct readings were recorded in PEBS.

HNET

RR

ICPs requiring RRs are generally identified through the billing validation process or customer enquiries, and passed to the switching team who review AMI readings or obtain Wells special readings to confirm whether a read renegotiation is required. A spreadsheet is used to calculate estimated RR readings, and the RR is raised from the IPBMS switching management page. Registry acknowledgement errors are monitored to identify failed updates.

When an AC response is received from the other trader it is imported into IBPMS. If the RR is accepted the switching team manually updates the reads and rebills the customer as necessary. If the RR is rejected the switching team reviews the reasons for the rejection and determines whether the RR needs to be reissued.

HNET issued 132 RR files for switch moves, 101 were accepted and 31 were rejected. I checked a sample of five accepted and five rejected RRs. In all cases there was a genuine reason for HNET's RR, the file content was accurate and supported by two actual reads (or was as requested by the other trader), and the reads recorded in IPBMS reflected the outcome of the RR process.

The switch breach history report recorded one RR breach which was delayed because a meter communication fault prevented HNET from promptly obtaining two actual readings to support the RR.

AC

Incoming RR files are imported into IPBMS and viewed in the switching console. The switching team reviews the RR readings against historic readings and reviews correspondence from the other trader to determine whether the RR should be accepted. The AC response is issued from IPBMS. Registry acknowledgement errors are monitored to identify failed updates, and the switch breach history report is also reviewed twice daily.

If the RR is accepted the switching team manually updates the reads and rebills the customer as necessary.

HNET issued four AC files for switch moves. One was accepted and three were validly rejected because the readings were inconsistent with HNET's actual readings, and the correct readings were recorded in IPBMS.

The switch breach history report did not record any AC breaches.

CS files with estimated reads where no RR is issued.

Review of five switch move CS files with estimated reads where no RR was issued confirmed that the correct readings were recorded in IPBMS.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.11 With: 12 Schedule 11.3 From: 22-Sep-23 To: 20-Feb-24	**TODD** 11 RR breaches. **HNET** One RR breach. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls over the read renegotiation process are strong. A small number of RR breaches occurred because of delays in obtaining the two actual reads required to issue an RR. The audit risk rating is low. The late RR files are expected to improve data accuracy, and revised reconciliation data is washed up once the RR process is completed.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. TODD maintains following best practices and only sends files outside of timeframe when required to correct invoicing for customers. **HNET:** Non-Compliance accepted. The one late RR was a result of a communication error with the meter, meaning the two validated reads required for the RR process could only be attained outside of the required timeframe.	Ongoing	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD: TODD only sends RRs outside of timeframes when in the best interest of the customer. TODD continues with refresher training, process reviews and improvement implementation where possible **HNET:**	Ongoing	

HNET will continue with ongoing monthly review for potential RR cases and identify possible improvement opportunities. HNET endeavours to obtain actual readings by using all available methods within the required timeframes.		

4.12. Gaining trader informs registry of switch request - gaining trader switch (Clause 14 Schedule 11.3)

Code reference

Clause 13 Schedule 11.3

Code related audit information

The gaining trader switch process applies when a trader has an arrangement with a customer or embedded generator to trade electricity through or assume responsibility for:

- *a half hour metering installation (that is not a category 1 or 2 metering installation) at an ICP with a submission type of half hour in the registry and an AMI flag of N; or*
- *a half hour metering installation at an ICP that has a submission type of half hour in the registry and an AMI flag of N and is traded by the losing trader as non-half hour; or*
- *a non-half hour metering installation at an ICP at which the losing trader trades electricity through a half hour metering installation with an AMI flag of N.*

If the uninvited direct sale agreement applies to an arrangement described above, the gaining trader must identify the period within which the customer or embedded generator may cancel the arrangement in accordance with section 36M of the Fair Trading Act 1986. The arrangement is deemed to come into effect on the day after the expiry of that period.

A gaining trader must advise the registry manager of the switch and expected event date no later than three business days after the arrangement comes into effect.

14(2) The gaining trader must include in its advice to the registry manager:

a) a proposed event date; and
b) that the switch type is HH.

14(3) The proposed event date must be a date that is after the date on which the gaining trader advises the registry manager, unless clause 14(4) applies.

14(4) The proposed event date is a date before the date on which the gaining trader advised the registry manager, if:

> *14(4)(a) – the proposed event date is in the same month as the date on which the gaining trader advised the registry manager; or*
>
> *14(4)(b) – the proposed event date is no more than 90 days before the date on which the gaining trader advises the registry manager, and this date is agreed between the losing and gaining traders.*

Audit observation

The switch gain process was examined to determine when Nova deem all conditions to be met. HH NTs on the event detail reports were matched to the metering information on the registry list reports to confirm whether the correct switch type was selected, and checked to determine whether they were issued on time.

Audit commentary

TODD

TODD's commercial and industrial team provide customer contracts to the energy connections team once agreement with the customer has been reached. The switching team runs a manual credit check and escalates any credit check failures to the credit team. An NT is generated from Orion once credit approval is received. NT files are run through an Excel NT file checker prior to being sent to the registry to identify and correct any discrepancies in the NT information, including proposed event date compliance.

Five HH NT files were issued during the audit period. The correct switch type was applied and the NTs were issued within three business days of pre conditions being cleared. No ICPs with meter category three or higher had TR or MI switches requested.

The switch breach history report did not record any breaches for HH NT files.

WISE

Review of the event detail and registry list reports confirmed WISE did not complete any HH switches and no ICPs with meter category 3 or higher were supplied. The switch breach history report did not record any breaches for HH NT files.

HNET

HH NTs are created manually using the registry user interface.

One category three ICP switched in during the audit period. The NT was issued on time with the correct switch type, and the NT content was correct.

The switch breach history report did not record any breaches for HH NT files.

Audit outcome

Compliant

4.13. Losing trader provision of information - gaining trader switch (Clause 15 Schedule 11.3)

Code reference

Clause 15 Schedule 11.3

Code related audit information

Within three business days after the losing trader is informed about the switch by the registry manager, the losing trader must:

> *15(a) - provide to the registry manager a valid switch response code as approved by the Authority; or*
>
> *15(b) - provide a request for withdrawal of the switch in accordance with clause 17.*

Audit observation

The event detail reports were reviewed to identify AN files issued by Nova during the audit period, and a sample were reviewed to determine whether the codes had been correctly applied. The switch breach history reports were examined for the audit period.

Audit commentary

TODD

Orion imports HH NT files and automatically generates an AN. Orion generates the response code according to a system hierarchy and applies the gaining trader's requested date as the proposed switch event date. The switch breach history report is reviewed daily to identify any AN files which are due.

I checked a diverse sample eight HH AN and confirmed that the correct response codes were applied.

No late AN files were recorded in the switch breach history report.

WISE

WISE did not issue any HH ANs, and no late AN files were recorded on the switch breach history report.

HNET

HH ANs are created manually using the registry user interface, and ANs due are identified using the switch breach history report.

HNET did not issue any HH ANs, and no late AN files were recorded on the switch breach history report.

Audit outcome

Compliant

4.14. Gaining trader to advise the registry manager - gaining trader switch (Clause 16 Schedule 11.3)

Code reference

Clause 16 Schedule 11.3

Code related audit information

The gaining trader must complete the switch no later than three business days, after receiving the valid switch response code, by advising the registry manager of the event date.

If the ICP is being electrically disconnected, or if metering equipment is being removed, the gaining trader must either-

> *16(a)- give the losing trader or MEP for the ICP an opportunity to interrogate the metering installation immediately before the ICP is electrically disconnected or the metering equipment is removed; or*
>
> *16(b)- carry out an interrogation and, no later than five business days after the metering installation is electrically disconnected or removed, advise the losing trader of the results and metering component numbers for each data channel in the metering installation.*

Audit observation

The HH switching process was examined. The switch breach history report for the audit period was reviewed to identify late CS files.

Audit commentary

TODD

HH CS files are created manually using the registry user interface, and CS files due are identified using the switch breach history report. All HH CS files issued during the audit period contained correct content.

The switch breach history report for the audit period did not record any late HH CS files.

WISE

Review of the event detail and registry list reports confirmed WISE did not complete any half hour switches and no ICPs with meter category 3 or higher were supplied. The switch breach history report did not record any breaches for HH CS files.

HNET

HH CS files are created manually using the registry user interface, and CS files due are identified using the switch breach history report.

One category three ICP switched in during the audit period. The CS content was correct but the file was issued late resulting in a CS breach. Because HH switches are rare, the process needed to be confirmed and information checked before the file was issued.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.14 With: 16 Schedule 11.3 From: 21-Sep-23 To: 21-Sep-23	**HNET** One HH CS breach. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are strong because the process has now been confirmed and future files are expected to be issued on time. The impact is low because the file was 11 days overdue.

Actions taken to resolve the issue	Completion date	Remedial action status
HNET: Non-Compliance accepted. One CS File was sent late as this scenario is not common for HNET. This non-compliance has increased awareness of requirements for the relevant staff members.	Ongoing	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
HNET: Refresher training is being provided to staff responsible for the HH switching process.	Ongoing	

4.15. Withdrawal of switch requests (Clauses 17 and 18 Schedule 11.3)

Code reference

Clauses 17 and 18 Schedule 11.3

Code related audit information

A losing trader or gaining trader may request that a switch request be withdrawn at any time until the expiry of two calendar months after the event date of the switch.

If a trader requests the withdrawal of a switch, the following provisions apply:

- *for each ICP, the trader withdrawing the switch request must provide the registry manager with (clause 18(c)):*
    - *the participant identifier of the trader making the withdrawal request (clause 18(c)(i)); and*
    - *the withdrawal advisory code published by the Authority (clause 18(c)(ii))*
- *within five business days after receiving notice from the registry manager of a switch, the trader receiving the withdrawal must advise the registry manager that the switch withdrawal request is accepted or rejected. A switch withdrawal request must not become effective until accepted by the trader who received the withdrawal (clause 18(d))*
- *on receipt of a rejection notice from the registry manager, in accordance with clause 18(d), a trader may re-submit the switch withdrawal request for an ICP in accordance with clause 18(c). All switch withdrawal requests must be resolved within ten business days after the date of the initial switch withdrawal request (clause 18(e))*
- *if the trader requests that a switch request be withdrawn, and the resolution of that switch withdrawal request results in the switch proceeding, within two business days after receiving notice from the registry manager in accordance with clause 22(b), the losing trader must comply with clauses 3,5,10 and 11 (whichever is appropriate) and the gaining trader must comply with clause 16 (clause 18(f)).*

Audit observation

The event detail reports were reviewed to:

- identify all switch withdrawal requests issued by Nova, and check a sample of NWs for each trader code, and
- identify all switch withdrawal acknowledgements issued by Nova and check a sample of NWs for each trader code.

The switch breach history reports were checked for any late switch withdrawal requests or acknowledgements.

Audit commentary

TODD

NW

ICPs requiring NWs are identified through customer enquiries or data validation processes and a service order is raised for the customer connections team. The customer connections team reviews the information provided and raises the NW in Orion, including manually selecting the withdrawal reason code. The files are manually triggered to be sent each afternoon.

When an AW response is received from the other trader it is imported into Orion. If the NW is accepted Orion will update the ICP account status and the customer connections team will check the ICP to make sure the account is correctly closed or open. If the NW is rejected the customer connections team reviews the reasons for the rejection and determines whether the NW needs to be reissued.

TODD issued 1,475 NW files. 152 (10.3%) were rejected and 1,323 (89.7%) were accepted. I checked a diverse sample of 21 NWs including at least three for each advisory code and found that three NW files had the date failed code applied where the proposed event date was not more than ten business days in the future.[8]

The switch breach report recorded:

- 11 SR breaches where the withdrawal process was not completed within ten business days, and
- 55 NA breaches where the NW arrival date was more than two calendar months after the CS actual transfer date.

I checked the five latest SR breaches and found they were caused by delays while wrong property issues and unauthorised switches were investigated.

I checked the ten latest NA breaches and found they were caused by late advice from the customer, investigation to determine the correct property, and delays while metering issues were resolved.

AW

Incoming NW files are imported into Orion. The customer connections team reviews the correspondence from the other trader to determine whether the NW should be accepted. The AW response is issued from Orion. The switch breach history report is monitored to identify AW files which are due but have not been sent.

130 (9.2%) of the 1,417 AWs issued by TODD were rejections. I reviewed a diverse sample of 16 rejections by TODD including at least three or all rejected AWs per advisory code, and confirmed they were rejected based the information available at the time the response was issued. One later was found to be the wrong property and accepted on reissue.

WISE

NW

ICPs requiring NWs are identified through customer enquiries or data validation processes and are passed to the switching team. Staff identify the switch to be withdrawn in PEBS and complete the NW switching form including manually selecting the withdrawal advisory code. Once they click submit, PEBS sends the NW to the registry. A spreadsheet is used to monitor withdrawals in progress.

When an AW response is received from the other trader it is imported into PEBS. If the NW is accepted the PEBS is automatically updated. If the NW is rejected the switching team reviews the reasons for the rejection and determines whether the NW needs to be reissued.

WISE issued 292 NW files. 24 (8.22%) were rejected and 268 (91.78%) were accepted. I checked a diverse sample of 21 NWs including at least three for each advisory code. Three NW files had the date failed code applied where the proposed event date was not more than ten business days in the future[9] and three NW files were sent in error while a new user was in training and WISE asked the other trader to reject the NWs.[10]

The switch breach report recorded one NA breach where the NW arrival date was more than two calendar months after the CS actual transfer date and one SR breach where the withdrawal process was not completed within ten business days. Both were delayed while WISE investigated the issues and

[8] 0096507402WR643 NW-1118815 5 May 2023, 0000007735TE57D 9 May 2023, and 0000376826TU317 NW-1123430 31 May 2023.
[9] 1002056702LCCFC NW-1129030 11 July 2023 and 0000187841UNF22 NW-1132877 3 August 2023.
[10] 0428280811LC57B NW-1162522 3 August 2023, 0304691887LCFA8 NW-1133583 8 August 2023 and 0000310330TUCA3 NW-1163788 19 February 2024.

negotiated with the other trader and their customer. The withdrawals were in time for reconciliation revision submissions to occur.

AW

Incoming NW files are imported into PEBS. The switching team reviews the correspondence from the other trader to determine whether the NW should be accepted. The AW response is issued from PEBS.

A spreadsheet is used to monitor withdrawals in progress, and the switch breach history report is reviewed twice daily.

44 (25.29%) of the 174 AWs issued by WISE were rejections. I reviewed a diverse sample of 17 rejections by WISE including at least three rejected AWs per advisory code and confirmed they were rejected based the information available at the time the response was issued.

The switch breach history report did not record any AW breaches.

HNET

NW

ICPs requiring NWs are identified through customer enquiries or data validation processes and are passed to the switching team. The switching team reviews the information provided and raises the NW using the IPBMS switching console including manually selecting the withdrawal reason code. Registry acknowledgement errors are monitored to identify failed updates.

When an AW response is received from the other trader it is imported into IBPMS. If the NW is accepted the switching team manually updates the customer account. If the NW is rejected the switching team reviews the reasons for the rejection and determines whether the NW needs to be reissued.

HNET issued 419 NW files. 28 (6.7%) were rejected and 391 (93.3%) were accepted. I checked a diverse sample of 21 NWs including at least three for each advisory code and found that three NW files had the date failed code applied where the proposed event date was not more than ten business days in the future.[11]

The switch breach report recorded six NA breaches where the NW arrival date was more than two calendar months after the CS actual transfer date:

- two were for double withdrawals where negotiation with customer and other traders prior to issuing the file caused delays, and
- four were delayed while investigation to confirm the situation and negotiation with the customer were completed.

All of the NWs were completed in time for reconciliation revision submissions to occur.

AW

Incoming NW files are imported into IPBMS and viewed in the switching console. The switching team reviews the correspondence from the other trader to determine whether the NW should be accepted. The AW response is issued from IPBMS. Registry acknowledgement errors are monitored to identify failed updates, and the switch breach history report is also reviewed twice daily.

41 (15.89%) of the 258 AWs issued by HNET were rejections. I reviewed a diverse sample of 14 rejections by HNET including at least three rejected AWs per NW advisory code, and confirmed they were rejected based the information available at the time the response was issued.

[11] 0000243875UN754 NW-1115628 17 April 2023, 0731654927LCEBD NW-1118667 1 May 2023, 0000667493UN69F NW-1120734 19 May 2023.

The switch breach history report did not record any AW breaches.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.15 With: 17 and 18 Schedule 11.3 From: 17-Apr-23 To: 19-Feb-24	**TODD** Three NW files had the date failed code applied where the proposed event date was not more than ten business days in the future. 11 SR breaches. 55 NA breaches. **WISE** Three NW files had the date failed code applied where the proposed event date was not more than ten business days in the future. Three NW files were created in error and rejected by the other trader at WISE's request. One NA breach. One SR breach. **HNET** Three NW files had the date failed code applied where the proposed event date was not more than ten business days in the future. Six NA breaches. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are moderate. All DF coded withdrawals checked had incorrect advisory codes applied and processes need to be updated to ensure this code is used correctly. Most NW files were issued on time and most delays were due to circumstances not fully within Nova's full control such as late notification from the customer, and negotiation with the other trader. The audit risk rating is low. Withdrawals were completed in time for revised data to be provided through the revision process. The impact of incorrect NW codes is reduced by supporting correspondence being provided to the other trader to explain the reasons for the withdrawal request.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted.	Ongoing	Identified

• Three ICPs had an incorrect withdrawal code of DF applied. As the NW was valid, just the incorrect code and all were historic switches, no action has been taken to correct. • SR breaches were a result of delays while unauthorised switches and wrong property issues were investigated. • NA breaches were caused by late advice from the customer, investigation to determine the correct property, and delays while metering issues were resolved. **WISE & HNET:** Non-Compliance accepted. During the audit it was identified that WISE had an incorrect interpretation of when to apply the DF code. Training on this correction has been provided to staff.		
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD: • The NW code issue was a result of onboarding new staff members. All occurred within a short time period and have not reoccurred since the completion of training. • TODD considers it is in the best interest of the customer to correct data to invoice accurately and that we comply with Clause 11.2 of part 11 "to provide complete and accurate information". TODD recognises this may cause some low impact non-compliances. **WISE & HNET:** WISE & HNET will provide ongoing staff training.	Ongoing	

4.16. Metering information (Clause 21 Schedule 11.3)

Code reference

Clause 21 Schedule 11.3

Code related audit information

For an interrogation or validated meter reading or permanent estimate carried out in accordance with Schedule 11.3:

> *21(a)- the trader who carries out the interrogation, switch event meter reading must ensure that the interrogation is as accurate as possible, or that the switch event meter reading is fair and reasonable.*

21(b) and (c) - the cost of every interrogation or switch event meter reading carried out in accordance with clauses 5(b) or 11(b) or (c) must be met by the losing trader. The costs in every other case must be met by the gaining trader.

Audit observation

The meter reading process in relation to meter reads for switching purposes was examined.

Audit commentary

The reads applied in switching files were examined. The meter readings used in the switching process are validated meter readings or permanent estimates. Nova's policy regarding the management of meter reading expenses is compliant.

TODD

ICP 0000001515UNDA1 CS-4813830 6 June 2023 should have switched out on actual reads 42214/27150 which are the reads for 5 June 2023 but switched out on actual reads 42215/27152 which are the reads for 6 June 2023. The impact is 3 kWh.

WISE

Four CS files contained incorrect readings[12], because the same final readings were entered into PEBS against two channels. The readings were corrected through the RR process, or the switches were withdrawn.

HNET

No inaccurate switch event readings were identified.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.16 With: 21 Schedule 11.3	**TODD** ICP 0000001515UNDA1 CS-4813830 6 June 2023 should have switched out on actual reads 42214/27150 which are the reads for 5 June 2023 but switched out on actual reads 42215/27152 which are the reads for 6 June 2023. The impact is 3 kWh. **WISE** Four CS files contained incorrect readings, because the closing readings were entered incorrectly for some meter registers. The readings were corrected through the RR process, or the switches were withdrawn. Potential impact: Low Actual impact: Low Audit history: None
From: 02-Apr-23	Controls: Strong
To: 07-Nov-23	Breach risk rating: 1

[12] 0000020455CPAFE CS-4749772 20 April 2023, 0000481005HBE9C CS-5298751 7 November 2023, 0001595081CN838 CS-4836472 23 June 2023 and 0036882000WRD21 CS-5084932 3 October 2023.

Audit risk rating	Rationale for audit risk rating
Low	The controls are strong, these were isolated errors. The impact is low because the WISE reads were corrected through the RR process or the switches were withdrawn, and the TODD ICP had a 3 kWh difference.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. TODD has not corrected the reads due to the length of time that has passed since the ICP switch event, and the gaining retailer did not initiate the RR Process. **WISE:** Non-Compliance accepted. The four instances of incorrect readings occurred due to an error when updating the final reading values for disconnected meters. All have been corrected through RR and NW.	June 2024	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD: TODD will provide refresher training to staff as the reads were not managed correctly. This is addressed in the recommendation in 4.10. **WISE:** WISE will automate the process of entering final reading values for disconnected meters to minimize errors.	July 2024	

4.17. Switch saving protection (Clause 11.15AA to 11.15AB)

Code reference

Clause 11.15AA to 11.15AC

Code related audit information

A losing retailer (including any party acting on behalf of the retailer) must not initiate contact to save or win back any customer who is switching away or has switched away for 180 days from the date of the switch.

The losing retailer may contact the customer for certain administrative reasons and may make a counteroffer only if the customer initiated contacted with the losing retailer and invited the losing retailer to make a counteroffer.

The losing retailer must not use the customer contact details to enable any other retailer (other than the gaining retailer) to contact the customer.

Audit observation

Win-back processes were discussed. The event detail reports were analysed to identify all withdrawn switches with a CX code applied 180 days of switch completion.

Audit commentary

TODD

When an NT is received, TODD contacts the customer by email to advise them that a switch is in progress. They do not complete win backs or offer any enticements.

I checked a sample of eight CX withdrawals issued within 180 days of switch completion including the four files which were rejected. I confirmed no enticements were offered and the withdrawals were initiated by the customer.

WISE

When an NT is received WISE checks whether the customer has indicated they are moving out. If they are not moving out or a transfer switch is requested, WISE sends a text notification and emails the customer to advise that an NT has been received. No incentives to remain a customer are offered.

I checked a sample of seven CX withdrawals issued within 180 days of switch completion including the four files which were rejected. I confirmed no enticements were offered and the withdrawals were initiated by the customer.

HNET

When an NT is received HNET contacts customers to:

- advise them that their bundle discount (if any) will no longer apply if they switch out their electricity supply, and
- advise them of termination fees (if any) if their ICP is under contract.

They do not contact customers that are uncontracted and do not receive a bundle discount, and no incentives to remain a customer are offered.

I checked a sample of ten CX withdrawals issued within 180 days of switch completion including the three files which were rejected. I confirmed no enticements were offered and the withdrawals were initiated by the customer.

Audit outcome

Compliant

5. MAINTENANCE OF UNMETERED LOAD

5.1. Maintaining shared unmetered load (Clause 11.14)

Code reference

Clause 11.14

Code related audit information

The trader must adhere to the process for maintaining shared unmetered load as outlined in clause 11.14:

> *11.14(2) - The distributor must give written notice to the traders responsible for the ICPs across which the unmetered load is shared, of the ICP identifiers of the ICPs.*
>
> *11.14(3) - A trader who receives such a notification from a distributor must give written notice to the distributor if it wishes to add or omit any ICP from the ICPs across which unmetered load is to be shared.*
>
> *11.14(4) - A distributor who receives such a notification of changes from the trader under (3) must give written notice to the registry manager and each trader responsible for any of the ICPs across which the unmetered load is shared.*
>
> *11.14(5) - If a distributor becomes aware of any change to the capacity of a shared unmetered load ICP or if a shared unmetered load ICP is decommissioned, it must give written notice to all traders affected by that change as soon as practicable after that change or decommissioning.*
>
> *11.14(6) - Each trader who receives such a notification must, as soon as practicable after receiving the notification, adjust the unmetered load information for each ICP in the list for which it is responsible to ensure that the entire shared unmetered load is shared equally across each ICP.*
>
> *11.14(7) - A trader must take responsibility for shared unmetered load assigned to an ICP for which the trader becomes responsible as a result of a switch in accordance with Part 11.*
>
> *11.14(8) - A trader must not relinquish responsibility for shared unmetered load assigned to an ICP if there would then be no ICPs left across which that load could be shared.*
>
> *11.14(9) - A trader can change the status of an ICP across which the unmetered load is shared to "inactive" status, as referred to in clause 19 of Schedule 11.1. In that case, the trader is not required to give written notice to the distributor of the change. The amount of electricity attributable to that ICP becomes UFE.*

Audit observation

I reviewed the processes to identify shared unmetered load. The registry list and AC020 reports were examined to determine compliance.

Audit commentary

TODD

TODD supplies 68 ICPs with shared unmetered load.

The AC020 report recorded three ICPs with shared unmetered load that differed from the calculation based on the network's information by more than ±0.1 kWh.

The errors were caused by confusion about the network's unmetered load details. The unmetered wattage listed against the child ICPs was the parent load divided by the number of ICPs sharing it, but TODD did not realise and divided the child load by the number of ICPs sharing again. TODD intends to change their process to check the load on the parent ICP when calculating shared unmetered daily kWh.

WISE

WISE has not supplied any ICPs with distributor or trader unmetered load details recorded during the audit period and does not intend to supply unmetered load. No unmetered load discrepancies were found on the AC020 report.

Validation is in place to prevent ICPs switching in with unmetered load, or having unmetered load added.

HNET

HNET has not supplied any ICPs with distributor or trader unmetered load details recorded during the audit period and does not intend to supply unmetered load. No unmetered load discrepancies were found on the AC020 report.

Validation is in place to prevent ICPs switching in with unmetered load, and a recommendation to check for ICPs which have unmetered load added is made in **section 3.7**.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 5.1 With: 11.14 From: 21-Jul-21 To: 25-Mar-24	**TODD** Three of the 68 ICPs with shared unmetered load had incorrect daily unmetered kWh recorded and were corrected during the audit. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are strong. Confusion had arisen because of the way the network had recorded the shared unmetered load against the child ICPs. The impact is low because the differences were small and the data has been corrected so that revised submission information can be provided.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. The three impacted ICPs were corrected during the audit sessions.	June 2024	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD:	June 2024	

Due to staff turnover, the allocation of the data integrity management had not been allocated to a new staff member. This has now been rectified and will be managed daily.		

5.2. Unmetered threshold (Clause 10.14 (2)(b))

Code reference

Clause 10.14 (2)(b)

Code related audit information

The reconciliation participant must ensure that unmetered load does not exceed 3,000 kWh per annum, or 6,000 kWh per annum if the load is predictable and of a type approved and published by the Authority.

Audit observation

The AC020 reports were examined to determine compliance.

Audit commentary

TODD

TODD supplies 296 ICPs with unmetered load connected. Three ICPs have unmetered under veranda lighting with a total unmetered load between 3,000 and 6,000 kWh per annum. Under veranda lighting is an approved load type.

WISE

WISE has not supplied any ICPs with distributor or trader unmetered load details recorded during the audit period and does not intend to supply unmetered load.

HNET

HNET has not supplied any ICPs with distributor or trader unmetered load details recorded during the audit period and does not intend to supply unmetered load.

Audit outcome

Compliant

5.3. Unmetered threshold exceeded (Clause 10.14 (5))

Code reference

Clause 10.14 (5)

Code related audit information

If the unmetered load limit is exceeded the retailer must:

- *within 20 business days, commence corrective measure to ensure it complies with Part 10,*
- *within 20 business days of commencing the corrective measure, complete the corrective measures,*
- *no later than ten business days after it becomes aware of the limit having been exceeded, advise each participant who is or would be expected to be affected of:*
    - *the date the limit was calculated or estimated to have been exceeded,*
    - *the details of the corrective measures that the retailer proposes to take or is taking to reduce the unmetered load.*

Audit observation

The AC020 reports were examined to determine compliance.

Audit commentary

TODD

The AC020 trader compliance report was examined. No ICPs have annual unmetered load over 6,000 kWh.

WISE

WISE has not supplied any ICPs with distributor or trader unmetered load details recorded during the audit period and does not intend to supply unmetered load.

HNET

HNET has not supplied any ICPs with distributor or trader unmetered load details recorded during the audit period and does not intend to supply unmetered load.

Audit outcome

Compliant

5.4. Distributed unmetered load (Clause 11 Schedule 15.3, Clause 15.37B)

Code reference

Clause 11 Schedule 15.3, Clause 15.37B

Code related audit information

An up-to-date database must be maintained for each type of distributed unmetered load for which the retailer is responsible. The information in the database must be maintained in a manner that the resulting submission information meets the accuracy requirements of clause 15.2.

A separate audit is required for distributed unmetered load data bases.

The database must satisfy the requirements of Schedule 15.5 with regard to the methodology for deriving submission information.

Audit observation

Nova does not wish to trade on DUML ICPs and will not switch any of these ICPs in. The registry list and AC020 reports were examined to determine compliance.

Audit commentary

No DUML ICPs are supplied, and Nova does not intend to supply DUML under any of its codes.

Audit outcome

Compliant

6. GATHERING RAW METER DATA

6.1. Electricity conveyed & notification by embedded generators (Clause 10.13, Clause 10.24 and 15.13)

Code reference

Clause 10.13, Clause 10.24 and 15.13

Code related audit information

A participant must use the quantity of electricity measured by a metering installation as the raw meter data for the quantity of electricity conveyed through the point of connection.

This does not apply if data is estimated or gifted in the case of embedded generation under clause 15.13.

A trader must, for each energised ICP that is not also an NSP, and for which it is recorded in the registry as being responsible, ensure that:

- *there is one or more metering installations,*
- *all electricity conveyed is quantified in accordance with the Code,*
- *it does not use subtraction to determine submission information for the purposes of Part 15.*

An embedded generator must give notification to the reconciliation manager for an embedded generating station, if the intention is that the embedded generator will not be receiving payment from the clearing manager or any other person through the point of connection to which the notification relates.

Audit observation

Processes for metering, submission, and distributed generation were reviewed. The registry lists and AC020 reports were examined to determine compliance.

Audit commentary

TODD

Metering installations installed.

TODD's new connection process includes a check that metering is installed before electrical connection occurs, and that any unmetered load is quantified. The MEP is nominated, and a meter installation service request is issued at the time the ICP is claimed at "inactive - new connection in progress" status. All new connections have an MEP nominated.

The AC020 report recorded eight "active" ICPs with metering category 9, null, or zero which did not have unmetered load indicated. Seven ICPs now have metering event records present in the registry which align with the "active" status date. ICP 0234172045LCFD4 had its MEP nomination accepted in November 2022, but still does not have metering details recorded on the registry. TODD has confirmed that metering is present, and they are receiving readings and submitting volumes for reconciliation. TODD is working with the MEP to confirm the metering details so that the MEP can update the registry.

No ICPs are settled using subtraction.

Distributed generation

Daily discrepancy reports are produced for distributed generation and reviewed as workloads allow. The reports were designed to identify ICPs with generation capacity and install type L, fuel type other, and fuel type solar with installation type B generation capacity and no I flow register. The reports had some deficiencies and the restrictions by fuel type were preventing all exceptions from being identified.

During the audit, TODD updated the report logic and it now identifies:

- **PV1 profile without a solar fuel type:** ICPs where the fuel type is not solar or solar+battery and the profile is not RPS EG1 or HHR,
- **generation profiles without distributor generation:** ICPs where a PV1 or EG1 profile is applied and the installation type is not B,
- **settled EG registers with incorrect flow direction:** ICPs with a settled EG register without flow direction I,
- **settled EG registers without distributor generation:** ICPs with a settled EG register and the installation type is not B, and
- **distributor generation without an EG meter:** ICPs with installation type B and no settled EG register.

As part of its review of discrepancy reporting TODD intends to review the distributed generation discrepancy reports more regularly.

Distributed generation discrepancies were checked using the AC020, registry list, and meter installation details reports:

Exception type	Quantity	Sample	Commentary
ICPs with generation recorded by the distributor and I flow metering where TODD did not record a generation profile	146	30	A sample of 30 ICPs were reviewed, and all were confirmed to be generating and have generation volumes submitted. 27 ICPs were correctly moved to HHR or RPS PV1 profile after the report was run and ICPs 0000931804TU29B, 0000542172TU5D7 and 1001266765UN6ED remain on RPS only. The profiles were not updated due to staff missing the step to update the profile when processing an EG register installation, and/or changes to I flow metering settlement flags which were not actioned through the validation process.
Non-zero generation capacity and no I flow meter or generation profile	36	**36**	**HHR (5)** Three ICPs were confirmed to be generating and had settled EG registers added after the report was run. ICP 1000016001BP55B is confirmed to be generating and a job to install EG metering is in progress. ICP 0000706396WEF07 is under investigation to confirm whether it is generating before a metering change is arranged. **NHH (31)** Four ICPs[13] are believed not to have generation, and are being investigated to confirm this. Six ICPs are confirmed not to have generation following cancellation of solar jobs, and the network has updated the registry installation type to L. One switched out after the report was run.

[13] 0007290998AL464, 1000019114BP2DD, 1000607949PC035 and 1000021103TC572.

Exception type	Quantity	Sample	Commentary
			20 ICPs were confirmed to be generating, of those: • five had settled EG registers added, and their profiles updated to RPS PV1 after the report was run, • four ICPs[14] have jobs for I flow meter installation underway, and • 11 ICPs had jobs for I flow meter installation turned down, including ICP 0000018136UN474 which is in the process of being decommissioned; the other ten ICPs[15] are under investigation to determine whether generation should be gifted or are being queried with the network and a process to provide notification of gifting needs to be developed.
Generation profile and a generation capacity of zero recorded by the distributor	11	11	All 11 ICPs were confirmed to have solar generation and I flow metering installed, and TODD's profiles were correct.
Generation profile inconsistent with the distributor's fuel type	6	6	Four of the five ICPs with PV1 profile and fuel type other were confirmed to have the correct profile. ICP 0000160115ENE75's fuel type is being queried with the network, but is believed to be correct. ICP 1001266949LC4B9 has fuel type solar with EG1 profile, and TODD confirmed that no solar is installed from installation paperwork.

Description	Recommendation	Audited party comment	Remedial action
Notification of gifting	**TODD** Develop a process to provide notification of gifting to the reconciliation manager where an ICP is confirmed to be generating but no I flow metering can or will be installed.	**TODD** Recommendation accepted. TODD is currently investigating options for implementing a process where these conditions are met Q4 2024	Investigating

Bridged meters

TODD provided a list of 27 ICPs with potentially bridged meters, and 25 of those were confirmed to have been bridged. 24 meters were later unbridged, or switched out before un-bridging was able to be completed. ICP 0000009536CP5A7 is believed to have been bridged when it was reconnected on 7 February 2023 and has not been unbridged. The ICP may have been disconnected sometime between 7

[14] 0000191273TR5AC, 0000752274HBF86, 0000040303CPE23 and 0045759599PCC92.
[15] 0030346537PC6CB, 0000683867HBA7C, 0000056406UN5DC, 0006832377RNDED, 0006403344RN497, 0000057067UNBC8, 0000292213WE291, 0007705366WACFD, 0030024129PCE50 and 0045757844PC343.

February 2023 and 2 May 2023 due to adverse weather events. TODD has had difficulty arranging a site visit with the customer and MEP and is following up with the MEP every few days in an effort to resolve the issue.

Of the 24 meters which were unbridged, or switched out before un-bridging was able to be completed:

- six ICPs were unbridged and had accurate corrections processed,
- 14 ICPs were unbridged and had corrections calculated, but are awaiting peer review before being entered into Orion; the meters were unbridged between 26 June 2023 and 15 January 2024 (a full list is recorded in **section 2.17**), and
- four ICPs[16] switched out while bridged or before a correction was processed; TODD has since updated their process to estimate consumption during their bridged period of supply where ICPs have switched.

The previous audit recorded that ICP 0000542837TU334 was bridged between 22 July 2022 to 11 January 2023 with no correction applied, and this issue has still not been resolved.

WISE

Metering installations installed.

All ICPs are metered with a MEP recorded, and no submission information is determined by subtraction.

WISE does not normally complete new connections, but completed a new connection for ICP 1000613331PC317 because the customer was an existing customer at another address. An MEP nomination was made and the meter was installed before initial electrical connection.

Distributed Generation.

The WISE application process rejects any application which has B in the installation type field.

Review of the registry list, event detail report and AC020 report found ICP 0000163077CK6D8 had distributed generation recorded by the distributor after switching in, and was identified through WISE's daily reporting on changes to distributed generation on the registry. WISE contacted the customer who advised that they were not using solar, and the ICP later switched out. There were no other ICPs with distributed generation indicated.

Bridged meters.

WISE provided a list of nine meters which were bridged. The meters were later unbridged, and I confirmed that a reasonable estimate of consumption was submitted for reconciliation.

HNET

Metering installations installed.

HNET's new connection process includes a check that metering is installed before electrical connection occurs. No ICPs have submission information determined by subtraction, and all ICPs have an MEP recorded.

The AC020 report recorded that "active" ICP 0001423159UN590 had a metering category of 9, and no unmetered load or MEP nomination recorded. The ICP has since been disconnected as it is no longer in use.

[16] 0000110488EN175, 0000983016LN57F, 0011005980PC3D1 and 1000009987BP916.

Distributed generation

Customers who wish to add distributed generation to their ICP are asked to arrange approval with their network. Once installation of generation is confirmed, HNET raises a service order for the MEP to install a settled I flow meter register.

When ICPs switch in, they are checked for settled I flow registers and if present a PV1 or EG1 profile will be recorded. If there are distributor generation details but no settled I flow register is present, HNET checks with the customer and arranges for I flow metering to be installed if generation is being used. There is currently no process to identify ICPs where the network has added distributed generation details, and I recommend that a new process is implemented.

HNET's registry list showed 61 "active" ICPs with a non-zero generation capacity listed by the distributor:

- 58 had I flow metering and PV1 profile recorded, and
- three ICPs had distributed generation details added by the distributor after switching in and did not have I flow metering, or a generation profile recorded:
    - one of those (ICP 1002063645LCC9B) was confirmed to have solar generation in use, but no I flow metering has been requested and no notification of gifting has been provided to the reconciliation manager, and
    - the other two ICPs switched out after the report was run, or the customer confirmed that the solar installation was not in use (ICP 0244638179LCF59).

The registry list showed ICP 0000546124NR68F had PV1 profile, but no generation was recorded by the distributor. This was an error because of a registry metering data discrepancy and the profile was corrected during the audit.

One ICP with PV1 profile (ICP 0005527309RN98) did not have a solar fuel type recorded by the distributor, and was confirmed to have solar installed using the high risk database.

The previous audit found IPBMS could only apply the PV1 profile for generation volumes. I confirmed that the EG1 profile can be added, and that the HNET team understands that this profile should be applied for ICPs which have non-solar generation fuel types.

Description	Recommendation	Audited party comment	Remedial action
Identification of additions of generation	**HNET** Identify ICPs where the installation type is updated to D or G, a generation fuel type is added, or a non-zero generation capacity is added by the distributor. Investigate to determine whether distributed generation is present. If generation is present arrange for an I flow metering to be installed or the ICP to be added to the reconciliation manager's gifting register.	**HNET** Recommendation accepted. HNET will implement a process to verify whether a new ICP has an export meter and how generation is conducted.	Identified
Compliance with requirement to measure generation volumes or notify	**HNET** If a customer refuses to have generation metering installed,	**HNET** Recommendation accepted. HNET has informed of gifting to the reconciliation manager to	Identified

Description	Recommendation	Audited party comment	Remedial action
the reconciliation manager	provide notification of gifting to the reconciliation manager.	add the ICP to the gift generation register	

Bridged meters

HNET provided two examples of meters which were bridged. The meters were later unbridged and I confirmed that a reasonable estimate of consumption was submitted for reconciliation.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.1 With: 10.13 From: 27-Nov-23 To: 31-May-24	**TODD** ICPs 0000931804TU29B, 0000542172TU5D7 and 1001266765UN6ED remain on RPS only but should have RPS PV1 profile. Ten ICPs had jobs for I flow meter installation turned down and are under investigation to determine whether generation should be gifted or are being queried with the network. While meters were bridged, energy was not metered and quantified according to the code for 25 ICPs. **WISE** While meters were bridged, energy was not metered and quantified according to the code for nine ICPs. **HNET** ICP 1002063645LCC9B was confirmed to have solar generation in use, but no I flow metering has been requested and no notification of gifting has been provided to the reconciliation manager. While meters were bridged, energy was not metered and quantified according to the code for two ICPs. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are rated as moderate. There are good processes in place to ensure that energy is quantified, but there are sometimes delays in investigating and metering distributed generation consumption. A small amount of under submission of I flow volumes will be occurring. There are processes in place to estimate consumption for bridged meters.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. • ICPs 0000931804TU29B, 0000542172TU5D7 and 1001266765UN6ED have had their profiles corrected on the Registry. • Ten ICPs are still under investigation as per the recommendation TODD has accepted. • The process for correcting the consumption for bridged meters once fixed has been strengthened. **WISE:** Non-Compliance accepted. • The existence of bridged meters where energy was not metered or quantified during bridge period is acknowledged. **HNET:** Non-Compliance accepted. • ICP 1002063645LCC9B HNET informed NZX reconciliation manager. NZX Reconciliation Manager confirmed the ICP has been added to the gifted generation register.	Ongoing	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD: • Additional training will be provided to the staff who manage the data integrity reports with more resource allocated to action these areas. • A process will be established for staff to follow for adding sites to the gifting register where required. **WISE:** WISE continues to work with MEPs through service level agreements and on-going regular operational meetings to ensure bridging of meters continues to be an undesirable outcome. **HNET:** HNET has accepted both of the auditors' recommendations and will utilise the gifted generation register if there a future instances where the conditions are met.	Ongoing	

HNET will continue to make best endeavours to resolve issues in a timely and accurate manner working with our industry stakeholders.		

6.2. Responsibility for metering at GIP (Clause 10.26 (6), (7) and (8))

Code reference

Clause 10.26 (6), (7) and (8)

Code related audit information

For each proposed metering installation or change to a metering installation that is a connection to the grid, the participant, must:

- *provide to the grid owner a copy of the metering installation design (before ordering the equipment),*
- *provide at least three months for the grid owner to review and comment on the design,*
- *respond within three business days of receipt to any request from the grid owner for additional details or changes to the design,*
- *ensure any reasonable changes from the grid owner are carried out.*

The participant responsible for the metering installation must:

- *advise the reconciliation manager of the certification expiry date not later than ten business days after certification of the metering installation,*
- *become the MEP or contract with a person to be the MEP,*
- *advise the reconciliation manager of the MEP identifier no later than 20 days after entering into a contract or assuming responsibility to be the MEP.*

Audit observation

The NSP table was reviewed to confirm the GIPs which Nova is responsible for, and the certification expiry date for those GIPs.

Audit commentary

TODD

The TODD and TGTL (Todd Generation Taranaki Limited) participant codes are responsible for the GIPs shown in the table below.

Responsible party	Description	NSP	MEP	Last audit certification expiry date (if different)	Current certification expiry date
TODD	JUNCTION RD	JRD1101TODDGG	ACCM		10 December 2025
TGTL	MCKEE	MKE1101TODDGG	ACCM	22 March 2024	7 December 2026

Accucal maintains the meter certification information on TODD's behalf. Both NSPs are currently certified. MKE1101TGTLGG's had a certification change during the audit period which was processed on time.

WISE and HNET

WISE and HNET are not responsible for any GIPs.

Audit outcome

Compliant

6.3. Certification of control devices (Clause 33 Schedule 10.7 and clause 2(2) Schedule 15.3)

Code reference

Clause 33 Schedule 10.7 and clause 2(2) Schedule 15.3

Code related audit information

The reconciliation participant must advise the metering equipment provider if a control device is used to control load or switch meter registers.

The reconciliation participant must ensure the control device is certified prior to using it for reconciliation purposes.

Audit observation

The registry lists were reviewed to determine which profiles were used by each participant code, and the AC020 reports were reviewed to identify exceptions.

Audit commentary

TODD

TODD only uses the HHR, RPS, EG1 and PV1 profiles, and control devices are not used for reconciliation purposes.

WISE

WISE only uses the RPS profile, and control devices are not used for reconciliation purposes.

HNET

HNET only uses the HHR, RPS and PV1 profiles, and control devices are not used for reconciliation purposes.

Audit outcome

Compliant

6.4. Reporting of defective metering installations (Clause 10.43(2) and (3))

Code reference

Clause 10.43(2) and (3)

Code related audit information

If a participant becomes aware of an event or circumstance that leads it to believe a metering installation could be inaccurate, defective, or not fit for purpose they must:

- *advise the MEP,*
- *include in the advice all relevant details.*

Audit observation

Processes relating to defective metering were examined.

A sample of defective meters were reviewed, to determine whether the MEP was advised, and if appropriate action was taken.

EMS identify faulty meters for generation. Their processes were reviewed as part of their agent audit.

Audit commentary

Defective meters are typically identified through the meter reading validation process, or from information provided by the meter reader, the network, the MEP, or the customer. Upon identifying a possible defective meter, Nova raises a field services job to investigate.

TODD

37 examples of defective or bridged NHH meters were provided by TODD, and in all cases the MEP was notified. Bluecurrent, EDMI and EMS confirmed that no HHR or generation meter defects occurred during the audit period.

WISE

14 examples of defective or bridged meters were provided by WISE, and in all cases the MEP was notified.

HNET

12 examples of defective or bridged meters were provided by HNET, and in all cases the MEP was notified. Bluecurrent and EDMI confirmed that no HHR meter defects had occurred during the audit period.

Audit outcome

Compliant

6.5. Collection of information by certified reconciliation participant (Clause 2 Schedule 15.2)

Code reference

Clause 2 Schedule 15.2

Code related audit information

Only a certified reconciliation participant may collect raw meter data, unless only the MEP can interrogate the meter, or the MEP has an arrangement which prevents the reconciliation participant from electronically interrogating the meter:

2(2) - The reconciliation participant must collect raw meter data used to determine volume information from the services interface or the metering installation or from the MEP.

2(3) - The reconciliation participant must ensure the interrogation cycle is such that is does not exceed the maximum interrogation cycle on the registry.

2(4) - The reconciliation participant must interrogate the meter at least once every maximum interrogation cycle.

2(5) - When electronically interrogating the meter the participant must:

- *a) ensure the system is to within +/- 5 seconds of NZST or NZDST,*
- *b) compare the meter time to the system time,*
- *c) determine the time error of the metering installation,*
- *d) if the error is less than the maximum permitted error, correct the meter's clock,*
- *e) if the time error is greater than the maximum permitted error then:*
  - *i) correct the metering installation's clock,*
  - *ii) compare the metering installation's time with the system time,*
  - *iii) correct any affected raw meter data,*
- *f) download the event log.*

2(6) – The interrogation systems must record:

- *the time,*
- *the date,*
- *the extent of any change made to the meter clock.*

Audit observation

The data collection and clock synchronisation processes were examined.

Nova's agents and MEPs are responsible for the collection of HHR and AMI data. Collection of data and clock synchronisation was reviewed as part of their agent and MEP audits, and a sample of clock synchronisation events received by Nova were reviewed.

Nova collects some generation data using Stark. I walked through the clock synchronisation process.

Audit commentary

All information used to determine volume information is collected from the services interface or the metering installation by Nova, one of their agents, or the MEP. Agents and MEPs monitor clock synchronisation, and this is covered as part of their audits.

TODD

Data collected by agents and MEPs

The agents and MEPs notify TODD when clock synchronisation events occur for HHR and AMI meters. TODD's smart metering team review the events for AMI meters, and TODD's reconciliation team review the events for C&I HHR meters. Each event is checked to determine whether it is a significant or persistent issue which requires a fault job to be raised, otherwise the difference is monitored to check that it is resolved. I reviewed examples of HHR clock synchronisation events and found that field services jobs were raised as required.

Bluecurrent confirmed that no clock synchronisation events outside allowable thresholds occurred during the audit period. EDMI recorded a time difference of 61-62 seconds for category 2 ICP 1000600536PC2DA from September 2023 which was resolved by January 2024.

The Bluecurrent agent audit recorded that ICP 0397869886LC470 did not have data collected within the maximum interrogation cycle. I confirmed that the meter was changed in June 2023 and data is now being consistently received.

Generation data collected by TODD

The Stark system retrieves meter information from the generation meters every half hour. The frequency of interrogation ensures that the meter is interrogated more than once during each interrogation cycle.

TODD synchronises their server every minute against an internet time source. During each interrogation, the data logger internal clock is compared with the data collection system clock, and any errors less than or equal to 300 seconds are adjusted automatically.

Because data is retrieved every 30 minutes, large time differences are unlikely to occur. If time errors over 300 seconds occur, TODD determines whether a correction is required after assessing materiality and arranges for the MEP to correct the clock.

The generation team monitors metering data in real time and notifies the reconciliation team if they identify any issues, and EMS validates meter event and clock synchronisation events as part of their own data validation. Compliance is recorded in the EMS agent audit report. EMS confirmed that there have been no generation clock synchronisation events outside allowable thresholds during the audit period.

WISE

AMI MEPs provide information on clock synchronisation events via email, which are reviewed by WISE to determine whether any action is required. I reviewed examples of recent clock synchronisation events and confirmed that no action was required.

HNET

The agents and MEPs provide information on clock synchronisation events via email, which are reviewed by HNET to determine whether any action is required. I viewed 16 examples of notified meter clock synchronisation events from the AMI MEP and found the clocks were synchronised and no estimations were required. Bluecurrent and EDMI confirmed that no clock synchronisation events outside allowable thresholds occurred during the audit period.

TODD manages the review of clock synchronisation events for HNET C&I HHR ICPs where Bluecurrent and EDMI advise that such an event has occurred. No clock synchronisation errors outside allowable thresholds occurred during the audit period.

Audit outcome

Compliant

6.6. Derivation of meter readings (Clauses 3(1), 3(2) and 5 Schedule 15.2)

Code reference

Clauses 3(1), 3(2) and 5 Schedule 15.2

Code related audit information

All meter readings must in accordance with the participants certified processes and procedures and using its certified facilities be sourced directly from raw meter data and, if appropriate, be derived and calculated from financial records.

All validated meter readings must be derived from meter readings.

A meter reading provided by a consumer may be used as a validated meter reading only if another set of validated meter readings not provided by the consumer are used during the validation process.

During the manual interrogation of each NHH metering installation the reconciliation participant must:

- *a) obtain the meter register,*
- *b) ensure seals are present and intact,*
- *c) check for phase failure (if supported by the meter),*
- *d) check for signs of tampering and damage,*
- *e) check for electrically unsafe situations.*

If the relevant parts of the metering installation are visible and it is safe to do so.

Audit observation

The data collection process was examined. Processes to provide meter condition information were reviewed as part of the Wells and MRS agent audits. Nova's processes to manage meter condition information and processes for customer and photo reads were reviewed.

Audit commentary

TODD

Derivation of readings

NHH AMI meter readings are taken from the access services interface by the MEP, and manual readings are taken from the meter by Wells and MRS. I traced reads for a sample of readings for 15 manually read ICPs from the source files to Orion. All were recorded and labelled correctly.

Read validation

During manual interrogation, the meter register value is collected and entered into a hand-held device by MRS and Wells. Validation occurs as part of the read input process.

MRS and Wells monitor meter condition as required by schedule 15.2 and provide information on meter condition along with the daily reads. MRS emails a weekly list of ICPs with meter condition issues to the smart metering team each Monday, and Wells provides meter condition information with their read files.

The MRS lists are reviewed by the billing team, and exceptions that require investigation or action are passed to the metering team. I reviewed a diverse sample of 29 meter condition events of different types provided by MRS and found:

- service orders had been raised and completed for five events where there were potentially stopped, faulty or damaged meters,
- service orders had been raised but not yet completed for nine events where the meter was potentially stopped, faulty or damaged; I saw evidence that TODD was following up jobs which had not been completed,
- service orders were not raised for 11 events where TODD found no action was required because the ICP was no longer supplied by TODD, they were already aware the meter was removed, or the screen was blank because the ICP was disconnected, and
- no service orders were raised for ICP 0000154720TR7F1 which had one broken glass/meter damaged and three meter stopped/faulty events, as it was already under investigation as a potential stopped meter; TODD intends to investigate this ICP further.

The Wells meter notes are imported into Orion and were used to create Orion activities which TODD could report on and review, but Orion activities is no longer used. SalesForce SFI is now used to manage notes and tasks associated with ICPs. Wells do not provide weekly or monthly reports of meter condition events to TODD, but will provide this information on request. TODD is investigating how they can recreate the process to manage meter condition notes in SalesForce SFI and or use regular reporting of meter condition events from Wells. I requested information on meter events which had occurred during the audit period from Wells and they advised that no recent events had occurred.

Meter condition issues are also identified through TODD's meter read validation process or customer enquiries.

Customer and photo readings

MRS and Wells provide customer readings in the notes field and record a no read. A system estimate is generated for billing, and forward estimate is created for reconciliation.

Customers may provide readings through Nova's app, a web portal form which generates an email to the meter reading inbox, or by phone. Reads loaded into the app are transferred directly into Orion and validated. Reads received by phone or the emailed form from the web portal are loaded manually into Orion by TODD staff. In all cases a customer read type is applied. I checked a sample of 12 customer supplied readings to confirm the process.

All NHH readings, including customer readings are validated for reasonableness and accuracy according to the NHH read validation process discussed in **section 9.5**. As part of the daily export of data to EnergyMarket, customer reads are checked to determine whether there are two actual readings which are at least 30 days apart for the meter register. If yes, the customer read is exported to EnergyMarket as a customer read for use in reconciliation calculations. If not, the read is excluded from the export.

TODD are in the process of automating the loading of customer reads, and this automated process is expected to include a validation step to ensure the read is compared to two actual reads at least 30 days apart.

WISE

All "active" ICPs have AMI or HHR metering, and meter readings are received from the MEPs. WISE does not use customer or photo readings.

HNET

Derivation of readings

NHH AMI meter readings are taken from the access services interface by the MEP, and manual readings are taken from the meter by Wells. I traced a diverse sample of reads for ten manually read NHH ICPs from Wells' source files to IPBMS. All the reads in IPBMS matched the source files and were correctly labelled.

Read validation

During manual interrogation, the meter register value is collected and entered into a hand-held device by Wells. Validation occurs as part of the read input process.

Wells monitor meter condition as required by schedule 15.2 and provide information on meter condition along with the daily reads and in a monthly summary. These files are reviewed and actioned as they are received, and no recent examples of meter condition events were identified.

Customer readings

HNET allows customers to provide readings by completing a form and attaching a photo. Customer readings received are entered into the system as estimates, which are treated as estimated readings by the switching process and ignored by the historic estimate process. If a customer reading indicates a potential reading discrepancy, a check reading will be requested.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.6 With: 5 Schedule 15.2 From: 1-Apr-23 To: 31-May-24	**TODD** Wells meter condition events are not currently reviewed. Potential impact: Low Actual impact: Low Audit history: None Controls: Weak Breach risk rating: 3

Audit risk rating	Rationale for audit risk rating
Low	The controls are weak, because Wells meter condition events are not reviewed by TODD. There are other processes in place to identify meter condition issues and MRS events are reviewed. TODD is investigating how to best obtain and review Wells meter condition information. The impact is low, because Wells advised there were no recent meter condition events for TODD ICPs.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. TODD is engaging with Wells to reestablish the delivery of the meter condition reports so appropriate actions can be taken to resolve issues.	Q3 2024	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD: As above	Q3 2024	

6.7. NHH meter reading application (Clause 6 Schedule 15.2)

Code reference

Clause 6 Schedule 15.2

Code related audit information

For NHH switch event meter reads, for the gaining trader the reading applies from 0000 hours on the day of the relevant event date and for the losing trader at 2400 hours at the end of the day before the relevant event date.

In all other cases, All NHH readings apply from 0000hrs on the day after the last meter interrogation up to and including 2400hrs on the day of the meter interrogation.

Audit observation

The process of the application of meter readings was examined. The event detail reports were examined to identify ICPs which had undergone upgrades or downgrades, and the upgrade and downgrade process was reviewed.

Audit commentary

NHH readings apply from 0000hrs on the day after the last meter interrogation up to and including 2400hrs on the day of the meter interrogation except in the case of a switch event meter reading which applies to the end of the day prior to the event date for the losing trader and the start of the event date for the gaining trader as required by this clause.

All AMI systems have a clock synchronisation function, which ensures correct time stamping. Manual readings taken by MRS and Wells are applied correctly.

TODD

NHH reading application

Application of reads was reviewed as part of the historic estimate checks in **section 12.11** and found to be compliant.

Switching file content

The content of CS and RR files was examined in **section 4** and found to be accurate apart from ICP 0000001515UNDA1 CS-4813830 6 June 2023 should have switched out on actual reads 42214/27150 which are the reads for 5 June 2023 but switched out on actual reads 42215/27152 which are the reads for 6 June 2023. The impact is 3 kWh.

Upgrades and downgrades

If a meter has category 1 or 2, submission type upgrades and downgrades are not normally aligned with a physical meter change. The submission type and profile are changed effective from midnight, and ICP days and submission information are reported in line with the registry information for each day.

If a meter is changing from category 1-2 to 3-5 or vice versa, the submission type change is aligned with the physical meter change.

- Where a downgrade from HHR to NHH metering occurs, HHR volumes are expected to be submitted up to the HHR meter removal date and NHH volumes are submitted from the NHH meter installation date, which is usually the same as the HHR meter removal date. ICP days up to the HHR meter removal date are reported as HHR, and ICP days after that are reported as NHH.
- Where an upgrade from NHH to HHR metering occurs, the NHH closing read is recorded on the NHH meter removal date and volumes up to the closing read are submitted as NHH. HHR submission begins from the HHR meter installation date, which is usually the same as the NHH meter removal date. ICP days up to the NHH meter removal date are reported as NHH, and ICP days after that are reported as HHR.

I checked three examples of upgrades and downgrades and found two were not processed correctly:

- BOPE meter category 2 ICP 0000052655HB79C had its meter physically changed on 16 January 2024; the closing NHH meter reading was entered on 16 January 2024 and the HHR consumption started from 17 January 2024, but the HHR interval data between the HHR meter installation on 16 January 2024 and 11.59pm on 16 January 2024 was omitted from submission, and
- BOPE meter category 2 ICP 0000831042HBD34 had its meter physically changed on 2 August 2023; the closing NHH meter reading was entered on 2 August 2023 and the HHR consumption started from 3 August 2023, but the HHR interval data between the HHR meter installation on 2 August 2023 and 11.59pm on 2 August 2023 was omitted from submission.

The issues occurred during a period before the reconciliation team took over completing profile changes. They are able to ensure that HHR interval consumption relating to the day of the meter change is captured in Stark and included in submissions. There was previously some confusion between the billing type and settlement type which resulted in some issues. Compliance is recorded in this section because the current process to complete upgrades and downgrades is compliant, and the missing submission data is recorded as non-compliance in **sections 12.2** and **12.7**.

I rechecked profile change issues identified during the previous audit and found that submission data was correct.

WISE

NHH reading application

Application of reads was reviewed as part of the historic estimate checks in **section 12.11** and found to be compliant.

Switching file content

The content of CS and RR files was examined in **section 4** and found to be accurate apart from four CS files containing incorrect readings[17], because the same final readings were entered into PEBS against two channels. The readings were corrected through the RR process or the switches were withdrawn.

Upgrades and downgrades

WISE only supplies NHH ICPs and no ICP upgrades or downgrades occurred.

HNET

NHH reading application

Application of reads was reviewed as part of the historic estimate checks in **section 12.11** and found to be compliant.

Switching file content

The content of CS and RR files was examined in **section 4** and found to be accurate.

Upgrades and downgrades

No ICP upgrades or downgrades were identified on the event detail report.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.7 With: 6 Schedule 15.2	**TODD** ICP 0000001515UNDA1 CS-4813830 6 June 2023 should have switched out on actual reads 42214/27150 which are the reads for 5 June 2023 but switched out on actual reads 42215/27152 which are the reads for 6 June 2023. The impact is 3 kWh. Profile changes for ICPs 0000052655HB79C and 0000831042HBD34 were processed incorrectly resulting in HHR consumption on the day of the meter change being omitted from submission. **WISE** Four CS files contained incorrect readings, because the same final readings were entered into PEBS against two channels. The readings were corrected through the RR process, or the switches were withdrawn. Potential impact: Low Actual impact: Low Audit history: None

[17] 0000020455CPAFE CS-4749772 20 April 2023, 0000481005HBE9C CS-5298751 7 November 2023, 0001595081CN838 CS-4836472 23 June 2023 and 0036882000WRD21 CS-5084932 3 October 2023.

From: 20-Apr-23 To: 7-Nov-23	Controls: Moderate Breach risk rating: 2

Audit risk rating	Rationale for audit risk rating
Low	The controls are moderate. A relatively small proportion of switching files contained incorrect content, and the reconciliation team is now responsible for profile changes to ensure that they are processed accurately. The audit risk rating is assessed to be low overall based on the proportion of files with incorrect information, and the kWh differences identified.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. • ICP 0000001515UNDA1 see section 4.16 • Profile changes see section 6.1 **WISE:** Non-Compliance accepted. See section 4.10	Ongoing	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD & WISE: As above	Ongoing	

6.8. Interrogate meters once (Clause 7(1) and (2) Schedule 15.2)

Code reference

Clause 7(1) and (2) Schedule 15.2

Code related audit information

Each reconciliation participant must ensure that a validated meter reading is obtained in respect of every meter register for every non half hour metered ICP for which the participant is responsible, at least once during the period of supply to the ICP by the reconciliation participant and used to create volume information.

This may be a validated meter reading at the time the ICP is switched to, or from, the reconciliation participant.

If exceptional circumstances prevent a reconciliation participant from obtaining the validated meter reading, the reconciliation participant is not required to comply with clause 7(1).

Audit observation

The process to manage missed reads and reporting on ICPs unread during the period of supply was examined.

Audit commentary

A validated meter reading must be obtained in respect of every meter register for every NHH metered ICP for which the participant is responsible, at least once during the period of supply to the ICP by the reconciliation participant, unless exceptional circumstances prevent this from occurring. This may be a validated meter reading at the time the ICP is switched to, or from, the reconciliation participant.

The NHH meter reading frequency guidelines published by the Electricity Authority define exceptional circumstances as meaning circumstances in which access to the relevant meter is not achieved despite the reconciliation participant's best endeavours. Best endeavours is defined as: where a reconciliation participant failed to interrogate an ICP as a result of access issues, the reconciliation participant had made a minimum of three attempts to contact the customer, by using at least two methods of communication.

TODD

Manually read ICPs

NHH commercial and industrial ICPs managed by account managers are referred to their account manager where readings cannot be obtained. Manually read mass market ICPs follow the process below:

- if the property can be located, the meter reader will leave a card in the customer's letterbox explaining that the meter reader could not gain access and asking the customer to contact TODD to resolve the issue and provide a customer reading,
- after 90 days without a reading an automated email is sent to the customer asking for a customer reading or for a special reading to be provided, and
- after 120 days without a reading the billing team reviews the ICP, and a consecutive estimate service request is created in SalesForce; they determine the reasons a read has not been obtained and attempt to work with the customer to resolve the issue preventing readings or upgrade the meter to AMI (any actions are recorded against the service request) and if the ICP is vacant, TODD attempts to identify the property owner or landlord and arrange a reading.

Reports are generated of all ICPs with consecutive estimate service orders which are tracked and prioritised. The proportion of ICPs affected are monitored.

Remotely read AMI ICPs

If no AMI readings are received for 30 days there is an automated process which moves ICPs to a Wells or MRS meter reading route depending on the region. A daily non-communicating meter report is received from Orion and the MEPs also provide weekly reports of non-communicating meters. The billing team reviews the issues to check whether the ICPs are being estimated correctly, and if there are any issues that they can resolve to allow reads to be imported, such as correcting meter numbers. IHUB is TODD's preferred MEP and they are working through a historic list of meters with communication faults before TODD begins raising service orders for new meters.

Read attainment during the period of supply

A report of 67 ICPs not read during the period of supply was provided for the period April 2023 to March 2024. Of these, 43 (64.2%) were supplied for less than 50 days. I reviewed the ten ICPs with the longest periods of supply (123 to 189 days) and found:

- six ICPs were unread due to access issues,
- one ICP was unread due to its meter being removed and was later disconnected,
- one ICP had a blank screen because it was disconnected,
- one ICP had the forced complete no read code applied, and

- ICP 0881381914LCE21 received an actual reading, but it was made a misread because it was lower than the switch in read and the ICP switched out before a second actual reading could be obtained to support a read renegotiation.

For ICP 0881381914LCE21 a reading was obtained but did not pass validation. For the other nine ICPs exceptional circumstances existed because the accounts were vacant and there was no customer to work with, or the ICPs were disconnected and could not physically be read.

WISE

ICPs which have estimated readings are investigated weekly to determine why no readings have been loaded and corrective action is taken, such as correcting meter information or following up with the MEP. A fault is raised with the MEP after ten days if the customer has not confirmed there is a genuine reason that the meter is not communicating, such as the mains switch being off.

All ICPs had at least one actual reading during the period of supply where the period of supply ended between April 2023 and March 2024.

HNET

HNET checks monthly for any ICPs that have not been read within 60 days of their start date, or have had not received an actual reading for 200 days or more.

The ICPs are passed to the switching team, who investigate to determine why no readings have been received. This may include checking Wells notes for manually read ICPs, checking with the MEP for AMI meters, and discussing read attainment and a possible meter replacement with the customer. It is possible to upgrade a manually read meter to AMI, HNET will arrange this with the MEP and customer. HNET staff are aware of the requirement to attempt to resolve the issue with the customer by contacting them at least three times using two methods of communication.

A report of seven ICPs not read during the period of supply was provided for the period April 2023 to April 2024. Of these, six (75%) were supplied for less than 50 days. I reviewed the five ICPs with the longest periods of supply (19 to 106 days) and found:

- one ICP had an actual reconnection read, and was listed in error, and
- the other ICPs met the best endeavours requirement or there were exceptional circumstances which prevented the meters from being read.

Audit outcome

Compliant

6.9. NHH meters interrogated annually (Clause 8(1) and (2) Schedule 15.2)

Code reference

Clause 8(1) and (2) Schedule 15.2

Code related audit information

At least once every 12 months, each reconciliation participant must obtain a validated meter reading for every meter register for non-half hour metered ICPs, at which the reconciliation participant trades continuously for each 12-month period.

If exceptional circumstances prevent a reconciliation participant from obtaining the validated meter reading, the reconciliation participant is not required to comply with clause 8(1).

Audit observation

The meter reading process was examined. Monthly reports were provided and reviewed to determine whether they met the requirements of clauses 8 and 9 of schedule 15.2.

A sample of ICPs not read in the previous 12 months were reviewed to determine whether reasonable endeavours were used to attain reads, and if exceptional circumstances existed.

Audit commentary

As discussed in **section 6.8**, there are processes in place monitor read attainment, and attempt to resolve issues preventing read attainment.

TODD

The monthly meter reading reports provided were reviewed.

Month	Total NSPs where ICPs were supplied > 12 months	NSPs <100% read	ICPs unread for 12 months	Overall percentage read
Sep-23	303	41	65	99.90%
Oct-23	303	44	67	99.90%
Nov-23	304	48	72	99.89%
Dec-23	307	49	78	99.88%
Jan-24	309	43	66	99.90%
Feb-24	310	38	59	99.91%

TODD provided a list of ICPs unread for 12 months as of 29 February 2024. I reviewed ten ICPs not read in the previous 12 months and found they were unread because the meter was unable to access or locate the meter or premises. For all ten ICPs TODD had met the best endeavours requirements, or exceptional circumstances existed.

TODD provides monthly reports on meter reading frequency to the Electricity Authority. I reviewed the reports for September 2023 to February 2024 and confirmed that the content of the reports met the requirements of clauses 8 and 9 of schedule 15.2 and they were submitted on time.

WISE

The monthly meter reading reports provided were reviewed.

Month	Total NSPs where ICPs were supplied > 12 months	NSPs <100% read	ICPs unread for 12 months	Overall percentage read
Sep-23	66	-	-	100.00%
Oct-23	69	-	-	100.00%
Nov-23	70	-	-	100.00%
Dec-23	72	-	-	100.00%

Month	Total NSPs where ICPs were supplied > 12 months	NSPs <100% read	ICPs unread for 12 months	Overall percentage read
Jan-24	72	-	-	100.00%
Feb-24	72	-	-	100.00%
Mar-24	72	-	-	100.00%

All ICPs had an actual reading within 12 months for the sample of months reviewed.

WISE provides monthly reports on meter reading frequency to the Electricity Authority. I reviewed the reports for September 2023 to February 2024 and confirmed that the content of the reports met the requirements of clauses 8 and 9 of schedule 15.2 and they were submitted on time.

HNET

The monthly meter reading reports provided were reviewed.

Month	Total NSPs where ICPs were supplied > 12 months	NSPs <100% read	ICPs unread for 12 months	Overall percentage read
Nov-23	132	-	-	100.00%
Jan-24	134	-	-	100.00%
Feb-24	134	-	-	100.00%

All ICPs had an actual reading within 12 months for the sample of months reviewed.

HNET provides monthly reports on meter reading frequency to the Electricity Authority. I reviewed the reports for August 2023 to January 2024 were provided and I found the reports were in the required format and were submitted on time.

Audit outcome

Compliant

6.10. NHH meters 90% read rate (Clause 9(1) and (2) Schedule 15.2)

Code reference

Clause 9(1) and (2) Schedule 15.2

Code related audit information

In relation to each NSP, each reconciliation participant must ensure that for each NHH ICP at which the reconciliation participant trades continuously for each four months, for which consumption information is required to be reported into the reconciliation process. A validated meter reading is obtained at least once every four months for 90% of the non-half hour meters.

A report is to be sent to the market administrator providing the percentage, in relation to each NSP, for which consumption information has been collected no later than 20 business days after the end of each month.

If exceptional circumstances prevent a reconciliation participant from obtaining the validated meter reading, the reconciliation participant is not required to comply with clause 9(1).

Audit observation

The meter reading process was examined. A sample of monthly reports were reviewed to determine whether they met the requirements of clauses 8 and 9 of schedule 15.2.

A sample of ICPs not read in the previous four months at NSPs where less than 90% of ICPs were read were reviewed to determine whether exceptional circumstances existed and if Nova had used their best endeavours to obtain readings.

Audit commentary

As discussed in **section 6.8**, there are processes in place monitor read attainment, and attempt to resolve issues preventing read attainment.

TODD

The monthly meter reading reports provided were reviewed.

Month	Total NSPs where ICPs were supplied > 4 months	NSPs <90% read	ICPs unread for 4 months	Overall percentage read
Sep-23	315	3	336	99.52%
Oct-23	317	4	313	99.55%
Nov-23	320	7	317	99.54%
Dec-23	320	7	297	99.57%
Jan-24	321	5	291	99.58%
Feb-24	324	5	278	99.60%

I checked the NSPs where 90% read attainment was not achieved for February 2024 and found they each had six or fewer ICPs connected. I reviewed the unread ICPs and found they were unread because the meter was unable to access or locate the meter or premises, or there were non-communicating AMI meters. For all five ICPs TODD had met the best endeavours requirements, or exceptional circumstances existed.

WISE

The monthly meter reading reports provided were reviewed.

Month	Total NSPs where ICPs were supplied > 4 months	NSPs <90% read	ICPs unread for 4 months	Overall percentage read
Sep-23	76	-	1	99.98%
Oct-23	76	-	2	99.96%
Nov-23	78	-	-	100%
Dec-23	82	-	-	100%

Month	Total NSPs where ICPs were supplied > 4 months	NSPs <90% read	ICPs unread for 4 months	Overall percentage read
Jan-24	82	-	-	100%
Feb-24	84	-	-	100%
Mar-24	84	-	-	100%

HNET

The monthly meter reading reports provided were reviewed.

Month	Total NSPs where ICPs were supplied > 4 months	NSPs <90% read	ICPs unread for 4 months	Overall percentage read
May-23	139	2	14	99.81%
Jun-23	139	3	12	99.84%
Jul-23	138	2	14	99.82%
Aug-23	138	3	15	99.81%
Sep-23	137	2	13	99.84%
Oct-23	137	3	9	99.89%

I checked the NSPs where 90% read attainment was not achieved for October 2023 and found they each had nine or fewer ICPs connected. The ICPs were unread due to meter communication or access issues, and HNET had met the best endeavours requirements.

Audit outcome

Compliant

6.11. NHH meter interrogation log (Clause 10 Schedule 15.2)

Code reference

Clause 10 Schedule 15.2

Code related audit information

The following information must be logged as the result of each interrogation of the NHH metering:

10(a) - the means to establish the identity of the individual meter reader,

10(b) - the ICP identifier of the ICP, and the meter and register identification,

10(c) - the method being used for the interrogation and the device ID of equipment being used for interrogation of the meter,

10(d) - the date and time of the meter interrogation.

Audit observation

TODD

NHH data is collected by:

- MRS and Wells for manually read meters, and
- ARC, IntelliHUB, FCLM, Nova and Bluecurrent for AMI meters.

The data interrogation log requirements were reviewed as part of their agent and MEP audits.

WISE

NHH data is provided by MEPs. The data interrogation log requirements were reviewed as part of their MEP audits.

HNET

NHH data is provided by MEPs and Wells. The data interrogation log requirements were reviewed as part of their MEP and agent audits.

Audit commentary

Compliance with this clause has been demonstrated by Nova's agents and MEPs as part of their own audits.

Audit outcome

Compliant

6.12. HHR data collection (Clause 11(1) Schedule 15.2)

Code reference

Clause 11(1) Schedule 15.2

Code related audit information

Raw meter data from all electronically interrogated metering installations must be obtained via the services access interface.

This may be carried out by a portable device or remotely.

Audit observation

TODD

HHR data is collected by Bluecurrent and EDMI as agents and MEPs. HHR interrogation data requirements were reviewed as part of their agent and MEP audits.

TODD uses Stark to retrieve HHR data from the generation meters. The data collection process was reviewed.

EMS reports generation data to the reconciliation manager as TODD's agent. Their processes for HHR data collection were reviewed as part of their agent audit.

WISE

Review of a registry list for the audit period confirmed that WISE has not supplied any ICPs with submission type HHR.

HNET

HNET supplies four HHR ICPs with meter installation category three, four or five. Bluecurrent and EDMI provide the data and TODD conducts submission for these ICPs.

Audit commentary

Compliance with this clause has been demonstrated by Bluecurrent, EDMI, EMS, and MEPs as part of their agent and MEP audits.

TODD interrogates generation station and customer meters using Stark, and data is obtained via the services access interface.

Audit outcome

Compliant

6.13. HHR interrogation data requirement (Clause 11(2) Schedule 15.2)

Code reference

Clause 11(2) Schedule 15.2

Code related audit information

The following information is collected during each interrogation:

> *11(2)(a) - the unique identifier of the data storage device,*
>
> *11(2)(b) - the time from the data storage device at the commencement of the download unless the time is within specification and the interrogation log automatically records the time of interrogation,*
>
> *11(2)(c) - the metering information, which represents the quantity of electricity conveyed at the point of connection, including the date and time stamp or index marker for each half hour period. This may be limited to the metering information accumulated since the last interrogation,*
>
> *11(2)(d) - the event log, which may be limited to the events information accumulated since the last interrogation,*
>
> *11(2)(e) - an interrogation log generated by the interrogation software to record details of all interrogations.*

The interrogation log must be examined by the reconciliation participant responsible for collecting the data and appropriate action must be taken if problems are apparent or an automated software function flags exceptions.

Audit observation

TODD

HHR data is collected by Bluecurrent and EDMI as agents and MEPs. HHR interrogation data requirements were reviewed as part of their agent and MEP audits.

TODD uses Stark to retrieve HHR data from generation meters. The interrogation process was discussed, and the interrogation data was viewed.

EMS reports generation data to the reconciliation manager as TODD's agent. HHR interrogation data was reviewed as part of their agent audit.

WISE

Review of a registry list for the audit period confirmed that WISE has not supplied any ICPs with submission type HHR.

HNET

HNET supplies four HHR ICPs with meter installation category three, four or five. Bluecurrent and EDMI provides the data and TODD conducts submission for these ICPs.

Audit commentary

Compliance with this clause has been demonstrated by Bluecurrent, EDMI, EMS and MEPs as part of their agent and MEP audits.

The following information is collected by Stark during each half hourly interrogation of HHR metering:

- the unique identifier (device ID) of the meter or data logger,
- the connection time, disconnection time and recorder time,
- the half-hour metering information for each trading period,
- event log, and
- interrogation log.

Audit outcome

Compliant

6.14. HHR interrogation log requirements (Clause 11(3) Schedule 15.2)

Code reference

Clause 11(3) Schedule 15.2

Code related audit information

The interrogation log forms part of the interrogation audit trail and, as a minimum, must contain the following information:

11(3)(a)- the date of interrogation,

11(3)(b)- the time of commencement of interrogation,

11(3)(c)- the operator identification (if available),

11(3)(d)- the unique identifier of the meter or data storage device,

11(3)(e)- the clock errors outside the range specified in Table 1 of clause 2,

11(3)(f)- the method of interrogation,

11(3)(g)- the identifier of the reading device used for interrogation (if applicable).

Audit observation

TODD

HHR data is collected by Bluecurrent and EDMI as agents, and MEPs. HHR interrogation log requirements were reviewed as part of their agent and MEP audits.

TODD uses Stark to retrieve HHR data from the generation meters. The interrogation process was discussed, and the interrogation logs were viewed.

EMS reports generation data to the reconciliation manager as TODD's agent. HHR interrogation logs were reviewed as part of their agent audit.

WISE

Review of a registry list for the audit period confirmed that WISE has not supplied any ICPs with submission type HHR.

HNET

HNET supplies four HHR ICPs with meter installation category three, four or five. Bluecurrent and EDMI provides the data and TODD conducts submission for these ICPs.

Audit commentary

Compliance with this clause has been demonstrated by Bluecurrent, EDMI, EMS and MEPs as part of their agent and MEP audits.

An interrogation log is available in Stark and was viewed during the audit. The log contains the following information:

- date,
- time,
- operator ID,
- data logger ID (always the same),
- clock errors, and
- interrogation method (always the same).

Audit outcome

Compliant

7. STORING RAW METER DATA

7.1. Trading period duration (Clause 13 Schedule 15.2)

Code reference

Clause 13 Schedule 15.2

Code related audit information

The trading period duration, normally 30 minutes, must be within ±0.1% (±2 seconds).

Audit observation

TODD

HHR data is collected by Bluecurrent, EDMI and EMS as agents and MEPs. Trading period duration was reviewed as part of their agent and MEP audits.

TODD uses Stark to retrieve HHR data from the generation meters every half hour. Evidence of trading period duration checks was reviewed.

WISE

Review of a registry list for the audit period confirmed that WISE has not supplied any ICPs with submission type HHR.

HNET

HNET supplies 12 HHR settled ICPs. Bluecurrent and EDMI provide the data and TODD conducts submission for these ICPs.

Audit commentary

Compliance with this clause has been demonstrated by EMS, Bluecurrent, EDMI and MEPs as part of their agent and MEP audits.

TODD

EDMI recorded a time difference of 61-62 seconds for category 2 ICP 1000600536PC2DA from September 2023 which was resolved by January 2024.

Stark's logs record an event if the number of seconds recorded does not match the expected number for the half hour. Clock synchronisation is discussed further in **section 6.5**.

WISE

No clock differences outside allowable thresholds were identified.

HNET

No clock differences outside allowable thresholds were identified.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 7.1 With: 13 Schedule 15.2 From: 01-Sep-23 To: 31-Dec-23	**TODD** EDMI recorded a time difference of 61-62 seconds for category 2 ICP 1000600536PC2DA from September 2023 which was resolved by January 2024. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	There are strong controls because the issue was identified and resolved. The impact is low because trading period duration had a of 51-52 seconds more than the allowable difference.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. Issue was identified and actioned accordingly.	June 2024	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD: TODD will continue to monitor issues to ensure submissions are accurate.	June 2024	

7.2. Archiving and storage of raw meter data (Clause 18 Schedule 15.2)

Code reference

Clause 18 Schedule 15.2

Code related audit information

A reconciliation participant who is responsible for interrogating a metering installation must archive all raw meter data and any changes to the raw meter data for at least 48 months, in accordance with clause 8(6) of Schedule 10.6.

Procedures must be in place to ensure that raw meter data cannot be accessed by unauthorised personnel.

Meter readings cannot be modified without an audit trail being created.

Audit observation

Processes to archive and store raw meter data were reviewed. Raw meter data from at least 48 months prior was reviewed to ensure that it is retained.

Nova's agents retain a copy of the raw meter data, and their compliance with the archiving and storage requirements were reviewed as part of their agent audits. Nova's own audit trails were reviewed in **section 2.4**.

Audit commentary

Compliance with this clause has been demonstrated by Nova's agents and MEPs as part of their agent audits. Access to Nova's systems is restricted using logins and passwords.

TODD

Readings cannot be modified in Orion or Stark without a compliant audit trail being created, and access to readings is restricted through logins and passwords. I confirmed that raw meter reading data is retained for at least 48 months.

Data can be edited in EnergyMarket however as the data is refreshed overnight from Orion, if a user did make an edit to this data, then it would be overwritten. Edits to data are performed in Orion and these are then transferred to EnergyMarket.

I confirmed that raw meter reading data is retained for at least 48 months.

Compliance is recorded in the EMS agent audit report in relation to generation data.

WISE

Readings cannot be modified in PEBS without a compliant audit trail being created, and access to readings is restricted through logins and passwords. I confirmed that raw meter reading data is retained for at least 48 months.

HNET

Readings cannot be modified in IPBMS without a compliant audit trail being created, and access to readings is restricted through logins and passwords. I confirmed that raw meter reading data is retained for at least 48 months.

TODD manages HNET's HHR data and I confirmed that readings cannot be modified without a compliant audit trail being created, and access to readings is restricted through logins and passwords. I confirmed that raw meter reading data is retained for at least 48 months.

Audit outcome

Compliant

7.3. Non-metering information collected/archived (Clause 21(5) Schedule 15.2)

Code reference

Clause 21(5) Schedule 15.2

Code related audit information

All relevant non-metering information, such as external control equipment operation logs, used in the determination of profile data must be collected, and archived in accordance with clause 18.

Audit observation

Processes to record and archive non-metering information were reviewed.

Audit commentary

Nova does not deal with any non-metering information.

Audit outcome

Compliant

8. CREATING AND MANAGING (INCLUDING VALIDATING, ESTIMATING, STORING, CORRECTING AND ARCHIVING) VOLUME INFORMATION

8.1. Correction of NHH meter readings (Clause 19(1) & (1A) Schedule 15.2)

Code reference

Clause 19(1) & (1A) Schedule 15.2

Code related audit information

Code related audit information

If a reconciliation participant detects errors while validating non-half hour meter readings, the reconciliation participant must:

> *19(1)(a) - confirm the original meter reading by carrying out another meter reading.*
>
> *19(1)(b) – replace the original meter reading with the second meter reading (even if the second meter reading is at a different date).*
>
> *19(1A) if a reconciliation participant detects errors while validating non half hour meter readings, but the reconciliation participant cannot confirm the original meter reading or replace it with a meter reading from another interrogation, the reconciliation participant must:*
>
> - *substitute the original meter reading with an estimated reading that is marked as an estimate; and*
> - *subsequently replace the estimated reading in accordance with clause 4(2).*

Audit observation

Processes for the correction of NHH meter readings were reviewed. Corrections to volumes where meter readings match the value recorded by the meter, such as where a multiplier is incorrect, a meter is defective or bridged, or "inactive" consumption is identified were reviewed in **section 2.1**.

Audit commentary

Where errors are detected during validation of non-half hour meter readings a check reading will be performed for manually read meters, or AMI readings for surrounding days will be checked. If an original meter reading cannot be confirmed from review of other actual readings, the reading is invalidated and an estimated reading is used and is appropriately labelled.

TODD

Transposed meter readings are identified through the meter read exceptions, because the affected meter registers will appear to have high or low consumption. The transposed readings are entered against the ICP's meter registers with a read type of misread which will be ignored for billing and reconciliation, and then re-entered against the correct register. An email is sent to the meter reader advising of the issue to prevent recurrence. I reviewed two transposed meter corrections to confirm the process.

WISE

Transposed meter readings are rare because all ICPs have AMI metering and readings are provided by the MEP. No ICPs with transposed meter readings were identified during the audit period.

HNET

Transposed meter readings are rare because most ICPs have AMI metering and readings are provided by the MEP. No ICPs with genuine transposed meter readings were identified during the audit period.

Audit outcome

Compliant

8.2. Correction of HHR metering information (Clause 19(2) Schedule 15.2)

Code reference

Clause 19(2) Schedule 15.2

Code related audit information

If a reconciliation participant detects errors while validating half hour meter readings, the reconciliation participant must correct the meter readings as follows:

19(2)(a) - if the relevant metering installation has a check meter or data storage device, substitute the original meter reading with data from the check meter or data storage device; or

19(2)(b) - if the relevant metering installation does not have a check meter or data storage device, substitute the original meter reading with data from another period provided:

1) *the total of all substituted intervals matches the total consumption recorded on a meter, if available; and*
2) *the reconciliation participant considers the pattern of consumption to be materially similar to the period in error.*

Audit observation

Processes for the correction of HHR meter readings and a sample of corrections were reviewed.

EMS completes corrections to generation data as TODD's agent. Compliance was assessed in their agent audit report.

Audit commentary

Where errors or missing data are detected during validation of half-hour metering information, and check metering data is not available, data from a period with a quantity and profile expected to be similar to the estimated period is used.

TODD

<u>HHR</u>

Data for C&I meters and AMI meters where the network's price category code requires kVar are managed in Stark. Estimates and corrections are calculated and then imported into Stark, and the Stark data is then transferred to EnergyMarket for submission. All corrections are peer reviewed before being entered.

Data for other AMI meters is stored in the AMI table and Orion denotes the ICP as HHR. EnergyMarket receives the meter and profile data from Orion and then retrieves the corresponding interval data from the AMI table. Estimates are created automatically in EnergyMarket based on the same trading period and day for the past six weeks, or the same day for the previous year depending on the profile for the load. If insufficient history is available a zero estimate will be created by EnergyMarket, and it is expected that the ICP will be moved to NHH-RPS for the affected period.

12 examples of HHR corrections were provided, and all removed HHR data after the switch out event date for backdated switches and were accurate. I rechecked ICP 0005238501RN91B which was found to have an incorrectly processed meter change in the last audit, and confirmed the data was corrected.

Generation

Compliance with this clause has been demonstrated by EMS as part of their agent audit. EMS confirmed that no generation corrections have been required during the audit period.

WISE

WISE does not deal with HHR data.

HNET

TODD perform all HHR data corrections for HNET using the same processes as for TODD data. No HHR corrections occurred during the audit period.

Audit outcome

Compliant

8.3. Error and loss compensation arrangements (Clause 19(3) Schedule 15.2)

Code reference

Clause 19(3) Schedule 15.2

Code related audit information

A reconciliation participant may use error compensation and loss compensation as part of the process of determining accurate data. Whichever methodology is used, the reconciliation participant must document the compensation process and comply with audit trail requirements set out in the Code.

Audit observation

Error and loss compensation arrangements were discussed.

Audit commentary

There are currently no error or loss compensation arrangements in place for TODD, HNET or WISE.

Audit outcome

Compliant

8.4. Correction of HHR and NHH raw meter data (Clause 19(4) and (5) Schedule 15.2)

Code reference

Clause 19(4) and (5) Schedule 15.2

Code related audit information

In correcting a meter reading in accordance with clause 19, the raw meter data must not be overwritten. If the raw meter data and the meter readings are the same, an automatic secure backup of the affected data must be made and archived by the processing or data correction application.

If data is corrected or altered, a journal must be generated and archived with the raw meter data file. The journal must contain the following:

19(5)(a)- the date of the correction or alteration,

19(5)(b)- the time of the correction or alteration,

19(5)(c)- the operator identifier for the person within the reconciliation participant who made the correction or alteration,

19(5)(d)- the half-hour metering data or the non-half hour metering data corrected or altered, and the total difference in volume of such corrected or altered data,

19(5)(e)- the technique used to arrive at the corrected data,

19(5)(f)- the reason for the correction or alteration.

Audit observation

Corrections are discussed in **sections 2.1, 8.1** and **8.2**, which confirmed that raw meter data is not overwritten as part of the correction process. Audit trails are discussed in **section 2.4**.

Raw meter data retention for MEPs and agents was reviewed as part of their MEP and agent audits.

EMS completes corrections to generation data as TODD's agent, and compliance was assessed during their agent audit.

Audit commentary

Compliance has been demonstrated by Nova's agents and MEPs as part of their agent and MEP audits.

I viewed compliant journals and supporting information for corrections for TODD, WISE and HNET. Raw data is not changed as part of the corrections process, and access to data is restricted using logins and passwords.

Audit outcome

Compliant

9. ESTIMATING AND VALIDATING VOLUME INFORMATION

9.1. Identification of readings (Clause 3(3) Schedule 15.2)

Code reference

Clause 3(3) Schedule 15.2

Code related audit information

All estimated readings and permanent estimates must be clearly identified as an estimate at source and in any exchange of metering data or volume information between participants.

Audit observation

A sample of reads and volumes were traced from the source files to Nova's systems in **section 2.3**.

Provision of estimated reads to other participants during switching was reviewed in **section 4** and corrections were reviewed in **sections 2.1** and **8.**

Audit commentary

TODD

Readings are clearly identified in Orion, and this was confirmed by reviewing a sample of actual and estimated readings. I found that read types were recorded correctly, and MEP estimates are not used.

When reviewing CS files I found four switch move CS files contained incorrect read types. The issues occurred because the billing team had created an occupier account when the customer moved out which coincided with the switch, or reads after the switch event date were not made misreads through TODD's validation process before the CS was created by Orion. A recommendation is made in **section 4.10** to check whether a switch is in progress before creating an occupier account. The affected switches are:

- 0000000443CP811 CS-5455330 12 February 2024 estimated but should have been actual, because the reading was mislabelled when it was moved to an occupier account,
- ICP 0000037455CP67F CS-5161256 16 October 2023 actual but should have been estimated, because readings after the event date were not made misreads,
- ICP 0000500900CAE05 CS-5441096 12 February 2024 actual but should have been estimated, because readings after the event date were not made misreads, and
- ICP 0900086046PCFFD CS-4908312 7 August 2023 actual but should have been estimated.

WISE

Readings are clearly identified in PEBS, and this was confirmed by reviewing a sample of actual and estimated readings. I found that read types were recorded correctly, and MEP estimates are not used.

HNET

Readings are clearly identified in IPBMS, and this was confirmed by reviewing a sample of actual and estimated readings. I found that read types were recorded correctly, and MEP estimates are not used.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 9.1 With: 3(3) Schedule 15.2 From: 07-Aug-23 To: 12-Feb-24	**TODD** Four switch move CS files had incorrectly recorded switch event read types. Potential impact: Low Actual impact: Low Audit history: Once Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are strong because most reads types are correctly recorded. The issues only affected the CS file content, and occurred where an occupier account was created on the day of the switch or reads after the switch event date were not made misreads. The impact on settlement and participants is low, because the read values were correct. All switch event reads are treated as validated and permanent by the reconciliation process and are used to calculate historic estimate.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. See section 4.10	Ongoing	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD: As above	Ongoing	

9.2. Derivation of volume information (Clause 3(4) Schedule 15.2)

Audit commentary Code reference

Clause 3(4) Schedule 15.2

Code related audit information

Volume information must be directly derived, in accordance with Schedule 15.2, from:

3(4)(a) - validated meter readings,

3(4)(b) - estimated readings,

3(4)(c) - permanent estimates.

Audit observation

A sample of submission data was reviewed in **section 12**, to confirm that volume was based on readings as required.

Audit commentary

Volume information is directly derived from validated meter readings, estimated readings, or permanent estimates.

Audit outcome

Compliant

9.3. Meter data used to derive volume information (Clause 3(5) Schedule 15.2)

Code reference

Clause 3(5) Schedule 15.2

Code related audit information

All meter data that is used to derive volume information must not be rounded or truncated from the stored data from the metering installation.

Audit observation

NHH data is collected by MEPs and agents, and HHR data is collected by agents. A sample of submission data was reviewed in **sections 11** and **12**, to confirm that volume was based on readings as required. I traced a sample of raw data from the MEPs and agents to Nova's systems in **section 2.3**.

EMS reports generation data to the reconciliation manager as TODD's agent. Their processes for HHR data were reviewed as part of their agent audit.

Audit commentary

The MEP or agent retains raw, unrounded data and compliance has been demonstrated as part of the agent and MEP audits.

TODD

NHH AMI data is received with up to three decimal places but is rounded to zero decimal places on import into Orion, and rounded data is transferred from Orion to EnergyMarket. Where NHH AMI data is not provided, meters are read manually by Wells or MRS. Wells and MRS provide readings without decimal places.

HHR data is not rounded or truncated by the agents or MEPs, or on import into TODD's systems.

The EMS processes for generation data are compliant. I viewed data collected by Nova in Stark, and confirmed it is not rounded or truncated.

WISE

NHH Meter readings are not truncated or rounded on import into PEBS.

HNET

If NHH AMI meter readings are recorded with more than two decimal places, they are rounded to two decimal places on import. I saw examples of WASN and IHUB meter readings that were rounded in IPBMS.

Where NHH AMI data is not provided, meters are read manually by Wells, who provide readings without decimal places.

HHR data is not rounded or truncated by the agents or MEPs, or on import into TODD's systems used to produce HNET submissions.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 9.3 With: 3(5) Schedule 15.2 From: 1-Jun-20 To: 31-May-24	**TODD AMI data** AMI readings with decimal places are rounded to zero decimal places on import into Orion, and the rounded readings are used to calculate submission data. **HNET AMI data** AMI readings with decimal places are rounded to two decimal places on import into IPBMS, and the rounded readings are used to calculate submission data. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate because they are not sufficient to ensure that submission information is consistently calculated from unrounded data. WISE data is not rounded. The impact is assessed to be low because the ICP level differences are expected to be very small, and the overall differences are expected to be small because there will be under and overs due to the rounding technique.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance disputed. Issue still exists since last audit. Compliance with this interpretation of this clause would cause non-compliance with Schedule 11.3 clause 5 & 11 and clause 6 (Traders must use same reading) and lead to overall volume inaccuracy in customer bills and submission, whereas using 0dp rounded reads does not introduce this overall volume inaccuracy into the switching process. The registry switching process would need to also accept switch reads containing decimal places in order to not over/under bill customers and over/under report volumes on each switch. **HNET:** Non-Compliance accepted. HNET will implement system changes by Q1 2025 to rectify the cause of the non-compliance.	Ongoing	**TODD:** disputed The auditor agrees that this is a technical non-compliance, and resolving it could create discrepancies and inaccuracies for switching and billing. The impact is very low. **HNET:** identified

Preventative actions taken to ensure no further issues will occur	Completion date	
TODD: As above **HNET:** HNET acknowledges the problem of AMI readings rounded up to calculate submission data. The system will be updated to ensure all decimal places are included in the calculation of AMI readings.	Q1 2025	

9.4. Half hour estimates (Clause 15 Schedule 15.2)

Code reference

Clause 15 Schedule 15.2

Code related audit information

If a reconciliation participant is unable to interrogate an electronically interrogated metering installation before the deadline for providing submission information, the submission to the reconciliation manager must be the reconciliation participant's best estimate of the quantity of electricity that was purchased or sold in each trading period during any applicable consumption period for that metering installation.

The reconciliation participant must use reasonable endeavours to ensure that estimated submission information is within the percentage specified by the Authority.

Audit observation

The HHR estimate process was examined and I checked a sample of HHR estimates for compliance with the requirement to use "reasonable endeavours" to ensure that estimated data is accurate to within 10%.

Audit commentary

TODD

HHR

If TODD has not received actual HHR data prior to the deadline for providing submission information, estimated data is provided.

Data for C&I meters and AMI meters where the network's price category code requires kVar are managed in Stark. ICPs requiring estimates are identified using a query, which cross checks registry information to determine whether the ICP is "active" and supplied by TODD. Estimates are calculated using a stored procedure based on gap filling where readings are available, the average for the same week day and trading period for the last six weeks, or the value for the same trading period and day in the previous year. If there is less than one week of data available to calculate the estimate, a query is run to force zero values to be estimated. There is another stored procedure which allows estimates to be calculated based on an average for the customer's ANZSIC code, and TODD began using this in preference to estimating zeros during the audit. The estimates are peer reviewed and imported into Stark, and the Stark data is then transferred to EnergyMarket for submission.

Data for other AMI meters is stored in the AMI table and Orion denotes the ICP as HHR. EnergyMarket receives the meter and profile data from Orion and then retrieves the corresponding interval data from the AMI table. Estimates are created automatically in EnergyMarket based on the same trading period and day for the past six weeks, or the same day for the previous year depending on the profile for the

load. If insufficient history is available a zero estimate will be created by EnergyMarket, and it is expected that the ICP will be moved to NHH-RPS for the affected period.

TODD maintains a list of ICPs where collection status issues have occurred for each reconciliation period. These are checked through each month prior to submission to ensure that replacement data is imported if it has been received. The spreadsheet is colour coded and comments are added to keep track of ICPs with estimates and whether the estimates need to be replaced.

I checked ten examples of HHR estimates and found that TODD had used reasonable endeavours to calculate them based on a period with a similar quantity and profile using their stored procedures, and that the temporary estimates were later replaced with actual data. I note that prior to the change to estimate based on ANZSIC codes where there is insufficient read history, some ICPs may have had zero estimates which did not reflect their likely consumption.

Generation

Compliance with this clause has been demonstrated by EMS as part of their agent audit. EMS confirmed that no generation estimates have been required during the audit period.

WISE

WISE does not supply any HHR ICPs.

HNET

TODD perform all HHR data corrections for HNET using the same processes as for TODD data. No estimations occurred during the audit period because actual data was available for HNET's HHR ICPs.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 9.4 With: 15 Schedule 15.2 From: 01-Jul-22 To: 01-Dec-22	**TODD** Zero HHR estimates were applied for "active" ICPs with less than one week of history before the process was changed to estimate based on the ANZSIC code during the audit. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are strong because the process was changed to estimate based on ANZSIC code where there is insufficient meter data history to create an estimate. The impact is low because TODD estimates are replaced with actual data and washed up and a small number of ICPs are expected to be affected.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. TODD has updated our process to include using ANSZIC codes for providing HHR estimates on HHR ICPs with active ICPs with no historical data.	June 2024	Cleared
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD: ANSZIC Codes are now included to help provide HHR estimates.	June 2024	

9.5. NHH metering information data validation (Clause 16 Schedule 15.2)

Code reference

Clause 16 Schedule 15.2

Code related audit information

Each validity check of non-half hour meter readings and estimated readings must include the following:

> *16(2)(a) - confirmation that the meter reading or estimated reading relates to the correct ICP, meter, and register,*
>
> *16(2)(b) - checks for invalid dates and times,*
>
> *16(2)(c) - confirmation that the meter reading or estimated reading lies within an acceptable range compared with the expected pattern, previous pattern, or trend,*
>
> *16(2)(d) - confirmation that there is no obvious corruption of the data, including unexpected zero values.*

Audit observation

I reviewed and observed the NHH data validation process, including checking a sample of data validations.

Audit commentary

TODD

NHH data is validated by several processes.

<u>Meter reader validation</u>

MRS and Wells perform a localised validation within their hand-held devices to ensure the reading is within expected high/low parameters. This is described further in the MRS and Wells agent audit reports. MRS and Wells also provide information on meter condition, where it could affect meter accuracy or safety. This is discussed further in **section 6.6**.

Orion validation

Orion validates readings on import. The read file import is scheduled to run automatically at 7.30am and 4.30pm each day. The billing team receives an email confirming whether the file import has been successful. If the file format or field content is unexpected, the upload will fail, and the file will be checked and re-uploaded.

Orion validates readings on import including identifying ICPs where:

- there is not an open ICP-meter-register combination for the reading,
- there is already a reading for the ICP-meter-register-read date combination,
- read-to-read consumption is negative, zero, low or high compared to the previous period,
- read dates are before the billed to date, or in the future,
- the ICP is on a no bill billing cycle, or
- the ICP has more than one account or matching meter.

The previous audit noted that the thresholds for high and low consumption compared to the previous period had not been reviewed since the implementation of the Orion system. There is currently a job in progress to review the thresholds, but it has not been completed.

Exceptions are reviewed on Orion's meter read import exceptions report, and either accepted or rejected and made misreads. Summary reporting on daily meter read exceptions is monitored to identify trends and/or potential issues which may need to be followed up with the meter readers.

Once read exceptions have been processed, billing information is generated, and the billing exceptions report is produced. The billing exceptions report identifies:

- credit and large debit invoices,
- billing periods of less than 20 days or more than 40 days,
- consumption which is more than 300% of the previous invoice,
- ICPs with meters which are missing reads or missing usage transactions, and
- ICPs which have actual readings for master ICPs and estimated reads for child ICPs.

Invoicing is completed overnight for the ICPs where billing exceptions have been cleared, and a sample of invoices are spot checked as part of the daily quality assurance checks. Abnormally high and low invoices are identified using SQL queries and checked to confirm they are correct.

The reconciliation team creates a daily report which shows ICPs with normalised consumption which is negative or more than 20,000 kWh per month, which are forwarded to the Whakatane team for investigation. If readings are found to be inaccurate they will be made misreads and ignored by the reconciliation process.

Vacant and "inactive" consumption

All "inactive" and "vacant" consumption is reported for reconciliation regardless of ICP status, and TODD continues to attempt to obtain readings for "vacant" and "disconnected" ICPs.

Vacant ICPs are identified through Power BI reporting and the "vacant" disconnection process is managed using SalesForce. Three letters are sent to the customer advising that the ICP will be disconnected if they do not sign up. After ensuring compliance with the customer care guidelines and that no applications or switches are in progress, the ICP will be disconnected according to TODD's disconnection policy.

"Inactive" consumption is identified using a Power BI report, and if consumption is confirmed to be genuine the ICP is returned to "active" status for the consumption period. The Power BI report is difficult to review as it contains false positives; it reports any ICP with volumes in a reconciliation period/month where it had "inactive" status for more than one day. This means that ICPs are likely to invalidly appear on the report for any month which falls within a read-to-read period with some

consumption, even if that consumption only occurred while the ICP had "active" status. TODD is working to improve the report so that only genuine consumption while "inactive" will be reported. Where genuine "inactive" consumption is found, TODD corrects the ICP to "active" status in Orion and the registry from the day after the last static reading.

Zero consumption

Zero consumption is identified through the read import validations and the bridged meter report, which is generated daily and shows ICPs with read-to-read periods with no consumption. The report is reviewed weekly, and matched to the previous report so that any notes can be reviewed. The ICPs are checked with the customer to determine whether the zero consumption is valid, and if not a field services job is raised. If the non-zero consumption is confirmed not to be genuine, a correction will be processed to estimate consumption during the faulty or bridged period.

Pre-submission validation

Processes to review reconciliation submission information are discussed in **section 12.3.**

WISE

PEBS validation

All reads received are from AMI meters, from the MEP on field services paperwork, or through the switching process. PEBS validates readings on import and daily emails are sent to operations for review where:

- an open ICP-meter-register combination cannot be found for a reading,
- an ICP's daily usage is below 2 kWh or above 70 kWh; the consumption is checked with the customer, and ICPs which have recently switched in with consumption over 20 kWh are checked to determine whether an RR is required,
- an ICP had consumption after becoming "vacant" or "disconnected"; the ICPs are checked to confirm whether the consumption appears genuine:
    - if it is, WISE contacts the MEP to ask whether the ICP has been reconnected and who requested the reconnection, and the status is updated to "active" for the period with consumption,
    - if the ICP has been reconnected by another trader as part of the switch in process, WISE will follow up with the other trader and request an NT,
    - otherwise, a field service order is raised for the ICP to be disconnected again, and
- customers have a high or low account balance, which is known as the daily credit review.

If a reading is lower than a previous actual reading, PEBS automatically processes a meter rollover. If it is not a genuine rollover, this will create a high consumption exception for investigation.

ICPs which have estimated readings are investigated weekly to determine why no readings have been loaded and corrective action is taken, such as correcting meter information or following up with the MEP. A fault is raised with the MEP after ten days if the customer has not confirmed there is a genuine reason that the meter is not communicating, such as the mains switch being off.

The previous audit noted that not all incoming switch event readings reflect all volume up to 11.59pm on the losing trader's last day of supply where the losing trader has applied an estimated switch event read, or an actual switch event read taken earlier in the day on their last day of supply. In these cases, WISE as a NHH trader cannot raise an RR under clause 6(2) and (3) schedule 11.3 like a HHR trader could. An issue was raised for the Authority's consideration, but no response has been received.

Pre-submission validation

Processes to review reconciliation submission information are discussed in **section 12.3.**

HNET

NHH data is validated by several processes.

Meter reader validation

Wells perform a localised validation within their hand-held devices to ensure the reading is within expected high/low parameters. This is described further in the Wells audit report. Wells also provides information on meter condition, where it could affect meter accuracy or safety. This is discussed further in **section 6.6**.

IPBMS validation

IPBMS validates readings on import and daily emails are sent to operations for review where:

- an open ICP-meter-register combination cannot be found for a reading,
- the number of digits in the reading is inconsistent with the expected value,
- read-to-read consumption is over 3,000 kWh,
- read-to-read consumption is negative, low, or zero, or
- the billed dollar amount falls outside a high or low threshold.

HNET continues to attempt to read ICPs which are "vacant" or "disconnected". A daily email is automatically generated from IPBMS showing any "vacant" or "disconnected" ICPs with consumption while they have "inactive" status. ICPs are checked to confirm whether the consumption appears genuine, and HNET contacts the MEP to ask whether the ICP has been reconnected and who requested the reconnection. If the ICP is reconnected by another trader as part of the switch in process, HNET will follow up with the other trader and request an NT.

Pre-submission validation

Processes to review reconciliation submission information are discussed in **section 12.3.**

Audit outcome

Compliant

9.6. Electronic meter readings and estimated readings (Clause 17 Schedule 15.2)

Code reference

Clause 17 Schedule 15.2

Code related audit information

Each validity check of electronically interrogated meter readings and estimate readings must be at a frequency that will allow a further interrogation of the data storage device before the data is overwritten within the data storage device and before this data can be used for any purpose under the Code.

Each validity check of a meter reading obtained by electronic interrogation, or an estimated reading must include:

17(4)(a) - checks for missing data,

17(4)(b) - checks for invalid dates and times,

17(4)(c) - checks of unexpected zero values,

17(4)(d) - comparison with expected or previous flow patterns,

17(4)(e) - comparisons of meter readings with data on any data storage device registers that are available,

17(4)(f) - a review of the meter and data storage device event log for any event that could have affected the integrity of metering data must be investigated,

17(4)(g) – a review of the relevant metering data where there is an event that could have affected the integrity of the metering data,

If there is an event that could affect the integrity of the metering data (including events reported by MEPs but excluding where the MEP is responsible for investigating and remediating the event) the reconciliation must investigate and remediate any events.

If the event may affect the integrity or operation of the metering installation the reconciliation participant must notify the metering equipment provider.

Audit observation

Review of electronic read validation processes and meter event logs, including checking examples of validations.

Audit commentary

TODD

NHH data

AMI reads are validated in Orion using the same processes described in **section 9.5.**

If no AMI readings are received for 30 days there is an automated process which moves ICPs to a Wells or MRS meter reading route depending on the region. A daily non-communicating meter report is received from Orion and the MEPs also provide weekly reports of non-communicating meters. The billing team reviews the issues to check whether the ICPs are being estimated correctly, and if there are any issues that they can resolve to allow reads to be imported, such as correcting meter numbers. IHUB is TODD's preferred MEP and they are working through a historic list of meters with communication faults before TODD begins raising service orders for new meters.

Meter events received from MEPs are actioned on receipt:

- TODD receives full meter event reports from Bluecurrent; following discussions with Bluecurrent regarding review and action of meter events, Bluecurrent agreed to review the events and provide any that require action to TODD via email,
- TODD receives lists of meter events which require action from IntelliHUB via email, and
- no meter events have been received from FCLM.

I checked a sample of meter events provided by the MEPs and found that the events had been investigated and service orders raised as needed.

HHR data

HHR data is validated including:

- review of high and low consumption at ICP level; HHR commercial and industrial sites are individually reviewed prior to submission, including viewing consumption history charts,
- comparing to the previous month for initial submissions and previous submissions for the same month for revisions; the data is reviewed at ICP level and NSP level, with a focus on negatives, highs, lows, and large variances (exceptions are investigated with field services jobs raised if there are concerns about the accuracy of the information recorded, and HHR data changes are checked against the HHR change tracking spreadsheet to ensure that they are valid), and
- missing data is identified in Stark and EnergyMarket; TODD maintains a list of ICPs where collection status issues have occurred for each reconciliation period which are checked through each month prior to submission to ensure that replacement data is imported if it has been

received (the spreadsheet is colour coded and comments are added to keep track of ICPs with estimates and whether the estimates need to be replaced).

Meter events received from MEPs and agents are actioned on receipt. I checked a sample of meter events provided by the MEPs and found that the events had been investigated and service orders raised as needed. During EDMI's agent audit, ICP 099576180CN5A1 meter 212615969 had Voltage Tolerance Failures/Errors in March 2023. This was not sent to TODD and no action has been taken.

Generation data

The EMS processes for generation data were assessed during their agent audit and confirmed to be compliant.

Stark retrieves meter information from the generation meters every half hour. Check data in Stark records:

- missing data,
- invalid data,
- unexpected zero volumes,
- meter data storage device events, and
- clock synchronisation events.

The reconciliation team does not actively monitor meter events. The Generation team monitors metering data in real time and notifies the reconciliation team if they identify any issues, and EMS validates meter event and clock synchronisation events as part of their own data validation. Compliance is recorded in the EMS agent audit report. TODD's reconciliation team intends to reinstate their own review of meter condition events, once they confirm the meanings of the event type codes.

WISE

Submission type is NHH for all ICPs, and data is validated as described in **section 9.5**.

Meter event reports are received via SFTP from Bluecurrent and WEL Networks, and are loaded into PEBS. PEBS automatically generates a report of any tamper events, which are reviewed in PEBS to determine whether there appears to be a genuine issue. Affected ICPs are checked with the customer, and a field services job is raised if necessary. There is no review or action for other meter event types. I reviewed a sample of meter events and noted that communications loss, power outage and reverse rotation events had not been checked.

IntelliHUB sends any meter events that require action to WISE via email. These are consistently reviewed and actioned, and I reviewed examples to confirm this.

Description	Recommendation	Audited party comment	Remedial action
Review of Bluecurrent and WEL Networks meter events	**WISE** Expand the PEBS validation of meter events to include more event types after discussing the event types reported and expected actions with each MEP.	**WISE** Recommendation accepted. WISE will expand our process to review all logs by September 2024	Identified

HNET

NHH

AMI reads are validated in IPBMS using the same processes described in **section 9.5.**

HNET receives full meter event reports from the MEPs but these are not reviewed. Instead, HNET actions any events which are emailed to them with a specific request for action. Because not all MEPs email all events requiring action, HNET should review the full meter event lists where they are provided.

Description	Recommendation	Audited party comment	Remedial action
Review of meter events	**HNET** Review meter event lists provided by the MEPs to determine whether any action is required.	**HNET** Recommendation accepted. HNET currently reviews all emails received. HNET will investigate if reports are being sent via other channels.	Identified

HHR

TODD perform all HHR data collection, data validation tasks, estimation, event log reviews and submission tasks for HNET using the same processes as for TODD data. No meter events which could affect accuracy were identified during the audit period.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 9.6 With: 17 Schedule 15.2 From: 01-Jun-23 To: 31-May-24	**TODD** During EDMI's agent audit, ICP 1099576180CN5A1 meter 212615969 had a Voltage Tolerance Failure/Error in March 2023. This was not sent to TODD and no action has been taken. **WISE** AMI Meter event logs are not reviewed for all event types. **HNET** AMI Meter event logs are not consistently reviewed. Potential impact: Medium Actual impact: Low Audit history: Twice Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are moderate overall. Most ICPs are supplied by TODD who now have processes to ensure that meter events requiring action are identified, investigated and resolved, but WISE and HNET require improvement to ensure that all events requiring action are consistently identified. The impact is low, as any events identified by the MEP or agent are consistently investigated and resolved according to the MEP or agent's instructions.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance disputed. TODD's understanding is ICP 1099576180CN5A1 is only able to have reads provided through the MEP back office. As a result, Clause 8 Schedule 10.6 rules apply, and the responsibility is the MEPs rather than the retailers. **WISE:** Non-Compliance accepted. WISE has accepted the recommendation of the auditor and will be widening the review process to include all metering events. **HNET:** Non-Compliance accepted. HNET accepts the auditor's recommendation. AMI Meter event logs and time synchronisation reports process will be established to review reporting provided from MEPs and where issues exist immediately raise jobs to replace meters impacted.	Ongoing Q3 2024 Q3 2024	**TODD:** disputed TODD believes that investigating this issue should be the responsibility of the MEP only. **WISE:** identified **HNET:** identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD: TODD is engaging with the MEP for the ICP impacted to confirm read attainment and therefore metering event notification process requirements. **WISE & HNET:** As above	Q3 2024	

10. PROVISION OF METERING INFORMATION TO THE GRID OWNER IN ACCORDANCE WITH SUBPART 4 OF PART 13 (CLAUSE 15.38(1)(F))

10.1. Generators to provide HHR metering information (Clause 13.136)

Code reference

Clause 13.136

Code related audit information

The generator (and/or embedded generator) must provide to the grid owner connected to the local network in which the embedded generator is located, half hour metering information in accordance with clause 13.138 in relation to generating plant that is subject to a dispatch instruction:

- *that injects electricity directly into a local network; or*
- *if the meter configuration is such that the electricity flows into a local network without first passing through a grid injection point or grid exit point metering installation.*

Audit observation

This process is managed by EMS and was assessed as part of their agent audit.

Audit Commentary

Review of the EMS report confirmed that HHR metering information is provided in a compliant manner.

Audit outcome

Compliant

10.2. Unoffered & intermittent generation provision of metering information (Clause 13.137)

Code reference

Clause 13.137

Code related audit information

Using an approved system or by written notice, each generator must give the relevant grid owner half-hour metering information for—

(a)unoffered generation from a generating station with a point of connection to the grid;

(c) electricity supplied from a type B industrial co-generating station with a point of connection to the grid.

If the half-hour metering information is not available, the generator must give the relevant grid owner a reasonable estimate of such data using an approved system or by written notice

Using an approved system or by written notice, each intermittent generator must, in relation to an intermittent generating station with a point of connection to the grid, give the relevant grid owner half-hour metering information for the intermittent generating station.

This clause does not apply to unoffered generation. If the half-hour metering information is not available, the generator must give the relevant grid owner a reasonable estimate of such data using an approved system or by written notice.

Using an approved system or by written notice, each intermittent generator must, in relation to an intermittent generating station with a point of connection to the grid, give the relevant grid owner half-hour metering information for the intermittent generating station. This clause does not apply to

unoffered generation. If the half-hour metering information is not available, the intermittent generator must give the relevant grid owner a reasonable estimate of such data.

Audit observation

This process is managed by EMS and was assessed as part of their agent audit.

Audit Commentary

Review of the EMS report confirmed that HHR metering information is provided in a compliant manner.

Audit outcome

Compliant

10.3. Loss adjustment of HHR metering information (Clause 13.138)

Code reference

Clause 13.138

Code related audit information

Each generator must provide the information required by clauses 13.136, 13.137, and 13.137A—

(a) adjusted for losses (if any) relative to the grid injection point or, for embedded generators the grid exit point, at which it offered the electricity; and

(b) in the manner and form that the relevant grid owner stipulates; and

(c) by 1000 hours on a trading day for each trading period of the previous trading day.

To avoid doubt, each generator must provide the half-hour metering information required under this clause—

(a) in accordance with the requirements of Part 15 for the collection of that generator's volume information; or

(b) from a source and in a manner agreed between the generator and the grid owner.

Audit observation

This process is managed by EMS and was assessed as part of their agent audit.

Audit Commentary

Review of the EMS report confirmed that loss adjustment is managed in a compliant manner.

Any loss adjustment relative to the grid injection point is normally made within the metering installation at the time of installation and commissioning.

Audit outcome

Compliant

10.4. Notification of the provision of HHR metering information (Clause 13.140)

Code reference

Clause 13.140

Code related audit information

If the generator provides half-hourly metering information to a grid owner under clauses 13.136 to 13.138, or 13.138A, it must also, by 0500 hours of that day, advise the relevant grid owner.

Audit observation

This process is managed by EMS and was assessed as part of their agent audit.

Audit commentary

EMS is the agent to the grid owner and conducts this notification. Compliance is confirmed in the EMS audit report.

Audit outcome

Compliant

11. PROVISION OF SUBMISSION INFORMATION FOR RECONCILIATION

11.1. Buying and selling notifications (Clause 15.3)

Code reference

Clause 15.3

Code related audit information

Unless an embedded generator has given a notification in respect of the point of connection under clause 15.3, a trader must notify the reconciliation manager if it is to commence or cease trading electricity at a point of connection using a profile with a profile code other than HHR, RPS, UML, EG1, or PV1 at least five business days before commencing or ceasing trader.

The notification must comply with any procedures or requirements specified by the reconciliation manager.

Audit observation

The registry lists were reviewed for each code to determine whether any profiles requiring trading notifications have been used. I checked whether any breach allegations had been made.

Audit commentary

There have been no breach allegations in relation to trading notifications for any of the codes.

TODD

TODD only uses the HHR, RPS, EG1 and PV1 profiles, and trading notifications are not required.

WISE

WISE only uses the RPS profile, and trading notifications are not required.

HNET

HNET only uses the HHR, RPS and PV1 profiles, and trading notifications are not required.

Audit outcome

Compliant

11.2. Calculation of ICP days (Clause 15.6)

Code reference

Clause 15.6

Code related audit information

Each retailer and direct purchaser (excluding direct consumers) must deliver a report to the reconciliation manager detailing the number of ICP days for each NSP for each submission file of submission information in respect of:

> *15.6(1)(a) - submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period,*
>
> *15.6(1)(b) - revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period.*

The ICP days information must be calculated using the data contained in the retailer or direct purchaser's reconciliation system when it aggregates volume information for ICPs into submission information.

Audit observation

The process for the calculation of ICP days was examined by checking NSPs with a small number of ICPs to confirm the AV110 ICP days calculation was correct and reviewing GR100 ICP days comparison variances. Alleged breaches were reviewed to determine whether any submissions were made late.

Audit commentary

The Authority did not record any alleged breaches for late submission information for TODD, HNET or WISE.

TODD

AV110 ICP days submissions are produced from EnergyMarket. A registry list discrepancies report compares submission information to a registry list with history to identify ICPs missing from the reconciliation submission, or included in the submission but excluded from the registry, and aggregation factor discrepancies. GR100 ICP days comparison reports are not reviewed.

ICP days are counted for any day the ICP has "active" or "inactive" status, and not counted where the ICP has "inactive - new connection in progress" status or is "decommissioned". This aligns with TODD's submission calculations which calculate consumption on the same basis but will result in some differences between the ICP days reported and ICP days with "active" status on the registry.

The process for the calculation of ICP days was examined by checking 50 NSPs with a small number of HHR ICPs and 50 NSPs with a small number of NHH ICPs on the February 2024 Revision 1 submission against the expected days calculated using a registry list with history. I found that ICP days reported matched the expected values including "inactive" days.

The following table shows the ICP days difference between TODD files and the RM return file (GR100) for all available revisions for 25 months. The consistent low negative percentage figures indicate that the TODD ICP days are higher than those on the registry, because "inactive" ICP days are included in TODD's submissions.

Month	Ri	R1	R3	R7	R14
Jan 2022	-	-	-	-0.94%	-0.91%
Feb 2022	-	-	-	-0.93%	-0.92%
Mar 2022	-	-	-	-0.97%	-0.97%
Apr 2022	-	-	-	-1.00%	-0.99%
May 2022	-1.03%	-1.04%	-1.03%	-1.03%	-1.01%
Jun 2022	-0.99%	-1.03%	-1.03%	-1.03%	-1.01%
Jul 2022	-1.08%	-1.09%	-1.09%	-1.08%	-1.07%
Aug 2022	-1.11%	-1.12%	-1.12%	-1.11%	-1.10%
Sep 2022	-1.16%	-1.16%	-1.16%	-1.14%	-1.14%

Month	Ri	R1	R3	R7	R14
Oct 2022	-1.15%	-1.19%	-1.19%	-1.16%	-1.17%
Nov 2022	-1.15%	-1.17%	-1.17%	-1.15%	-1.15%
Dec 2022	-1.20%	-1.19%	-1.19%	-1.18%	-1.17%
Jan 2023	-1.14%	-1.15%	-1.15%	-1.15%	-
Feb 2023	-1.16%	-1.17%	-1.16%	-1.16%	-
Mar 2023	-1.18%	-1.20%	-1.20%	-1.21%	-
Apr 2023	-1.21%	-1.20%	-1.22%	-1.23%	-
May 2023	-1.22%	-1.22%	-1.22%	-1.23%	-
Jun 2023	-1.19%	-1.18%	-1.19%	-1.19%	-
Jul 2023	-1.00%	-1.20%	-1.26%	-1.22%	-
Aug 2023	-1.31%	-1.31%	-1.29%	-	-
Sep 2023	-1.22%	-1.27%	-1.27%	-	-
Oct 2023	-0.92%	-1.34%	-1.33%	-	-
Nov 2023	-1.25%	-1.29%	-1.23%	-	-
Dec 2023	-1.35%	-1.34%	-	-	-
Jan 2024	-1.28%	-1.26%	-	-	-

I reviewed ten NHH and ten HHR NSP level ICP days differences for the July 2023 Revision 7 and found:

- 19 differences were caused by "inactive" ICPs being included in the AV110 but not included in the GR100 calculation; compliance is recorded because TODD's ICP days matched the days that submission information provided for, and
- one difference occurred because the meter for ICP 0000604730MP151 had accidentally been closed one day early; the error was corrected on discovery during the audit and revised submission data will be washed up.

WISE

AV110 ICP days submissions are produced from PEBS. The submissions are validated at ICP level prior to submission by reviewing a sample of ICPs with "active" days for reasonableness.

The process for the calculation of ICP days was examined by checking the ICP days submitted in February 2024 Revision 1 against supporting information for all NSPs, which found the data matched. I also checked 50 NSPs with a small number of NHH ICPs on the February 2024 Revision 1 submission against the expected "active" days calculated using a registry list with history. I found that ICP days reported matched the expected values including "inactive" days, except for BOB0331 and BOB1101. An error occurred at these NSPs due to a timing issue; ICP 0009951282CNBD7 was loaded in PEBS against NSP BOB0331 before its NT was issued on 8 June 2023. Later that day, the network updated the NSP to BOB1101 effective from 8 June 2023 but the change was not included in the EDA file imported into PEBS because WISE was not yet the trader. The CS completed effective from 6 June 2023 on 9 June 2023 without the NSP being updated. The error was not detected and resolved until the audit was completed, and I recommend reviewing the GR100 submissions published by the reconciliation manager following each submission to identify similar situations in future.

Description	Recommendation	Audited party comment	Remedial action
GR100 ICP days review	**WISE** Review the GR100 ICP days reports published by the reconciliation manager to identify and resolve discrepancies between the reported and expected ICP days. Where an ICP has an incorrect NSP, there will be negative and positive ICP days differences of the same amount at the affected NSPs.	**WISE** Recommendation accepted. WISE has implemented the download and review of the GR100 reports in July 2024	Identified

The following table shows the ICP days difference between the WISE database and the RM return file (GR100) for all available revisions for 26 months. Negative percentage figures indicate that the WISE ICP days are higher than those contained on the registry, and positive percentage figures indicate that the WISE ICP days are lower than those contained on the registry. I checked all three differences remaining in the July 2023 Revision 7 and found they related to ICP 0009951282CNBD7 being assigned to BOB0331 when it should have had BOB1101, and the timing of a switch withdrawal. The information in PEBS is now up to date and revised submission information will be provided.

Month	Ri	R1	R3	R7	R14
Jan 2022	-0.03%	-1.47%	-0.03%	-0.03%	0.03%
Feb 2022	-0.10%	-0.07%	-0.04%	-0.04%	0.04%
Mar 2022	-0.05%	-0.03%	-0.02%	-0.02%	0.02%
Apr 2022	-0.03%	-0.05%	-0.05%	-0.05%	0.04%
May 2022	-0.05%	-0.05%	-0.06%	-0.06%	0.02%

Month	Ri	R1	R3	R7	R14
Jun 2022	-0.04%	-0.05%	-0.05%	0.05%	0.02%
Jul 2022	-0.07%	-0.06%	-0.06%	-	0.02%
Aug 2022	-0.11%	-0.10%	-0.09%	0.09%	0.05%
Sep 2022	-0.09%	-0.09%	-0.08%	0.08%	0.05%
Oct 2022	-0.06%	-0.04%	-	0.03%	0.03%
Nov 2022	-0.04%	0.02%	0.04%	0.04%	0.04%
Dec 2022	-0.04%	0.07%	0.06%	0.06%	0.06%
Jan 2023	0.05%	0.06%	0.06%	0.06%	-
Feb 2023	0.04%	0.09%	0.06%	0.06%	-
Mar 2023	0.07%	0.07%	0.06%	0.06%	-
Apr 2023	0.06%	0.06%	0.06%	0.06%	-
May 2023	0.06%	0.04%	0.04%	0.04%	-
Jun 2023	0.06%	0.03%	0.02%	0.02%	-
Jul 2023	0.01%	0.02%	0.02%	0.02%	-
Aug 2023	0.01%	0.02%	0.02%	-	-
Sep 2023	0.01%	0.02%	0.02%	-	-
Oct 2023	0.04%	0.02%	0.02%	-	-
Nov 2023	0.03%	0.02%	0.02%	-	-
Dec 2023	0.01%	0.02%	-	-	-
Jan 2024	0.08%	0.02%	-	-	-

HNET

NHH AV110 ICP days submissions are produced from IPBMS. Revision 7 and 14 submissions are validated at NSP level by comparing them to the GR100 expected ICP days for the previous revision and investigating any discrepancies. Initial submissions and earlier revisions are not validated against the GR100 because the GR100 is not available prior to the initial submission and changes are expected between revisions for earlier revisions due to backdated switching and registry activity. Zeroing does not routinely occur, but I did not find any issues where zeros should have been provided and were not.

The process for the calculation of ICP days was examined by checking 50 NSPs with a small number of NHH ICPs on the February 2024 initial submission against the expected "active" days calculated using a registry list with history. I found that ICP days reported matched the expected values.

HHR AV110 ICP days submissions are produced by TODD. The process for the calculation of ICP days was examined by checking the ICP days submitted in February 2024 Revision 1 against registry information for all NSPs, which found the data matched. ICP 0326516743LC9D7 had an incorrect submission type recorded on the registry from 1 July 2023 until 23 April 2024 which prevented TODD from providing HHR volumes and ICP days. The submission type error was corrected as soon as it was identified and revised submission data will be washed up.

The following table shows the ICP days difference between HNET's database and the RM return file (GR100) for all available revisions for 23 months. Negative percentage figures indicate that HNET's ICP days are higher than those contained on the registry, and positive percentage figures indicate that the HNET's ICP days are lower than those contained on the registry. No NHH or HHR ICP days differences remained after Revision 7, which confirmed that differences in earlier revisions were caused by timing.

Month	Ri	R1	R3	R7	R14
Jan 2022	0.01%	0.00%	-0.01%	0.00%	0.00%
Feb 2022	0.03%	-0.02%	-0.01%	0.00%	0.00%
Mar 2022	-0.01%	0.01%	0.00%	0.00%	0.00%
Apr 2022	-0.01%	-0.02%	0.00%	0.00%	0.00%
May 2022	0.00%	0.02%	0.00%	-	0.00%
Jun 2022	0.03%	0.00%	0.00%	-	0.00%
Jul 2022	0.00%	0.00%	0.00%	-	0.00%
Aug 2022	-0.01%	0.00%	0.00%	0.00%	0.00%
Sep 2022	0.01%	0.00%	-	-	0.00%
Oct 2022	0.01%	0.00%	-	-	0.00%
Nov 2022	-	-	-	-	0.00%

Month	Ri	R1	R3	R7	R14
Dec 2022	-	-	-	-	-
Jan 2023	-	0.01%	0.00%	0.00%	-
Feb 2023	-	-0.01%	-	0.00%	-
Mar 2023	-	-0.01%	0.00%	0.00%	-
Apr 2023	-	0.00%	-	0.00%	-
May 2023	-	-0.14%	-	0.00%	-
Jun 2023	-	-0.02%	-	0.00%	-
Jul 2023	-	0.00%	-	-	-
Aug 2023	-	0.00%	0.00%	-	-
Sep 2023	-	0.01%	0.01%	-	-
Oct 2023	-	0.05%	0.00%	-	-
Nov 2023	-	0.02%	-	-	-
Dec 2023	-	0.01%	-	-	-
Jan 2024	0.01%	-	-	-	0.00%

I rechecked issues with AV110 submissions identified during the previous audit and found that they had been resolved except for 0007112322RN8C3 which had been assigned to an incorrect NSP within its balancing area but could not be resolved because Revision 14 had already passed.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 11.2 With: 15.6	**TODD** ICP 0000604730MP151 had accidentally been closed one day early resulting in under submission of one ICP day at CUL0661 for July 2023. The error was corrected on discovery during the audit and revised submission data will be washed up. **WISE**

From: 1-Jun-23 To: 30-Apr-24	Between June 2023 and April 2024 ICP days and volumes for ICP 0009951282CNBD7 were recorded against BOB0331 but should have been recorded against BOB1101. The NSP has been corrected and revised submission information will be washed up. **HNET** ICP 0326516743LC9D7 had an incorrect submission type recorded on the registry from 1 July 2023 until 23 April 2024 which prevented TODD from providing HHR volumes and ICP days. The submission type error was corrected as soon as it was identified and revised submission data will be washed up. Potential impact: Low Actual impact: Low Audit history: Three times Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are strong, and sufficient to ensure that ICP days are normally reported correctly. The issues causing inaccurate ICP days submission were isolated. Corrections have been made and revised submission data washed up.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. 0000604730MP151 issue has been corrected during the audit and will be washed up. **WISE:** Non-Compliance accepted. WISE did not receive the network EDA file for the change of ICP 0009951282CNBD7 from BOB0331 to BOB1101. WISE manually corrected to reflect the change to BOB1101 on April 3 2024. **HNET:** Non-Compliance accepted. ICP 0326516743LC9D7 was initially gained as NHH and later changed to HHR. HNET was unaware that the trader's submission type needed to be changed in the Registry. This was rectified upon this being raised.	June 2024 April 2024 July 2023	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
TODD: TODD will continue focusing on optimising its standard and continue to uphold checks to ensure discrepancies are looked into in a timely manner. **WISE:** WISE will implement a monitoring process to track mismatches between the WISE system and EA's Registry data to prevent misalignment. **HNET:** HNET is now aware of the requirement to update the trader submission type and has incorporated this into their standard processes.	Ongoing Q3 2024 July 2023	

11.3. Electricity supplied information provision to the reconciliation manager (Clause 15.7)

Code reference

Clause 15.7

Code related audit information

A retailer must deliver to the reconciliation manager its total monthly quantity of electricity supplied for each NSP, aggregated by invoice month, for which it has provided submission information to the reconciliation manager, including revised submission information for that period as non- loss adjusted values in respect of:

> *15.7(a) - submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period,*
>
> *15.7(b) - revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period.*

Audit observation

The process for the calculation of "as billed" volumes was examined by checking five NSPs with a small number of ICPs for each code to confirm the AV120 calculation was correct, and reviewing GR130 reports to evaluate differences between billed and submission data.

Alleged breaches were reviewed to determine whether any submissions were made late.

Audit commentary

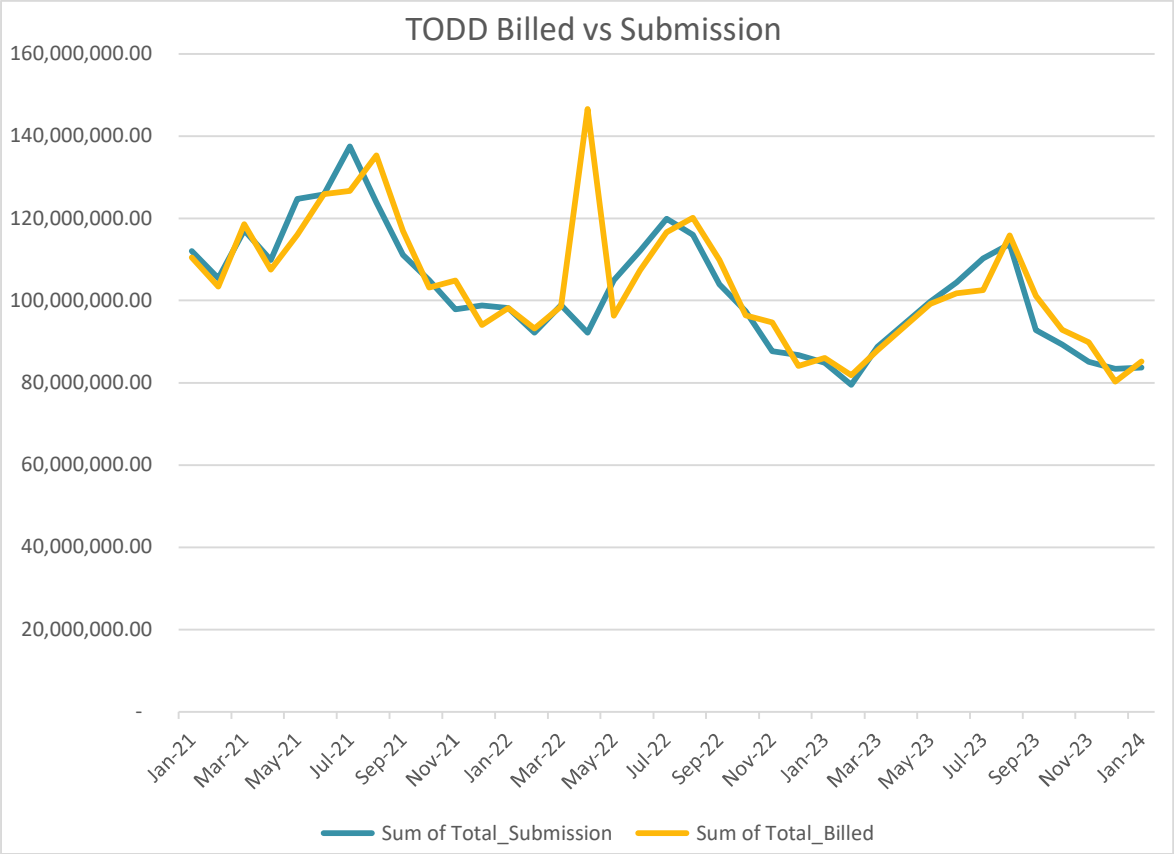
The Authority did not record any alleged breaches for late submission information for TODD, HNET or WISE.

TODD

AV120 submissions are produced by EnergyMarket using billing data from Orion and Kinetiq (via Stark). The NHH and HHR billing data is combined to produce a single AV120 submission. Prior to submission TODD reviews an ICP meter history summary, which compares profiled, unprofiled and billed usage for reasonableness. Any exceptions are investigated.

The process for the calculation of "as billed" volumes was examined by checking five NSPs with a small number of ICPs against invoice information. The AV120 billed consumption calculation was confirmed to be correct for the NSPs checked.

I checked the difference between submission and electricity supplied information for the period January 2021 to January 2024, and the results are shown in the chart below. The total difference is 0.7% for the year ending January 2024 (billed higher than submission).



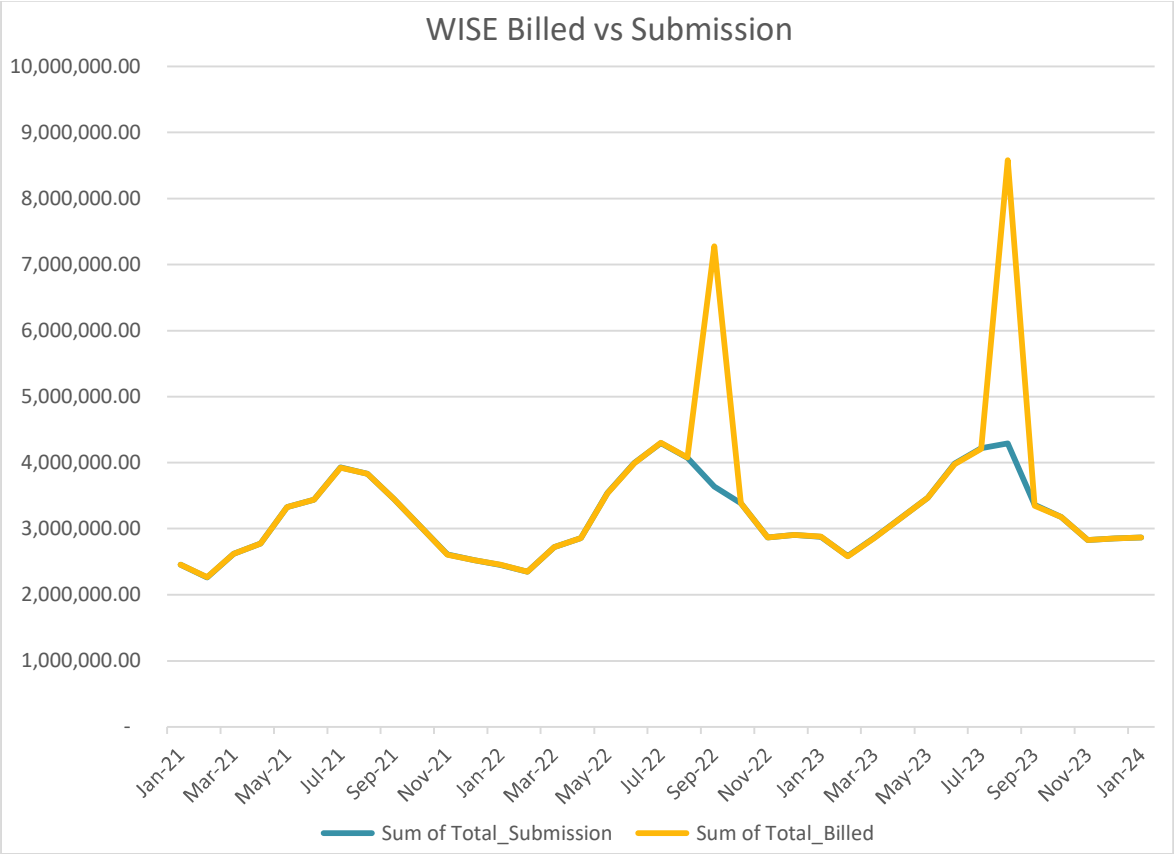
The spike in the billed data for April 2022 was investigated during previous audits. The issue was caused by a billing error for an ICP connected to TUI1101 in April 2023. The following month the incorrect invoice was reversed. The reversal made the overall volume billed at TUI1101 negative for May 2022, so it was replaced with a zero so that the reconciliation manager portal would accept the file.

WISE

AV120 submissions are produced by PEBS. The process for the calculation of "as billed" volumes was examined by checking five NSPs with a small number of ICPs against invoice information for February 2024. The AV120 billed consumption calculation was confirmed to be correct for the NSPs checked.

I checked the difference between submission and electricity supplied information for the period January 2021 to January 2024, and the results are shown in the chart below. The total difference is 10.4% for the year ending January 2024 (billed higher than submission). This was due to double counting of billed information in September 2022 and August 2023. The "as billed" files were regenerated just prior to submission which added the data originally generated and the new data set together. Following discovery of this error, the process has been adjusted to ensure that the billed data is not double counted.

If August 2023 is excluded, the difference between billed and submitted data for the year ending January 2024 is 0.1%.

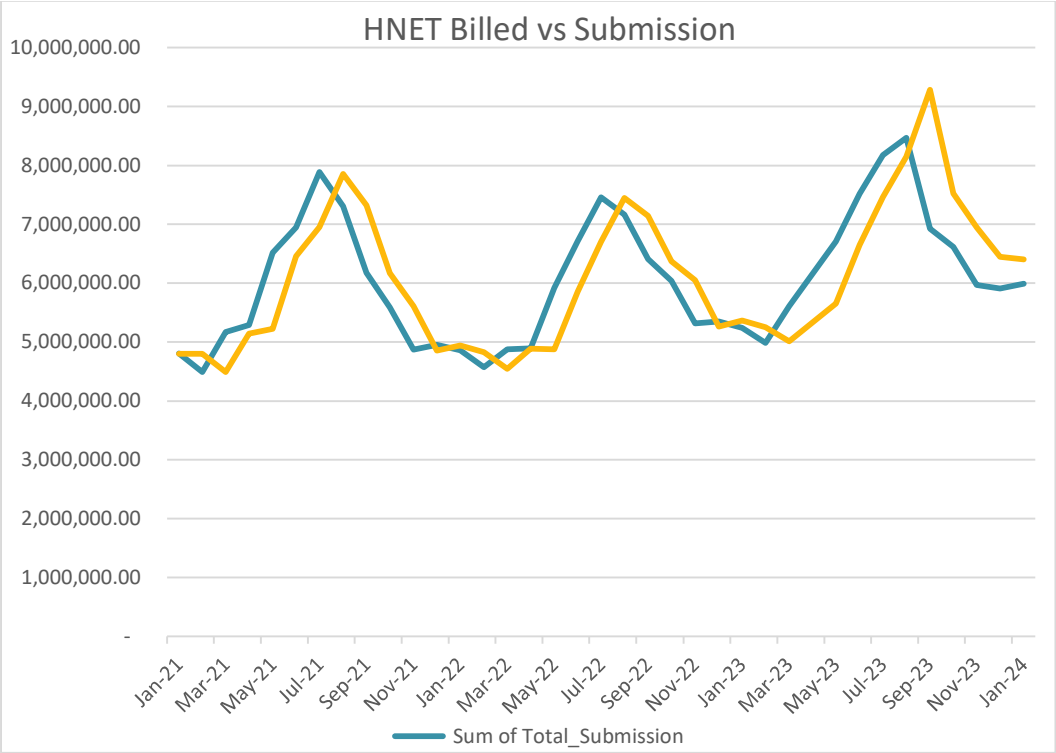


HNET

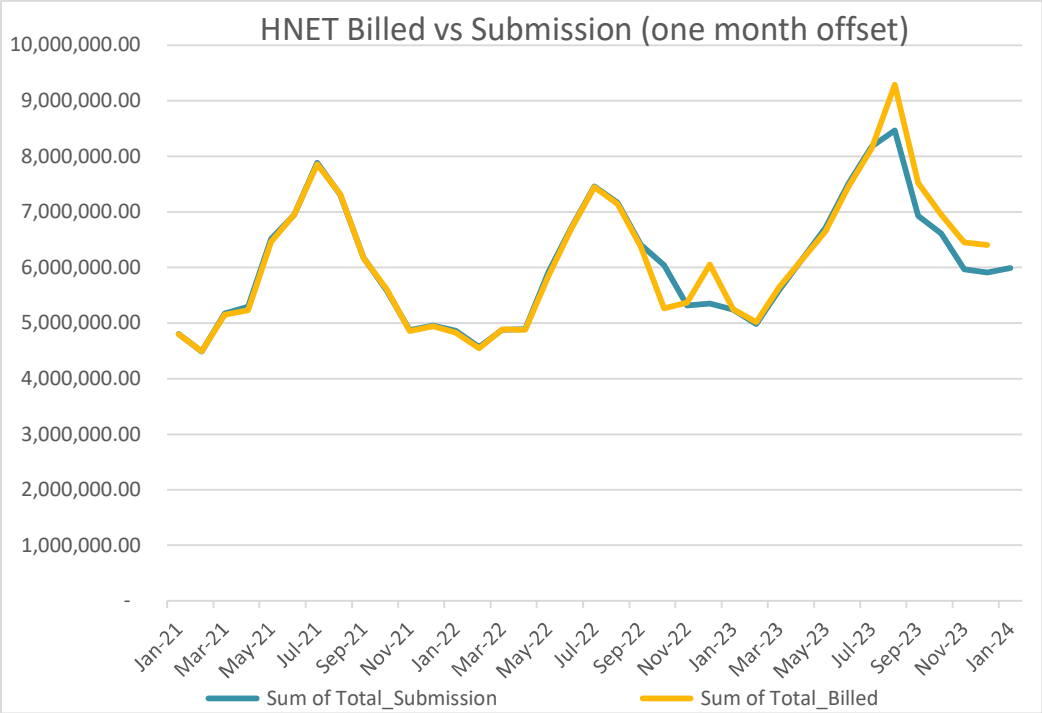
AV120 submissions are produced by IPBMS. HHR billing information provided by TODD is loaded into IPBMS to produce invoices. This HHR billing information combined with the NHH billing information to produce the AV120 report.

The process for the calculation of "as billed" volumes was examined by checking five NSPs with a small number of ICPs against invoice information for February 2024. The AV120 billed consumption calculation was confirmed to be correct for the NSPs checked.

I checked the difference between submission and electricity supplied information for the period January 2021 to January 2024, and the results are shown in the chart below. The total difference is 2.6% for the year ending January 2024 (billed higher than submission).



When the data is adjusted for the one month offset between billed and submission data the larger difference between the billed and submitted data from August 2023 onwards is visible. It relates to HHR ICP 0326516743LC9D7, which due to an error had the HHR submission flag set to no on the registry. TODD did not produce HHR volumes, but it was included in the billed submissions. The ICP's submission flag has been corrected and revised submission information will be washed up. Compliance is recorded in this section because the billed data submission was correct.



Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 11.3 With: 15.7 From: 01-Sep-22 To: 31-Aug-23	**WISE** Billed data was double counted in the AV120 submission in September 2022 and August 2023. The process has been corrected to prevent recurrence of this issue. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are strong, because the process has been adjusted to ensure that billed data is not double counted. The audit risk rating is low because the submission data is correct, and the billed data is only used to check the reasonableness of the submission data.

Actions taken to resolve the issue	Completion date	Remedial action status
WISE: Non-Compliance accepted. During the generation of wash-up data for September 2023, a duplication issue occurred. This was corrected in the subsequent wash-up process	October 2023	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
WISE: WISE has revised the process for generating wash-up data to prevent data duplication.	October 2023	

11.4. HHR aggregates information provision to the reconciliation manager (Clause 15.8)

Code reference

Clause 15.8

Code related audit information

Using relevant volume information, each retailer or direct purchaser (excluding direct consumers) must deliver to the reconciliation manager its total monthly quantity of electricity consumed for each half hourly metered ICP for which it has provided submission information to the reconciliation manager, including:

15.8(a) - submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period,

15.8(b) - revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period.

Audit observation

I confirmed that the process for the calculation and aggregation of HHR data is correct by matching HHR aggregates information with the HHR volumes data for a sample of submissions and tracing a sample of data from the source files received from the MEP or agent to the submission files.

The GR090 ICP Missing files were examined, and an extreme case sample of ICPs missing were checked.

Alleged breaches during the audit period were reviewed to determine whether any reconciliation submissions were late.

Audit commentary

The Authority did not record any alleged breaches for late submission information for TODD, HNET or WISE.

TODD

AMI and C&I HHR data is prepared in separate systems and is then appended into a single set of files for submission. Initial validation is performed on the separate distinct datasets before they are merged together.

To check the accuracy of HHR submissions:

- I compared nine HHR volumes and aggregates submissions:
  - two submissions for April 2023 (before TODD included validation of aggregates against volumes as part of their pre submission checks) had X flow differences of around ±700 kWh between the volumes and aggregates, which are believed to be caused by a small number of ICPs which had duplicated volumes in the aggregates report before this issue was corrected; the differences were washed out by Revision 3.
  - the other six submissions had differences of up to ±90 kWh at total level which were confirmed to be rounding differences when the files were compared at NSP level, and
- I traced a sample of raw HHR data to the aggregate submissions for 15 ICPs for a diverse sample of MEPs, and confirmed the process and that the data was recorded accurately.

I recommend that TODD compares the aggregates and volumes prior to submission. Based on my analysis, rounding differences between the totals reported are normally less than ±10 kWh for I flows and ±90 kWh for X flows.

Description	Recommendation	Audited party comment	Remedial action
Compare the HHR volumes and aggregates submission totals prior to submission	**TODD** Compare the HHR volumes and aggregates submission totals prior to submission. Investigate any differences over ±10 kWh for I flows and ±90 kWh for X flows, to determine whether they are caused	**TODD** Recommendation acknowledged. TODD will investigate the feasibility of building checks to determine HHR Volumes and HHR Aggregates prior to submissions.	Investigating

Description	Recommendation	Audited party comment	Remedial action
	by ICP issues that require correction.		

TODD does not review the GR090 ICP missing files, instead relying on their checks of submission data against a registry list with history. The GR090 ICP Missing files were examined for all revisions for January 2023 to February 2024. I checked an extreme case sample of the 50 ICPs missing from the most revisions:

- 44 had "inactive" status and zero or less than 0.02 kWh reported per month due to meter creep,
- two appeared as exceptions on the GR090 in error, and the registry was consistent with TODD's submission data, and
- four ICPs had "inactive" status but non-zero volumes were submitted for some months:
  - two ICPs had status corrections to "active" for the period with usage,
  - one ICP had non-zero consumption estimated, and
  - ICP 1001155450CK45C had consumption reported during an "inactive" period; it was disconnected on 5 October 2022 and recorded consumption from 17 September 2024 before switching out on 2 October 2024 (it is believed that the ICP was reconnected by the gaining trader, but its status was not updated prior to switch out) - all volumes were submitted, and the incorrect ICP status is recorded as non-compliance in **section 3.8**.

WISE

WISE does supply any HHR ICPs.

HNET

HHR aggregates files are prepared and sent by TODD on HNETs behalf using the same process as applied for TODD. HNET does not actively monitor the GR-090 ICP missing report.

To check the accuracy of HHR submissions, I:

- compared eight HHR volumes and aggregates submissions and confirmed that they were consistent with small rounding differences of less than 2 kWh, and
- traced a sample of raw HHR data to the aggregates submissions for three ICPs for a diverse sample of MEPs, and confirmed the process and that the data was recorded accurately.

I checked the GR090 ICP missing files for November 2021 to February 2024 and found two ICPs were missing:

- one was a timing difference for a backdated switch, and
- ICP 0326516743LC9D7 had an incorrect submission type recorded on the registry from 1 July 2023 until 23 April 2024 which prevented TODD from providing HHR volumes and ICP days; the submission type error was corrected as soon as it was identified and revised submission data will be washed up.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 11.4 With: 15.8	**TODD** Two submissions for April 2023 (before TODD included validation of aggregates against volumes as part of their pre submission checks) had X flow differences of around ±700 kWh between the volumes and aggregates, which are believed to be

From01-Apr 23 To: 23-Apr-24	caused by a small number of ICPs which had duplicated volumes in the aggregates report before this issue was corrected. The differences were washed out by Revision 3. **HNET** ICP 0326516743LC9D7 had an incorrect submission type recorded on the registry from 1 July 2023 until 23 April 2024 which prevented TODD from providing HHR volumes and ICP days. The submission type error was corrected as soon as it was identified and revised submission data will be washed up. Potential impact: None Actual impact: None Audit history: Once Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are strong, and sufficient to ensure that HHR volumes and aggregates are normally reported correctly. The issues causing inaccurate submission were isolated. Corrections have been made and revised submission data washed up.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. Issue was identified where comparison checks between and has since not occurred. As per previous audit, checks were made to confirm there was no discrepancies between HHR aggregate submissions since. **HNET:** Non-Compliance accepted. See section 11.2	June 2024	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD: Underlying discrepancy was fixed in the previous audit. **HNET:** As above	June 2024	

12. SUBMISSION COMPUTATION

12.1. Daylight saving adjustment (Clause 15.36)

Code reference

Clause 15.36

Code related audit information

The reconciliation participant must provide submission information to the reconciliation manager that is adjusted for NZDT using one of the techniques set out in clause 15.36(3) specified by the Authority.

Audit observation

Daylight savings processes for MEPs and agents were reviewed as part of their audits. EMS reports generation data to the reconciliation manager as Nova's agent.

TODD uses the Stark system to retrieve HHR data from the generation meters every half hour

Audit commentary

Compliance has been demonstrated by Nova's MEPs and agents as part of their MEP and agent audits.

AMI data provided is daylight savings adjusted. HHR and generation data is adjusted for daylight savings in EnergyMarket using the trading period run on technique. I observed this system process and confirmed that it is working correctly for ICPs going into and coming out of daylight savings. The correct number of trading periods were recorded for the sample of submissions which were checked for periods where daylight savings adjustments occurred.

Audit outcome

Compliant

12.2. Creation of submission information (Clause 15.4)

Code reference

Clause 15.4

Code related audit information

By 1600 hours on the 4th business day of each reconciliation period, the reconciliation participant must deliver submission information to the reconciliation manager for all NSPs for which the reconciliation participant is recorded in the registry as having traded electricity during the consumption period immediately before that reconciliation period (in accordance with schedule 15.3).

By 1600 hours on the 13th business day of each reconciliation period, the reconciliation participant must deliver submission information to the reconciliation manager for all points of connection for which the reconciliation participant is recorded in the registry as having traded electricity during any consumption period being reconciled in accordance with clauses 15.27 and 15.28, and in respect of which it has obtained revised submission information (in accordance with schedule 15.3).

Audit observation

Processes to ensure that HHR, NHH and generation submissions are accurate were reviewed. A list of breaches was obtained from the Electricity Authority.

Audit commentary

The Authority did not record any alleged breaches for late submission information for TODD, HNET or WISE.

TODD

NHH submissions

AV080 submissions are prepared in EnergyMarket using data from Orion and the registry, and the reconciliation manager's shape files. I checked submission information for a sample of ICPs to confirm that it was accurate and found "vacant" and "inactive" consumption was reported, and I flow consumption was correctly reported with PV1 profile for distributed generation ICPs.

Unmetered load is reported based on readings entered against a dummy meter register on the scheduled read date. Orion automatically estimates consumption based on the average daily kWh recorded against the register. TODD has excluded unmetered load meter registers from being profiled using the reconciliation manager's seasonal adjusted shape values, and volumes between readings are apportioned to each reconciliation period on a straight line basis. There are small rounding differences of less than ±1 kWh compared to expected submission values based on the average daily kWh x days in the period, because Orion rounds the meter reading on the unmetered load register but the daily kWh value may be to three decimal places. I checked submissions for a sample of ten unmetered load ICPs to confirm the process.

HHR submissions

TODD prepares HHR submissions in EnergyMarket. The process for generating submissions was reviewed and found to be compliant in **section 11.4**.

Generation submissions

Generation data is reported by EMS as TODD's agent, and compliance was demonstrated as part of their agent audit.

Delivery of submission data for all ICPs that TODD is responsible for

Submission accuracy issues are discussed in detail in **section 12.7**. There were some instances were submissions made by TODD were incomplete:

- ICPs 0006408150RNAD7 and 0000137223UN454 were unbridged and had corrections calculated but are awaiting peer review before being entered into Orion; the meters were unbridged between 26 June 2023 and 27 July 2023 and the estimated consumption is 2,491 kWh.
- ICPs 0000052655HB79C and ICP 0000831042HBD34 underwent meter upgrades and had HHR volumes on the day of the meter change omitted.
- ICP 0000541521TUFFE had no unmetered load reported because an opening meter read was not recorded on the dummy meter register, and has been corrected.
- Zero HHR estimates were applied for "active" ICPs with less than one week of history before the process was changed to estimate based on the ANZSIC code during the audit.

I re-checked the previous audit submission accuracy non-compliances. All issues were resolved in time for Revision 14 submissions except ICPs 0001450521PC4E7 (confirmed faulty 10 March 2023), 0000923413TU251 (confirmed bridged October 2022 to February 2023) and 0110006013EL580 (confirmed faulty 16 January 2023 until replaced 21 March 2023) which have not undergone corrections.

WISE

WISE prepares NHH submissions using PEBS. WISE did not supply any ICPs with unmetered load, genuine "inactive" or "vacant" consumption, or distributed generation and I flow metering. Historic estimate scenarios were reviewed in **section 12.11** and found to be compliant.

Delivery of submission data for all ICPs that WISE is responsible for

I did not identify any ICPs where submission data was not provided.

HNET

NHH submissions

HNET prepares NHH submissions using IPBMS. I checked submission information for a sample of ICPs to confirm that it was accurate and found "vacant" consumption was reported, status corrections were processed to ensure that "inactive" consumption was reported, and I flow consumption was correctly reported with PV1 profile for distributed generation ICPs. HNET does not supply any ICPs with unmetered load.

HHR submissions

TODD prepares HHR submissions in EnergyMarket for HNET. The process for generating submissions was reviewed and found to be compliant in **section 11.4**. There were no HHR corrections or estimations during the audit period.

Delivery of submission data for all ICPs that HNET is responsible for

HHR ICP 0326516743LC9D7 had the HHR submission flag set to no on the registry. TODD did not produce HHR volumes, but it was included in the billed submissions. The ICP's submission flag has been corrected and revised submission information will be washed up.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 12.2 With: 15.4 From: 01-Apr-23 To: 31-May-24	**TODD** ICPs 0000052655HB79C and ICP 0000831042HBD34 underwent meter upgrades and had HHR volumes on the day of the meter change omitted. ICP 0000541521TUFFE had no unmetered load reported because an opening meter read was not recorded on the dummy meter register and has been corrected. Zero HHR estimates were applied for" active" ICPs with less than one week of history before the process was changed to estimate based on the ANZSIC code during the audit. **HNET** ICP 0326516743LC9D7 had an incorrect submission type recorded on the registry from 1 July 2023 until 23 April 2024 which prevented TODD from providing HHR volumes and ICP days. The submission type error was corrected as soon as it was identified and revised submission data will be washed up. Potential impact: None Actual impact: None Audit history: Three times Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls over submission completeness are strong overall, and sufficient to ensure that most submission data is accurate. The errors identified were isolated. The impact is low overall based on the volume differences identified, and because revised submission information has been or will be washed up.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. 0000052655HB79C and 0000831042HBD34 Where meter upgrades are undertaken with HHR ICPs, updates and dates will align so all volumes are accounted for. 0000541521TUFFE Unmetered load register was created and has been corrected. Zero estimates As per section 9.4, previous process was not passed down to include using ANSZIC codes for providing HHR estimates on HHR ICPs with active ICPs with no historical data. Process has been identified again and included back into the process. **HNET:** Non-Compliance accepted. See section 11.2	July 2024	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD: As per section 9.4 - ANAZIC Codes are now included again to help provide HHR estimate. 0000541521TUFFE will have unreported load accounted for in all washup submissions going forward. 0000052655HB79C and 0000831042HBD34 will have all unaccounted for volumes accounted for in washup submission. **HNET:** As above	July 2024	

12.3. Allocation of submission information (Clause 15.5)

Code reference

Clause 15.5

Code related audit information

In preparing and submitting submission information, the reconciliation participant must allocate volume information for each ICP to the NSP indicated by the data held by the registry for the relevant consumption period at the time the reconciliation participant assembles the submission information. Volume information must be derived in accordance with Schedule 15.2.

However, if, in relation to a point of connection at which the reconciliation participant trades electricity, a notification given by an embedded generator under clause 15.13 for an embedded generating station is in force, the reconciliation participant is not required to comply with the above in relation to electricity generated by the embedded generating station.

Audit observation

Processes to ensure that information used to aggregate the reconciliation reports is consistent with the registry were reviewed in **section 2.1**. Processes to ensure that HHR, NHH, and generation submissions are accurate were reviewed. A sample of GR170 and AV080 files were compared, to confirm zeroing occurs.

Audit commentary

TODD

NHH

AV080 submissions are prepared in EnergyMarket using data from Orion and the registry, and the reconciliation manager's shape files. Submission accuracy and aggregation was checked by comparing the November 2023 Revision 1 AV080 file to ICP level data for five NSPs. The data was consistent with the ICP level information.

NHH submission data is validated prior to being provided to the reconciliation manager including:

- a daily report which shows NHH and HHR ICPs with monthly consumption which is negative or more than 20,000 kWh per month, which is run by the reconciliation team and forwarded to the Whakatane team for investigation; if readings are found to be inaccurate, they will be made misreads and ignored by the reconciliation process,
- a registry list discrepancies report which compares submission information to a registry list with history to identify ICPs missing from the reconciliation submission, or included in the submission but excluded from the registry, aggregation factor discrepancies including incorrect profiles and submission types, and "inactive" and "vacant" consuming ICPs,
- a ICP meter history summary which compares profiled, unprofiled and billed usage for reasonableness; any exceptions are investigated, and
- NSP level comparison to the previous month for initial submissions, and previous submissions for revision submissions, with any exceptions investigated at ICP level.

Zeroing occurs automatically in the EnergyMarket database. A zero line is added if an aggregation factor combination appeared in a previous submission for the period but is not included in the current submission. GR170 and AV080 files for eight revisions were compared, and I found all NSPs included in the GR170 were included in the AV080, confirming that zeroing is occurring as required.

TODD no longer checks for ICPs with forward estimate remaining prior to Revision 14 and does not enter permanent readings for these ICPs. This is recorded as non-compliance in **section 12.8.**

HHR

As discussed in **section 9.6**, TODD's HHR data validation processes are compliant with the requirements of clause 17 schedule 15.2. HHR submission data is validated prior to being provided to the reconciliation manager including:

- review of high and low consumption at ICP level; HHR ICPs are included in the ICP level consumption checks described in the NHH section above - HHR commercial and industrial sites are individually reviewed prior to submission, including viewing consumption history charts,
- comparing to the previous month for initial submissions and previous submissions for the same month for revisions; the data is reviewed at ICP level and NSP level, with a focus on negatives, highs, lows, and large variances and exceptions are investigated, with field services jobs raised if

there are concerns about the accuracy of the information recorded - HHR data changes are checked against the HHR change tracking spreadsheet to ensure that they are valid, and

- a registry list discrepancies report which compares submission information to a registry list with history to identify ICPs missing from the reconciliation submission or included in the submission but excluded from the registry, aggregation factor discrepancies including incorrect profiles and submission types, and "inactive" and "vacant" consuming ICPs.

Zeroing occurs automatically in the EnergyMarket database. A zero line is added if an aggregation factor combination appeared in a previous submission for the period but is not included in the current submission.

Generation

EMS collect and validate generation data and prepare the submissions, and compliance is recorded in their agent audit report.

EMS usually provides a copy of the generation submission data to TODD on business day two, but TODD's reconciliation team does not always have time to review it prior to the submission deadline as they are focussed on creating other submission files. Generation submissions are validated post submission as part of the Clearing Manager invoice review. TODD compares the invoiced consumption to accruals TODD has calculated based on the generation volumes.

Previous audits recommended that generation submissions are validated prior to submission against the accruals (if available) and TODDs measurement of unit level volumes aggregated to the relevant BUS level (NSP) where there is more than one generation unit connected to a GIP BUS, to ensure that any errors are identified and resolved prior to the submission deadline. TODD has decided not to adopt this recommendation.

WISE

AV080 submissions are prepared in PEBS. Detailed meter register level supporting data was provided for the October 2023 Revision 3 submission and I confirmed that the AV080 report is correctly aggregated and consistent with ICP level data.

Submission data is validated prior to being provided to the reconciliation manager including:

- ICP level consumption over 2,000 kWh in winter and 1,000 kWh in summer,
- ICP level historic estimate higher than total estimate,
- NSP level comparison to the previous month for initial submissions, and previous submissions for revision submissions, and
- aggregation row level comparison to previous submissions to identify any rows which have appeared in previous submissions but not the current revision which require zeroing.

Any exceptions are reviewed to determine whether they are valid.

GR170 and AV080 files for nine revisions were compared, and I found all NSPs included in the GR170 were included in the AV080, confirming that zeroing is occurring as required.

HNET

AV080 submissions are prepared in IPBMS. Submission accuracy and aggregation was checked by comparing the April 2023 Revision 7 AV080 file to ICP level data for five NSPs. The data was consistent with the ICP level information.

Submission data is validated prior to being provided to the reconciliation manager including NSP level comparison to the previous month for initial submissions, and previous submissions for revision submissions. Large differences are checked using ICP level data to determine the cause, and if a correction is needed.

For revision submissions, HNET compares the aggregation rows in the current revision to the previous revision to determine whether any zeroing is required. GR170 and AV080 files for six revisions were compared, and I found all NSPs included in the GR170 were included in the AV080, confirming that zeroing was not required for these revisions.

Audit outcome

Compliant

12.4. Grid owner volumes information (Clause 15.9)

Code reference

Clause 15.9

Code related audit information

The participant (if a grid owner) must deliver to the reconciliation manager for each point of connection for all of its GXPs, the following:

- *submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period (clause 15.9(a)),*
- *revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period (clause 15.9(b)).*

Audit observation

Review of the NSP table confirmed that Nova is not a grid owner.

Audit commentary

Nova is not a grid owner.

Audit outcome

Not applicable

12.5. Provision of NSP submission information (Clause 15.10)

Code reference

Clause 15.10

Code related audit information

The participant (if a local or embedded network owner) must provide to the reconciliation manager for each NSP for which the participant has given a notification under clause 25(1) schedule 11.1 (which relates to the creation, decommissioning, and transfer of NSPs) the following:

- *submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period (clause 15.10(a)),*
- *revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period (clause 15.10(b)).*

Audit observation

The registry list and NSP table were reviewed.

Audit commentary

Nova does not own any local or embedded networks and is not required to provide NSP submission information.

Audit outcome

Not applicable

12.6. Grid connected generation (Clause 15.11)

Code reference

Clause 15.11

Code related audit information

The participant (if a grid connected generator) must deliver to the reconciliation manager for each of its points of connection, the following:

- *submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period (clause 15.11(a)),*
- *revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period (clause 15.11(b)).*

Audit observation

TODD

Generation data is reported by EMS as TODD's agent, and creation of generation submissions was reviewed as part of their agent audit. Alleged breaches during the audit period were reviewed to determine whether any reconciliation submissions were late.

HNET and **WISE**

HNET and WISE are not a grid connected generators; compliance was not assessed.

Audit commentary

TODD

No breaches had been recorded for late provision of generation submission information. Compliance with this clause has been demonstrated by EMS as part of their agent audit.

HNET and **WISE**

HNET and WISE are not a grid connected generators; compliance was not assessed.

Audit outcome

Compliant

12.7. Accuracy of submission information (Clause 15.12)

Code reference

Clause 15.12

Code related audit information

If the reconciliation participant has submitted information and then subsequently obtained more accurate information, the participant must provide the most accurate information available to the reconciliation manager or participant, as the case may be, at the next available opportunity for submission (in accordance with clauses 15.20A, 15.27, and 15.28).

Audit observation

Alleged breaches during the audit period were reviewed to determine whether any reconciliation submissions were late. Corrections were reviewed in **sections 2.1**, **8.1** and **8.2**.

Audit commentary

The Authority did not record any alleged breaches for late submission information for TODD, HNET or WISE.

TODD

TODD has good validation processes in place and exceptions are usually corrected as quickly as possible with revised submission data provided at the next available opportunity. Some submission data was found to be inaccurate and was not corrected at the next available opportunity for submission.

Issue	Estimated submission impact[18]
Consumption omitted during NHH to HHR upgrades For upgrades, if HHR consumption is not correctly recorded in TODD's systems for the day of the upgrade it will be omitted from submission. I saw two cases where the NHH meter was ended on the day of the meter change, and the HHR meter was not started until the day after the meter change resulting in a small amount of under submission: • BOPE meter category 2 ICP 0000052655HB79C had its meter physically changed on 16 January 2024 but the closing NHH meter reading was entered on 16 January 2024 and the HHR consumption started from 17 January 2024; the HHR interval data between the HHR meter installation on 16 January 2024 and 11.59pm on 16 January 2024 was omitted from submission, and • BOPE meter category 2 ICP 0000831042HBD34 had its meter physically changed on 2 August 2023 but the closing NHH meter reading was entered on 2 August 2023 and the HHR consumption started from 3 August 2023; the HHR interval data between the HHR meter installation on 2 August 2023 and 11.59pm on 2 August 2023 was omitted from submission. The issues occurred during a period before the reconciliation team took over completing profile changes. They are able to ensure that HHR interval consumption relating to the day of the meter change is captured in Stark and included in submissions. There was previously some confusion between the billing type and settlement type which resulted in some issues.	Low
Incomplete bridged meter corrections ICPs 0006408150RNAD7 and 0000137223UN454 were unbridged and had corrections calculated but are awaiting peer review before being entered into Orion; the meters were unbridged between 26 June 2023 and 27 July 2023 and the estimated consumption is 2,491 kWh.	Low
Unreported unmetered load due to a meter set up issue Unmetered load is reported based on estimated readings entered onto a dummy meter register on the scheduled read date. If the meter does not have an opening reading recorded, no estimates will be created. Discrepancy reporting is available to identify unmetered load registers with no readings.	Low

[18] Minor (less than ±500 kWh), low (less than ±10,000 kWh), medium (less than ±50,000 kWh) or high (more than ±100,000 kWh).

Issue	Estimated submission impact[18]
0000541521TUFFE switched in on 19 July 2023 but did not have an unmetered load register created until 26 January 2024 and then had a misread instead of an opening reading recorded, which prevented unmetered load readings from being entered. Zero unmetered load was reported when 0.864 kWh per day should have been used. The error has since been corrected and revised submission information will be washed up.	
HHR estimate accuracy for ICPs with limited read history If there is less than one week of data available to calculate the estimate, a query is run to force zero values to be estimated. There is another stored procedure which allows estimates to be calculated based on an average for the customer's ANZSIC code, and TODD began using this in preference to estimating zeros during the audit. The impact is low because any estimates are replaced with actual data if it becomes available later.	Low
Arc Innovations meters settled as HHR As noted in the previous audits, there is an issue with Arc Innovations meters when used for HHR settlement. The on-site setup is that a meter pulses into a data storage device, which counts the pulses and stores them every 200 pulses which equals 0.1 kWh. There is only one decimal place, so the smallest increment of consumption is 0.1. The total kWh per month will be accurate, but if volumes are not recorded and reported against the correct trading period, TODD may not be charged at the wholesale rate that applied during the trading period when the electricity was consumed. The 34 affected meters do not have multipliers and have the highest metering category of 1, so the impact is expected to be minimal. Non-compliance is recorded in **section 2.1** due to information not being complete and accurate. Compliance is recorded in this section because TODD is unable to obtain more accurate information.	Low

I re-checked the previous audit submission accuracy non-compliances. All issues were resolved in time for Revision 14 submissions except ICPs 0001450521PC4E7 (confirmed faulty 10 March 2023), 0000923413TU251 (confirmed bridged October 2022 to February 2023) and 0110006013EL580 (confirmed faulty 16 January 2023 until replaced 21 March 2023) which have not undergone corrections.

WISE

WISE's validation processes identify incomplete and inaccurate data, which is normally corrected at the first available opportunity. One submission inaccuracy was identified: between June 2023 and April 2024 ICP days and volumes for ICP 0009951282CNBD7 were recorded against BOB0331 but should have been recorded against BOB1101. The NSP has been corrected and revised submission information will be washed up.

I rechecked the data discrepancies reported in the last audit that required following up and found corrections were processed, or the ICPs had switched out before the corrections could be processed.

HNET

HNET's validation processes identify incomplete and inaccurate data, which is normally corrected at the first available opportunity. One submission inaccuracy was identified: ICP 0326516743LC9D7 had an incorrect submission type recorded on the registry from 1 July 2023 until 23 April 2024 which prevented TODD from providing HHR volumes and ICP days. The submission type error was corrected as soon as it was identified and revised submission data will be washed up.

The previous audit found IPBMS could only apply the PV1 profile for generation volumes. I confirmed that the EG1 profile can be added, and that the HNET team understands that this profile should be applied for ICPs which have non-solar generation fuel types.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 12.7 With: 15.12 From: 01-Apr-23 To: 31-May-24	**TODD** ICPs 0000052655HB79C and ICP 0000831042HBD34 underwent meter upgrades and had HHR volumes on the day of the meter change omitted. ICP 0000541521TUFFE had no unmetered load reported because an opening meter read was not recorded on the dummy meter register and has been corrected. Zero HHR estimates were applied for "active" ICPs with less than one week of history before the process was changed to estimate based on the ANZSIC code during the audit. **WISE** ICP days and volumes for ICP 0009951282CNBD7 were recorded against BOB0331 but should have been recorded against BOB1101. The NSP has been corrected and revised submission information will be washed up. **HNET** ICP 0326516743LC9D7 had an incorrect submission type recorded on the registry from 1 July 2023 until 23 April 2024 which prevented TODD from providing HHR volumes and ICP days. The submission type error was corrected as soon as it was identified and revised submission data will be washed up. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls over submission accuracy are strong overall, and sufficient to ensure that most submission data is accurate. The errors identified were isolated. The impact is low overall based on the volume differences identified, and because revised submission information has been or will be washed up.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. As per section 12.2	July 2024	Identified

WISE: Non-Compliance accepted. As per section 11.2 **HNET:** Non-Compliance accepted. As per section 11.2		
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD, WISE & HNET: As above	July 2024	

12.8. Permanence of meter readings for reconciliation (Clause 4 Schedule 15.2)

Code reference

Clause 4 Schedule 15.2

Code related audit information

Only volume information created using validated meter readings, or if such values are unavailable, permanent estimates, has permanence within the reconciliation processes (unless subsequently found to be in error).

The relevant reconciliation participant must, at the earliest opportunity, and no later than the month 14 revision cycle, replace volume information created using estimated readings with volume information created using validated meter readings.

If, despite having used reasonable endeavours for at least 12 months, a reconciliation participant has been unable to obtain a validated meter reading, the reconciliation participant must replace volume information created using an estimated reading with volume information created using a permanent estimate in place of a validated meter reading.

Audit observation

NHH volumes 14-month revisions were reviewed to identify any forward estimate still existing.

Audit commentary

TODD

Some forward estimate remained at Revision 14. TODD no longer checks for ICPs with forward estimate remaining prior to Revision 14 and does not enter permanent readings for these ICPs due to an increase in workload associated with this activity. I checked a sample of ICPs with forward estimate remaining and confirmed that it was because readings had not been received.

Month	Count of NSPs	NSPs where threshold was not met	Forward estimate volume
Jan-2022	305	20	3575.03
Feb-2022	304	20	3027.92
Mar-2022	305	21	3141.93
Apr-2022	305	20	3269.14
May-2022	306	15	3567.98
Jun-2022	308	12	1678.78
Jul-2022	308	10	1144.62
Aug-2022	311	8	810.77
Sep-2022	313	8	591.91
Oct-2022	312	8	642.44
Nov-2022	312	8	466.47
Dec-2022	313	9	557.19
Total			**22474.18**

WISE

All 14 month revisions from Jan 2022 to December 2022 had 100% historic estimate.

HNET

All 14 month revisions from Jan 2022 to December 2022 had 100% historic estimate.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 12.8 With: 4 Schedule 15.2 From: 01-Jan-22 To: 31-May-24	**TODD** TODD does not enter permanent estimate readings before Revision 14 is created, and some forward estimate remains at Revision 14. Potential impact: Low Actual impact: Low Audit history: Once Controls: Moderate Breach risk rating: 2

Audit risk rating	Rationale for audit risk rating
Low	Controls are moderate. Read attainment processes are robust but for a small proportion of ICPs where actual readings are not obtained within 14 months a permanent estimate reading is not entered. The audit is risk rating is low because there are sound estimation processes.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. TODD will create documentation and provide training to current staff on the permanent estimate process along with an investigation of each ICP to evaluate its eligibility for a permanent estimate	November 2024	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD: Subject to confirmation, permanent estimate readings will be inserted with no reasonable endeavors eligibility investigation to simplify and/or automate the process.	November 2024	

12.9. Reconciliation participants to prepare information (Clause 2 Schedule 15.3)

Code reference

Clause 2 Schedule 15.3

Code related audit information

If a reconciliation participant prepares submission information for each NSP for the relevant consumption periods in accordance with the Code, such submission information for each ICP must comprise the following:

- *half hour volume information for the total metered quantity of electricity for each ICP notified in accordance with clause 11.7(2) for which there is a category 3 or higher metering installation (clause 2(1)(a)) for each ICP about which information is provided under clause 11.7(2) for which there is a category 1 or category 2 metering installation (clause 2(1)(b)):*
  - *a) any half hour volume information for the ICP; or*
  - *b) any non-half hour volumes information calculated under clauses 4 to 6 (as applicable).*
  - *c) unmetered load quantities for each ICP that has unmetered load associated with it derived from the quantity recorded in the registry against the relevant ICP and the number of days in the period, the distributed unmetered load database, or other sources of relevant information (clause 2(1)(c)),*
- *to create non half hour submission information a reconciliation participant must only use information that is dependent on a control device if (clause 2(2)):*
  - *a) the certification of the control device is recorded in the registry; or*
  - *b) the metering installation in which the control device is location has interim certification.*

- *to create submission information for a point of connection the reconciliation participant must apply to the raw meter data (clause 2(3):*
    - *a) for each ICP, the compensation factor that is recorded in the registry (clause 2(3)(a)),*
    - *b) for each NSP the compensation factor that is recorded in the metering installations most recent certification report (clause 2(3)(b)).*

Audit observation

Aggregation and content of reconciliation submissions was reviewed, and the registry list and AC020 reports were reviewed.

Audit commentary

TODD

Compliance with this clause was assessed:

- HHR volume is reported for all ICPs with a meter category 3 or higher,
- unmetered load submissions were checked in **section 12.2**,
- no profiles requiring a certified control device are used,
- no loss or compensation arrangements are required, and
- aggregation of the AV080, AV090 and AV140 reports is compliant.

WISE

Compliance with this clause was assessed:

- all the WISE ICPs have metering category 1, and are submitted as NHH,
- no ICPs with unmetered load are supplied,
- no profiles requiring a certified control device are used,
- no loss or compensation arrangements are required, and
- aggregation of the AV080 report was reviewed in sections **13.2** and **12.3** and confirmed compliant.

One aggregation error was identified, between June 2023 and April 2024 ICP days where volumes for ICP 0009951282CNBD7 were recorded against BOB0331 but should have been recorded against BOB1101. The NSP has been corrected and revised submission information will be washed up. Compliance is recorded in this section because the process to prepare submission information is correct, but an exception occurred because PEBS recorded an incorrect NSP. Non-compliance is recorded in **section 12.7** for inaccurate submission information.

HNET

Compliance with this clause was assessed:

- no ICPs with unmetered load are supplied,
- no control devices are used for reconciliation purposes,
- no ICPs have error or loss compensation arrangements,
- aggregation of the AV080 report was reviewed in sections **13.2** and **12.3** and confirmed compliant, and
- HHR volumes and HHR aggregates files are prepared and supplied by TODD, these were confirmed to be accurate.

One aggregation error was identified, ICP 0326516743LC9D7 had an incorrect submission type recorded on the registry from 1 July 2023 until 23 April 2024 which prevented TODD from providing HHR volumes and ICP days on HNET's behalf. The submission type error was corrected as soon as it was identified and revised submission data will be washed up. Compliance is recorded in this section because the process to prepare submission information is correct, but an exception occurred because the registry recorded

an incorrect submission type. Non-compliance is recorded in **section 12.7** for inaccurate submission information.

Audit outcome

Compliant

12.10.Historical estimates and forward estimates (Clause 3 Schedule 15.3)

Code reference

Clause 3 Schedule 15.3

Code related audit information

For each ICP that has a non-half hour metering installation, volume information derived from validated meter readings, estimated readings, or permanent estimates must be allocated to consumption periods using the techniques described in clauses 4 to 7 to create historical estimates and forward estimates.

Each estimate that is a forward estimate or a historical estimate must clearly be identified as such (clause 3(2)).

If validated meter readings are not available for the purpose of clauses 4 and 5, permanent estimates may be used in place of validated meter readings (clause 3(3)).

Audit observation

A sample of AV080 submissions were reviewed to confirm that historic estimates are included and identified. Permanence of meter readings is reviewed in **section 12.8**. The methodology to create forward estimates is reviewed in **section 12.12**.

Audit commentary

I reviewed a sample of AV080 submission data for TODD, WISE and HNET and confirmed that forward and historic estimates are included and identified as such.

Audit outcome

Compliant

12.11. Historical estimate process (Clauses 4 and 5 Schedule 15.3)

Code reference

Clauses 4 and 5 Schedule 15.3

Code related audit information

The methodology outlined in clause 4 of schedule 15.3 must be used when preparing historical estimates of volume information for each ICP when the relevant seasonal adjustment shape is available, and the reconciliation participant is not using an approved profile in accordance with clause 4A.

If the Authority has approved a profile for the purpose of apportioning volume information (in kWh) to part or full consumption periods, a reconciliation participant may use the profile despite the relevant seasonal adjustment shape being available; and if it uses the profile, must otherwise prepare the historical estimate in accordance with the methodology in clause 4.

*If a seasonal adjustment shape is not available, and the **reconciliation participant** is not using an approved **profile** under clause 4A, the methodology for preparing an historical estimate of volume information for each ICP must be the same as in clause 4, except that the relevant quantities kWh_{Px} must be prorated as determined by the reconciliation participant using its own methodology or on a flat shape*

basis using the relevant number of days that are within the consumption period and within the period covered by kWh_{PX}.

Audit observation

To assist with determining compliance of the Historical Estimate (HE) processes, Nova were supplied with a list of scenarios, and for some individual ICPs a manual HE calculation was conducted and compared to the result from Nova's systems.

Audit commentary

TODD

SASV (seasonal adjusted shape values) files are automatically downloaded via FTP. Following download, the RPS SASV file is imported automatically into EnergyMarket. The reconciliation team checks the folders after import to confirm that the SASV files have been moved to the processed folder indicating that they have been imported successfully.

Review of examples with consumption during an "inactive" period confirmed that all consumption during "inactive" periods is captured and reported. I confirmed that disconnection readings are treated as validated actual readings by the historic estimate process, but reconnection readings are not. The previous audit recommended that reconnection readings should be treated as validated readings and TODD is still considering how this could be managed.

Unmetered load is reported based on readings entered against a dummy meter register on the scheduled read date. Orion automatically estimates consumption based on the average daily kWh recorded against the register. TODD has excluded unmetered load meter registers from being profiled using the reconciliation manager's seasonal adjusted shape values, and volumes between readings are apportioned to each reconciliation period on a straight line basis. There are small rounding differences of less than ±1 kWh compared to expected submission values based on the average daily kWh x days in the period, because Orion rounds the meter reading on the unmetered load register but the daily kWh value may be to three decimal places.

The table below shows that all scenarios are calculating as expected.

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 become "inactive" then "active" again within a month.	Consumption is only calculated for the "active" portion of the month.	Compliant
d	ICP switches in part way through a month on an estimated switch reading	Consumption is calculated to include the 1st day of responsibility.	Compliant
e	ICP switches out part way through a month on an estimated switch reading	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

Test	Scenario	Test expectation	Result
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
j	Unmetered load for a full month	Consumption is calculating based on daily unmetered kWh for full month.	Compliant
k	Unmetered load for a part month	Consumption is calculating based on daily unmetered kWh for "active" days of the month.	Compliant
l	Network/GXP/Connection (POC) alters partway through a month.	Consumption is separated and calculated for the separate portions of where it is to be reconciled to.	Compliant
m	ICP with a customer read during the month	Customer reads are not used to calculate historic estimate, unless they have been validated against a set of validated readings from another source.	Compliant, the customer read was validated and used by the historic estimate process
n	ICP with a photo read during the month	Photo reads are not used to calculate historic estimate, unless they have been validated against a set of validated readings from another source.	Compliant, the photo read was validated and used by the historic estimate process
o	ICP has a meter with a multiplier greater than 1	The multiplier is applied correctly.	Compliant

WISE

SASV files are manually downloaded and imported into PEBS using the upload SAS (GR-030) file and add reporting job. The process shows if any import errors have occurred so that they can be investigated and resolved.

The table below shows that all scenarios checked are calculating as expected and correct SASV values are applied.

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

Test	Scenario	Test expectation	Result
b	ICP becomes “inactive” part way through a month.	Consumption is only calculated for the “active” portion of the month.	Compliant
c	ICP become “inactive” then “active” again within a month.	Consumption is only calculated for the “active” portion of the month.	Compliant
d	ICP switches in part way through a month on an estimated switch reading	Consumption is calculated to include the 1st day of responsibility.	Compliant
e	ICP switches out part way through a month on an estimated switch reading	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
j	Unmetered load for a full month	Consumption is calculating based on daily unmetered kWh for full month.	Not applicable – no unmetered load
k	Unmetered load for a part month	Consumption is calculating based on daily unmetered kWh for “active” days of the month.	Not applicable – no unmetered load
l	Network/GXP/Connection (POC) alters partway through a month.	Consumption is separated and calculated for the separate portions of where it is to be reconciled to.	Compliant
m	ICP with a customer read during the month	Customer reads are not used to calculate historic estimate, unless they have been validated against a set of validated readings from another source.	Not applicable – no customer reads
n	ICP with a photo read during the month	Photo reads are not used to calculate historic estimate, unless they have been validated against a set of validated readings from another source.	Not applicable – no photo reads
o	ICP has a meter with a multiplier greater than 1	The multiplier is applied correctly.	Not applicable – no ICPs with multipliers supplied

HNET

SASV files are manually downloaded and imported into IPBMS using the seasonal file upload process. The process shows if any import errors have occurred so that they can be investigated and resolved.

The table below shows that all scenarios checked are calculating as expected and correct SASV values are applied.

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 become “inactive” then “active” again within a month.	Consumption is only calculated for the “active” portion of the month.	Compliant
d	ICP switches in part way through a month on an estimated switch reading	Consumption is calculated to include the 1st day of responsibility.	Compliant
e	ICP switches out part way through a month on an estimated switch reading	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
j	Unmetered load for a full month	Consumption is calculating based on daily unmetered kWh for full month.	Not applicable – no unmetered load
k	Unmetered load for a part month	Consumption is calculating based on daily unmetered kWh for “active” days of the month.	Not applicable – no unmetered load
l	Network/GXP/Connection (POC) alters partway through a month.	Consumption is separated and calculated for the separate portions of where it is to be reconciled to.	Compliant
m	ICP with a customer read during the month	Customer reads are not used to calculate historic estimate, unless they have been	Not applicable – no customer reads

Test	Scenario	Test expectation	Result
		validated against a set of validated readings from another source.	
n	ICP with a photo read during the month	Photo reads are not used to calculate historic estimate, unless they have been validated against a set of validated readings from another source.	Not applicable – no photo reads
o	ICP has a meter with a multiplier greater than 1	The multiplier is applied correctly.	Compliant

Audit outcome

Compliant

12.12. Forward estimate process (Clause 6 Schedule 15.3)

Code reference

Clause 6 Schedule 15.3

Code related audit information

Forward estimates may be used only in respect of any period for which an historical estimate cannot be calculated.

The methodology used for calculating a forward estimate may be determined by the reconciliation participant, only if it ensures that the accuracy is within the percentage of error specified by the Authority.

Audit observation

The process to create forward estimates was reviewed.

Forward estimates were checked for accuracy by analysing the GR170 file for variances between revisions over the audit period.

Audit commentary

TODD

To minimise forward estimates, TODD runs a process to add end of month AMI readings to Orion where they are available. This is completed mid-month to add the previous month's end readings.

Forward estimates are calculated using the following methods in order of preference:

- HHR interval data,
- the profiled daily average consumption between the previous two actual reads; initial submissions use a flat line profile to calculate the forward estimate, and revisions are profiled using SASV, and
- zero where there is no HHR interval data or less than two actual reads.

The accuracy of the initial submission, in comparison to each subsequent revision is required to be within 15%. The table below shows the number of balancing areas where this target was not met.

Count of balancing areas differences over 15%.

Month	Over ±15%				Over ±15% and ±100,000 kWh				Total Balancing Areas
	Revision 1	Revision 3	Revision 7	Revision 14	Revision 1	Revision 3	Revision 7	Revision 14	
Apr-22	6	5	7	8	-	-	-	-	216
May-22	7	15	8	16	-	-	-	-	217
Jun-22	7	9	12	13	-	-	-	-	219
Jul-22	7	9	14	15	-	-	-	-	219
Aug-22	4	8	12	12	-	-	-	-	222
Sep-22	4	10	11	11	-	-	-	-	224
Oct-22	3	9	9	10	-	-	-	-	223
Nov-22	5	7	7	7	-	-	-	-	223
Dec-22	7	8	9	9	-	-	-	-	224
Jan-23	3	6	6		-	-	-		227
Feb-23	2	7	8		-	-	-		226
Mar-23	4	6	7		-	-	-		228

Month	Over ±15%				Over ±15% and ±100,000 kWh				Total Balancing Areas
	Revision 1	Revision 3	Revision 7	Revision 14	Revision 1	Revision 3	Revision 7	Revision 14	
Apr-23	5	7	6		-	-	-		228
May-23	1	4	7		-	-	-		230
Jun-23	4	11	12		-	-	-		230
Jul-23	9	11	12		-	-	-		233
Aug-23	2	6			-	-			233
Sep-23	3	11			-	-			231
Oct-23	8	9			-	-			231
Nov-23	6	10			-	-			236
Dec-23	4				-				238

The total variation between revisions at an aggregate level is shown below.

Month	Variation				Volume impact			
	Revision 1	Revision 3	Revision 7	Revision 14	Revision 1	Revision 3	Revision 7	Revision 14
Apr-22	-0.06%	-0.10%	-0.13%	-0.03%	37,986	66,456	91,236	18,710

Month	Variation				Volume impact			
	Revision 1	Revision 3	Revision 7	Revision 14	Revision 1	Revision 3	Revision 7	Revision 14
May-22	-1.45%	-1.52%	-1.50%	-1.41%	1,140,546	1,193,526	1,176,429	1,111,695
Jun-22	-2.11%	-2.17%	-2.16%	-2.14%	1,801,014	1,855,123	1,842,733	1,826,938
Jul-22	-0.91%	-1.01%	-1.03%	-1.04%	827,897	926,324	943,412	948,558
Aug-22	0.01%	-0.12%	-0.16%	-0.18%	-11,900	105,752	138,360	156,546
Sep-22	0.49%	0.38%	0.37%	0.37%	-390,955	-297,021	-288,873	-290,786
Oct-22	1.07%	0.70%	0.69%	0.65%	-789,546	-519,631	-513,205	-484,810
Nov-22	1.03%	0.84%	0.91%	0.85%	-684,032	-556,652	-599,964	-563,211
Dec-22	0.85%	0.84%	0.92%	0.77%	-552,210	-546,749	-597,889	-502,730
Jan-23	-0.06%	0.18%	0.17%		39,425	-114,590	-110,791	
Feb-23	0.34%	0.35%	0.31%		-202,645	-208,025	-185,655	
Mar-23	-0.10%	0.00%	-0.12%		70,686	2,244	79,392	
Apr-23	-0.57%	-0.50%	-0.61%		371,516	324,043	395,355	
May-23	-1.19%	-1.30%	-1.37%		899,499	984,104	1,034,892	

Month	Variation				Volume impact			
	Revision 1	Revision 3	Revision 7	Revision 14	Revision 1	Revision 3	Revision 7	Revision 14
Jun-23	-1.43%	-1.55%	-1.68%		1,155,307	1,252,470	1,357,307	
Jul-23	-1.51%	-1.43%	-1.44%		1,303,523	1,233,482	1,238,266	
Aug-23	-0.47%	-0.97%			415,637	865,464		
Sep-23	1.57%	1.30%			-1,127,131	-939,907		
Oct-23	0.68%	0.19%			-467,187	-128,384		
Nov-23	0.31%	-0.06%			-198,574	40,225		
Dec-23	0.80%				-497,028			

There were no balancing area differences where the variation between revisions was more than ± 15% and ± 100,000 kWh. I reviewed a sample of balancing area differences over 15% for Revision 3 for November 2023 and found the differences were caused by backdated switches and new connections and forward estimates which were higher or lower than the actual data.

WISE

The WISE forward estimate process is based on estimated reads entered in PEBS. The estimated reads are calculated from the average daily consumption, which is based on actual read history. If no historical information is available, the average daily consumption provided by the customer on sign up is used.

The accuracy of the initial submission, in comparison to each subsequent revision is required to be within 15%. The table below shows the number of balancing areas where this target was not met.

Count of balancing areas differences over 15%.

Month	Over ±15%				Over ±15% and ±100,000 kWh				Total Balancing Areas
	Revision 1	Revision 3	Revision 7	Revision 14	Revision 1	Revision 3	Revision 7	Revision 14	
Apr-22	1	1	1	1	-	-	-	-	20
May-22	-	1	1	1	-	-	-	-	22
Jun-22	-	-	-	-	-	-	-	-	22
Jul-22	-	-	-	-	-	-	-	-	22
Aug-22	-	-	-	-	-	-	-	-	22
Sep-22	-	-	-	-	-	-	-	-	23
Oct-22	-	-	-	-	-	-	-	-	24
Nov-22	1	1	1	1	-	-	-	-	24
Dec-22	-	-	-	-	-	-	-	-	24

Month	Over ±15%				Over ±15% and ±100,000 kWh				Total Balancing Areas
	Revision 1	Revision 3	Revision 7	Revision 14	Revision 1	Revision 3	Revision 7	Revision 14	
Jan-23	-	-	-		-	-	-		24
Feb-23	-	1	1		-	-	-		25
Mar-23	-	-	-		-	-	-		25
Apr-23	-	-	-		-	-	-		25
May-23	-	1	1		-	-	-		25
Jun-23	-	1	1		-	-	-		25
Jul-23	-	-	-		-	-	-		25
Aug-23	-	-			-	-			25
Sep-23	-	-			-	-			26
Oct-23	-	-			-	-			26
Nov-23	-	-			-	-			27
Dec-23	-				-				27

The total variation between revisions at an aggregate level is shown below.

Month	Variation				Volume impact			
	Revision 1	Revision 3	Revision 7	Revision 14	Revision 1	Revision 3	Revision 7	Revision 14
Apr-22	-0.12%	-0.04%	-0.04%	-0.04%	3,496	1,033	1,096	1,166
May-22	-0.12%	-0.03%	-0.04%	-0.07%	4,109	957	1,536	2,587
Jun-22	-0.28%	-0.19%	-0.19%	-0.22%	11,117	7,479	7,644	8,895
Jul-22	-0.23%	-0.20%	-0.21%	-0.25%	10,066	8,437	8,954	10,882
Aug-22	-0.16%	-0.12%	-0.11%	-0.17%	6,592	4,888	4,505	6,928
Sep-22	-0.08%	-0.08%	-0.09%	-0.18%	2,768	2,842	3,378	6,369
Oct-22	-0.09%	-0.14%	-0.15%	-0.20%	2,920	4,863	5,160	6,721
Nov-22	-0.14%	-0.07%	-0.07%	-0.14%	3,946	1,972	2,140	3,968
Dec-22	-0.02%	0.08%	0.05%	-0.03%	460	-2,255	-1,532	764
Jan-23	-0.06%	-0.07%	-0.06%		1,702	1,910	1,823	
Feb-23	-0.06%	-0.09%	-0.08%		1,552	2,198	2,134	
Mar-23	-1.60%	-0.15%	-0.17%		46,532	4,205	4,816	

Month	Variation				Volume impact			
	Revision 1	Revision 3	Revision 7	Revision 14	Revision 1	Revision 3	Revision 7	Revision 14
Apr-23	-0.06%	0.01%	-0.08%		1,728	-373	2,407	
May-23	0.00%	-0.15%	-0.26%		-132	5,253	8,853	
Jun-23	0.13%	-0.14%	-0.20%		-4,976	5,589	8,081	
Jul-23	-0.01%	-0.23%	-0.28%		362	9,815	11,737	
Aug-23	0.05%	-0.05%			-1,982	2,333		
Sep-23	0.69%	0.25%			-23,127	-8,416		
Oct-23	0.19%	0.08%			-6,089	-2,515		
Nov-23	-0.23%	-0.12%			6,612	3,472		
Dec-23	-0.02%				501			

There were no balancing area differences where the variation between revisions was more than ± 15% and ± 100,000 kWh. I reviewed a sample of balancing area differences over 15% for Revision 3 for November 2023 and found the differences was caused by a backdated switch in with consumption which was higher than expected.

HNET

The HNET forward estimate process is a straight line process based on historic daily average consumption. Where there is insufficient read history to estimate, the average daily kWh from the incoming CS file will be used, or an average of 5 kWh per day for residential customers or an agreed daily average for commercial customers.

The accuracy of the initial submission, in comparison to each subsequent revision is required to be within 15%, and this target was met for most balancing areas.

Count of balancing areas differences over 15%.

Month	Over ±15%				Over ±15% and ±100,000 kWh				Total Balancing Areas
	Revision 1	Revision 3	Revision 7	Revision 14	Revision 1	Revision 3	Revision 7	Revision 14	
Apr-22	-	4	4	4	-	-	-	-	78
May-22	2	3	3	4	-	-	-	-	78
Jun-22	2	4	4	5	-	-	-	-	78
Jul-22	4	4	4	5	-	-	-	-	78
Aug-22	3	5	6	6	-	-	-	-	78
Sep-22	3	3	6	6	-	-	-	-	82
Oct-22	2	3	5	5	-	-	-	-	81
Nov-22	1	4	5	6	-	-	-	-	82
Dec-22	-	3	3	4	-	-	-	-	84

Month	Over ±15%				Over ±15% and ±100,000 kWh				Total Balancing Areas
	Revision 1	Revision 3	Revision 7	Revision 14	Revision 1	Revision 3	Revision 7	Revision 14	
Jan-23	-	1	1		-	-	-		84
Feb-23	-	1	1		-	-	-		85
Mar-23	1	1	2		-	-	-		85
Apr-23	1	-	1		-	-	-		85
May-23	1	2	2		-	-	-		85
Jun-23	1	2	2		-	-	-		84
Jul-23	1	1	1		-	-	-		84
Aug-23	1	1			-	-			84
Sep-23	2	2			-	-			84
Oct-23	1	3			-	-			84
Nov-23	2	1			-	-			85
Dec-23	1				-				84

The total variation between revisions at an aggregate level is shown below.

Month	Variation				Volume impact			
	Revision 1	Revision 3	Revision 7	Revision 14	Revision 1	Revision 3	Revision 7	Revision 14
Apr-22	-0.12%	-0.10%	0.10%	0.09%	5,746	4,872	-4,831	-4,085
May-22	-0.22%	-0.38%	-0.37%	-0.26%	12,625	21,430	20,778	14,930
Jun-22	-0.15%	-0.05%	-0.17%	0.00%	9,852	3,225	11,048	-154
Jul-22	0.36%	0.44%	0.32%	0.28%	-25,806	-31,880	-23,093	-20,450
Aug-22	-0.14%	-0.03%	-0.14%	-0.12%	9,461	1,749	9,700	8,318
Sep-22	-0.02%	0.15%	0.06%	0.09%	958	-9,215	-3,638	-5,257
Oct-22	-0.09%	0.06%	-0.07%	0.21%	5,027	-3,289	4,160	-11,745
Nov-22	0.17%	0.35%	0.18%	0.24%	-8,486	-17,411	-8,960	-11,892
Dec-22	-0.09%	-0.05%	-0.08%	-0.02%	4,494	2,442	4,144	1,075
Jan-23	-0.11%	-0.16%	-0.09%		5,538	7,797	4,662	
Feb-23	0.13%	0.17%	0.15%		-5,945	-7,910	-7,087	
Mar-23	-0.01%	-0.08%	0.00%		532	4,238	-25	

Month	Variation				Volume impact			
	Revision 1	Revision 3	Revision 7	Revision 14	Revision 1	Revision 3	Revision 7	Revision 14
Apr-23	-0.05%	-0.32%	-0.30%		2,691	17,099	15,768	
May-23	-0.27%	-0.57%	-0.57%		17,049	36,676	36,418	
Jun-23	-0.36%	-0.40%	-0.42%		26,486	29,420	30,784	
Jul-23	-0.17%	-0.33%	-0.44%		13,078	25,724	34,782	
Aug-23	-0.07%	-0.22%			5,511	18,099		
Sep-23	1.35%	1.39%			-89,089	-91,696		
Oct-23	0.06%	-0.09%			-3,696	5,526		
Nov-23	0.06%	-0.03%			-3,092	1,456		
Dec-23	-0.07%				4,162			

There were no balancing area differences where the variation between revisions was more than ± 15% and ± 100,000 kWh. I reviewed all balancing area differences over 15% for Revision 3 for November 2023 and found the differences were caused by backdated meter changes and forward estimates which were higher or lower than the actual data.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 12.12 With: 6 Schedule 15.3 From: 01-Apr-22 To: 31-Dec-23	**TODD, HNET** and **WISE** Some balancing area differences where the variation between revisions was more than ± 15% were caused by forward estimates which were higher or lower than the actual data. Potential impact: Medium Actual impact: Low Audit history: Once Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are strong, as they are sufficient to ensure most data is accurate. The audit risk rating is low because good estimation processes are in place, and initial data is replaced with revised data and washed up.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. Following our previous audit non-compliance under this clause, TODD have continued to use end of month reads for ICPs where AMI data is available. This has resulted in TODD's initial submissions becoming more accurate as the proportion of Historic estimates increase and Forward estimates decrease. Additionally, increased consumption based on starting and ending end of month reads reduces the effect of profiling, further reducing the variance between the initial submission and subsequent revisions. TODD incorporated this change for submission months starting February 2019 onwards. **WISE:** Non-Compliance accepted. Forward estimation in WISE is calculated based on the usage entered by the customer upon registration, while estimate reads are based on actual usage data from past reading history. Occasionally, significant discrepancies can occur due to backdated bills from previous retailers, in these instances WISE utilises the RR process to adjust the reading values to minimise discrepancies.	Ongoing	Identified

HNET: Non-Compliance accepted. There was a significant discrepancy of over due to incorrectly entered profile information for ICP 0326516743LC9D7. Refer to section 11.2		
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD: TODD will continue entering end of month reads for ICPs where AMI data is available. This will ensure a high degree of accuracy in the initial submission and smaller variances between the initial and subsequent revisions. TODD recognises it will be an on-going challenge to achieve full compliance with this clause due to factors such as legacy meters, mid-month reads and the effects of aggressive profiling. **WISE & HNET:** As above	Ongoing	

12.13. Compulsory meter reading after profile change (Clause 7 Schedule 15.3)

Code reference

Clause 7 Schedule 15.3

Code related audit information

If the reconciliation participant changes the profile associated with a meter, it must, when determining the volume information for that meter and its respective ICP, use a validated meter reading or permanent estimate on the day on which the profile change is to take effect.

The reconciliation participant must use the volume information from that validated meter reading or permanent estimate in calculating the relevant historical estimates of each profile for that meter.

Audit observation

The event detail report was reviewed to identify ICPs with profile changes. A sample of ICPs with profile changes were reviewed to confirm that there was an actual reading on the day of the profile change.

Audit commentary

TODD

In the event of a profile change, TODD uses a validated meter reading on the day that the change is effective. A sample of eight profile changes were checked and an actual meter reading was recorded on the day of the profile change, and the day before the profile change.

WISE

WISE only uses the RPS profile, and no profile changes have occurred.

HNET

HNET only uses the HHR, PV1 and RPS profiles. Profile changes to add or remove PV1 profile are usually created by a robotic process when an I flow meter register with the settlement indicator set to yes is added or removed. The robotic process applies the current date as the event date, or if the change is made manually the user selects the event date.

There were three profile changes during the audit period:

- 0000546124NR68F was updated to RPS PV1 by the robotic process from the date the MEP updated the registry to include an I flow register; the MEP record was later updated to remove the I flow meter's settlement indicator and HNET corrected the profile,
- 0414128044LC7CD was updated manually with an event date which matched the CS receipt date for an ICP which had a settled I flow register on switch in, but should have been updated from the CS event date, and
- 1000549774PC17C was manually updated to remove an I flow register effective from the previous trader update.

ICP 1000549774PC17C's profile change was not made on an actual or permanent estimate reading. The ICP switched in on 28 April 2023 and no actual or permanent estimate readings were available until 23 May 2023.

Description	Recommendation	Audited party comment	Remedial action
Profile changes	**HNET** Review the profile change process to ensure that profile changes are applied from the correct date, and on an actual or permanent estimate reading.	**HNET** Recommendation accepted. HNET will review the current weekly internal profile change process whether profile changes are applied with the correct date and actual or permanent estimate reading.	Identified

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 12.13 With: 7 Schedule 15.3 From: 02-May-23 To: 02-May-23	**HNET** ICP 1000549774PC17C's profile change was not made on an actual or permanent estimate reading. The ICP switched in on 28 April 2023 and no actual or permanent estimate readings were available until 23 May 2023. Potential impact: Low Actual impact: Low Audit history: None Controls: Weak Breach risk rating: 3
Audit risk rating	**Rationale for audit risk rating**

Low	The controls are weak because they do not ensure that profile changes are made on the correct date or on an actual or permanent estimate reading. The impact is low because a small number of profile changes occur.

Actions taken to resolve the issue	**Completion date**	**Remedial action status**
HNET: Non-Compliance accepted	Q1 2025	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
HNET: HNET will provide internal training focused on the accuracy of event dates and will also ensure the addition of actual or permanent estimated readings for the events.	Q1 2025	

13. SUBMISSION FORMAT AND TIMING

13.1. Provision of submission information to the RM (Clause 8 Schedule 15.3)

Code reference

Clause 8 Schedule 15.3

Code related audit information

For each category 3 of higher metering installation, a reconciliation participant must provide half hour submission information to the reconciliation manager.

For each category 1 or category 2 metering installation, a reconciliation participant must provide to the reconciliation manager:

- *Half hour submission information; or*
- *Non half hour submission information; or*
- *A combination of half hour submission information and non-half hour submission information*

However, a reconciliation participant may instead use a profile if:

- *The reconciliation participant is using a profile approved in accordance with clause Schedule 15.5; and*
- *The approved profile allows the reconciliation participant to provide half hour submission information from a non-half hour metering installation; and*
- *The reconciliation participant provides submission information that complies with the requirements set out in the approved profile.*

Half hour submission information provided to the reconciliation manager must be aggregated to the following levels:

- *NSP code,*
- *reconciliation type,*
- *profile,*
- *loss category code,*
- *flow direction,*
- *dedicated NSP,*
- *trading period.*

The non-half hour submission information that a reconciliation participant submits must be aggregated to the following levels:

- *NSP code,*
- *reconciliation type,*
- *profile,*
- *loss category code,*
- *flow direction,*
- *dedicated NSP,*
- *consumption period or day.*

Audit observation

Processes to ensure that information used to aggregate the reconciliation reports is consistent with the registry were reviewed in **section 2.1**. Aggregation of NHH volumes is discussed in **section 12.3**, aggregation of HHR volumes is discussed in **section 11.4** and NSP volumes are discussed in **section 12.6**.

Audit commentary

A sample of submission data was reviewed for TODD, WISE and HNET which confirmed that submission data is in the appropriate format and is aggregated to the following level:

- NSP code,
- reconciliation type,
- profile,
- loss category code,
- flow direction,
- dedicated NSP, and
- trading period for half hour metered ICPs and consumption period or day for all other ICPs.

TODD

The submitted data was also compared to billed data in **section 11.3**, and I confirmed that the submission data appears reasonable. No report aggregation errors were identified.

WISE

The submitted data was also compared to billed data in **section 11.3**, and I confirmed that the submission data appears reasonable.

One aggregation error was identified, between June 2023 and April 2024 ICP days where volumes for ICP 0009951282CNBD7 were recorded against BOB0331 but should have been recorded against BOB1101. The NSP has been corrected and revised submission information will be washed up. Compliance is recorded in this section because the process to prepare submission information is correct, but an exception occurred because PEBS recorded an incorrect NSP. Non-compliance is recorded in **section 12.7** for inaccurate submission information.

HNET

The submitted data was also compared to billed data in **section 11.3**, and I confirmed that the submission data appears reasonable.

One aggregation error was identified, ICP 0326516743LC9D7 had an incorrect submission type recorded on the registry from 1 July 2023 until 23 April 2024 which prevented TODD from providing HHR volumes and ICP days on HNET's behalf. The submission type error was corrected as soon as it was identified and revised submission data will be washed up. Compliance is recorded in this section because the process to prepare submission information is correct, but an exception occurred because the registry recorded an incorrect submission type. Non-compliance is recorded in **section 12.7** for inaccurate submission information.

Audit outcome

Compliant

13.2. Reporting resolution (Clause 9 Schedule 15.3)

Code reference

Clause 9 Schedule 15.3

Code related audit information

When reporting submission information, the number of decimal places must be rounded to not more than two decimal places.

If the unrounded digit to the right of the second decimal place is greater than or equal to five, the second digit is rounded up, and if the digit to the right of the second decimal place is less than five, the second digit is unchanged.

Audit observation

I reviewed the rounding of data on the AV090, AV140 and AV080 reports as part of the aggregation checks. AV130 submissions were reviewed in **section 12.6**.

Audit commentary

TODD

Submission information is appropriately rounded to no more than two decimal places.

WISE

Up to April 2024, AV080 submission data was produced to four decimal places and rounded to three decimal places. Rounding was updated in April 2024 and submissions are now rounded to two decimal places.

HNET

Submission information is appropriately rounded to no more than two decimal places.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 13.2 With: 9 Schedule 15.3 From: 01-Oct-22 To: 31-Mar-24	**WISE** Up to April 2024, AV080 submission data was produced to four decimal places and rounded to three decimal places. Rounding was updated in April 2024 and submissions are now rounded to two decimal places. Potential impact: Low Actual impact: None Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are strong because the files are now rounded to two decimal places. The impact is low because the submission information was accurate and the reconciliation manager's system accepted the files with the extra decimal places.

Actions taken to resolve the issue	Completion date	Remedial action status
WISE: Non-Compliance accepted. WISE implemented changes to the submission rounding in April 2024 and are now two decimal places. There was no resolution	April 2024	Cleared

required as the original submissions prior to April 2024 with additional decimal places were accepted by the reconciliation manager.		
Preventative actions taken to ensure no further issues will occur	**Completion date**	
WISE: As above	April 2024	

13.3. Historical estimate reporting to RM (Clause 10 Schedule 15.3)

Code reference

Clause 10 Schedule 15.3

Code related audit information

By 1600 hours on the 13th business day of each reconciliation period the reconciliation participant must report to the reconciliation manager the proportion of historical estimates per NSP contained within its non-half hour submission information.

The proportion of submission information per NSP that is comprised of historical estimates must (unless exceptional circumstances exist) be:

- *at least 80% for revised data provided at the month 3 revision (clause 10(3)(a)),*
- *at least 90% for revised data provided at the month 7 revision (clause 10(3)(b)),*
- *100% for revised data provided at the month 14 revision (clause 10(3)(c)).*

Audit observation

The timeliness of submissions of historic estimate was reviewed in **section 12.2**.

I reviewed a sample of AV080 reports to determine whether historic estimate requirements were met.

Audit commentary

TODD

The quantity of historical estimates is contained in the submission file and is not a separate report.

Historic estimate targets were not met for all NSPs for all revisions checked. Review of a sample of NSPs where the thresholds were not met found that actual readings had not been obtained for some ICPs and permanent estimate readings had not been entered.

Month	Revision 3 80% Met	Revision 7 90% Met	Revision 14 100% Met	Total
Jan-2022	305	303	285	305
Feb-2022	304	302	284	304
Mar-2022	305	301	284	305
Apr-2022	305	304	285	305

Month	Revision 3 80% Met	Revision 7 90% Met	Revision 14 100% Met	Total
May-2022	305	305	291	306
Jun-2022	307	307	296	308
Jul-2022	307	307	298	308
Aug-2022	311	311	303	311
Sep-2022	313	313	305	313
Oct-2022	312	312	304	312
Nov-2022	312	310	304	312
Dec-2022	313	311	304	313
Jan-2023	316	314		316
Feb-2023	315	314		315
Mar-2023	316	316		316
Apr-2023	318	318		318
May-2023	320	320		320
Jun-2023	320	320		320
Jul-2023	646	323		646
Aug-2023	322			322
Sep-2023	321			321
Oct-2023	322			322
Nov-2023	327			327

The table below shows that the percentage HE at a summary level for all NSPs is well above the required targets for revisions 3 and 7, and below the required target for Revision 14.

Month	Revision 3 80% Target	Revision 7 90% Target	Revision 14 100% Target
Jan-2022	97.675%	99.455%	99.995%
Feb-2022	98.102%	99.508%	99.995%
Mar-2022	98.072%	99.577%	99.995%
Apr-2022	98.341%	99.624%	99.995%
May-2022	98.375%	99.705%	99.995%
Jun-2022	98.734%	99.769%	99.997%
Jul-2022	99.092%	99.812%	99.998%
Aug-2022	99.083%	99.812%	99.999%
Sep-2022	99.124%	99.808%	99.999%
Oct-2022	99.160%	99.815%	99.999%
Nov-2022	99.142%	99.822%	99.999%
Dec-2022	99.095%	99.804%	99.999%
Jan-2023	99.221%	99.806%	
Feb-2023	99.141%	99.869%	
Mar-2023	99.157%	99.898%	
Apr-2023	99.290%	99.894%	
May-2023	99.301%	99.890%	
Jun-2023	99.450%	99.886%	
Jul-2023	99.420%	99.871%	
Aug-2023	99.420%		
Sep-2023	99.416%		

Month	Revision 3 80% Target	Revision 7 90% Target	Revision 14 100% Target
Oct-2023	99.381%		
Nov-2023	99.238%		

WISE

The quantity of historical estimates is contained in the submission file and is not a separate report. Historic estimate targets were met for all revisions. Read attainment rates are discussed in **sections 6.9, 6.10** and **6.11**.

Month	Revision 3 80% Met	Revision 7 90% Met	Revision 14 100% Met	Total
Jan-2022	56	56	56	56
Feb-2022	62	62	62	62
Mar-2022	68	68	68	68
Apr-2022	72	72	72	72
May-2022	74	74	74	74
Jun-2022	74	74	74	74
Jul-2022	73	73	73	73
Aug-2022	74	74	74	74
Sep-2022	75	75	75	75
Oct-2022	79	79	79	79
Nov-2022	77	77	77	77
Dec-2022	79	79	79	79
Jan-2023	81	81		81
Feb-2023	82	82		82
Mar-2023	82	82		82

Month	Revision 3 80% Met	Revision 7 90% Met	Revision 14 100% Met	Total
Apr-2023	83	83		83
May-2023	82	82		82
Jun-2023	83	83		83
Jul-2023	83	83		83
Aug-2023	82			82
Sep-2023	84			84
Oct-2023	84			84
Nov-2023	87			87

The table below shows that the percentage HE at a summary level for all NSPs is at or above the required targets.

Month	Revision 3 80% Target	Revision 7 90% Target	Revision 14 100% Target
Jan-2022	99.9946%	100.0000%	100.0000%
Feb-2022	99.9858%	100.0000%	100.0000%
Mar-2022	99.9866%	100.0000%	100.0000%
Apr-2022	99.9972%	100.0000%	100.0000%
May-2022	99.9806%	100.0000%	100.0000%
Jun-2022	99.9622%	100.0000%	100.0000%
Jul-2022	100.0000%	100.0000%	100.0000%
Aug-2022	100.0000%	100.0000%	100.0000%
Sep-2022	100.0000%	100.0000%	100.0000%
Oct-2022	100.0000%	100.0000%	100.0000%

Month	Revision 3 80% Target	Revision 7 90% Target	Revision 14 100% Target
Nov-2022	100.0000%	100.0000%	100.0000%
Dec-2022	100.0000%	100.0000%	100.0000%
Jan-2023	100.0000%	100.0000%	
Feb-2023	100.0000%	100.0000%	
Mar-2023	100.0000%	100.0000%	
Apr-2023	100.0000%	100.0000%	
May-2023	100.0000%	100.0000%	
Jun-2023	100.0000%	100.0000%	
Jul-2023	100.0000%	100.0000%	
Aug-2023	100.0000%		
Sep-2023	100.0000%		
Oct-2023	100.0000%		
Nov-2023	100.0000%		

HNET

The quantity of historical estimates is contained in the submission file and is not a separate report.

Historic estimate targets were met for all Revision 14 submissions checked but were not met for some revision 3 and 7 submissions. I checked a sample of 13 NSP submissions where the read attainment thresholds were not met and confirmed that they related to ICPs where reads had not been obtained. Read attainment rates are discussed in **sections 6.9, 6.10** and **6.11**.

Month	Revision 3 80% Met	Revision 7 90% Met	Revision 14 100% Met	Total
Jan-2022	129	129	129	129
Feb-2022	130	130	130	130
Mar-2022	130	130	130	130
Apr-2022	131	131	131	131

Month	Revision 3 80% Met	Revision 7 90% Met	Revision 14 100% Met	Total
May-2022	131	131	131	131
Jun-2022	131	130	131	131
Jul-2022	131	129	131	131
Aug-2022	132	131	132	132
Sep-2022	136	136	136	136
Oct-2022	135	135	135	135
Nov-2022	138	138	138	138
Dec-2022	140	140	140	140
Jan-2023	140	140		140
Feb-2023	141	140		141
Mar-2023	141	139		141
Apr-2023	142	141		142
May-2023	142	141		142
Jun-2023	141	141		141
Jul-2023	280	139		280
Aug-2023	140			140
Sep-2023	140			140
Oct-2023	140			140
Nov-2023	141			141

The table below shows that the percentage HE at a summary level for all NSPs is at or above the required targets.

Month	Revision 3 80% Target	Revision 7 90% Target	Revision 14 100% Target
Jan-2022	98.8232%	99.8314%	100.0000%
Feb-2022	99.5717%	99.9465%	100.0000%
Mar-2022	99.5507%	99.9451%	100.0000%
Apr-2022	99.6211%	99.9864%	100.0000%
May-2022	99.2345%	99.9246%	100.0000%
Jun-2022	99.2014%	99.9408%	100.0000%
Jul-2022	99.7264%	99.9233%	100.0000%
Aug-2022	99.7580%	99.9430%	100.0000%
Sep-2022	99.6250%	99.9677%	100.0000%
Oct-2022	99.5360%	99.9297%	100.0000%
Nov-2022	99.4060%	99.9060%	100.0000%
Dec-2022	99.0882%	99.9125%	100.0000%
Jan-2023	99.1430%	99.8438%	
Feb-2023	99.4978%	99.8039%	
Mar-2023	99.1630%	99.7813%	
Apr-2023	99.4803%	99.8053%	
May-2023	99.4641%	99.8415%	
Jun-2023	99.6334%	99.9508%	
Jul-2023	99.6400%	99.9665%	
Aug-2023	99.6652%		
Sep-2023	99.5766%		

Month	Revision 3 80% Target	Revision 7 90% Target	Revision 14 100% Target
Oct-2023	99.6126%		
Nov-2023	99.5803%		

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 13.3 With: 10 of Schedule 15.3 From: 01-Jan-22 To: 31-May-23	**TODD** Historic estimate targets were not met for some revision 3, 7 and 14 submissions. **HNET** Historic estimate targets were not met for some revision 3 and 7 submissions. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	Overall, the controls are assessed to be moderate because compliance is achieved in most instances, but some improvements can be made. The impact is assessed to be low as good estimation processes are in place where historic estimate cannot be obtained.

Actions taken to resolve the issue	Completion date	Remedial action status
TODD: Non-Compliance accepted. TODD continues to actively work on gaining an actual read at the earliest timeframe as possible. Forward Estimates at R14 continue to be checked. TODD will again review the process of creating permanent estimate readings to ensure that we have historical estimates for all ICPs that have not obtained an 'Actual read' by R14 and are eligible for a permanent estimate. **HNET:**	Ongoing	Identified

Non-Compliance accepted. HNET endeavours to obtain actual reads for NHH meters. There were significant challenges faced by our external partner in maintaining sufficient workforce to conduct readings over 2023		
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TODD: TODD will continue focusing on optimising its standard by identifying and monitoring its performance and opportunities for improvement. **HNET:** HNET will continue to work with our external partners and contractors to make best efforts in gaining actual readings. There will a focus on migration of legacy meters to smart meters for the remainder of 2024 to mitigate the resource constraints faced by our external partners.	Ongoing	

CONCLUSION

Overall, compliance was high and non-compliances generally affected a small number of ICPs and events for manual processes, or only occurred under specific circumstances. The impact of the non-compliances was low and controls were generally strong or moderate, and Nova indicated that further control improvements are planned.

The audit found 35 non-compliances, and 16 recommendations are raised. The future risk rating has increased from 51 to 53. Although the number of non-compliance raised is the same as the previous audit, some non-compliances were for Code clauses where compliance was recorded previously, because no examples of non-compliance were identified during the previous audit. Where non-compliance was re-raised against the same Clauses as the previous audit I sometimes found the controls and/or impact had changed during the audit period. The change in rating does not correlate to a decline in performance.

I have considered this in conjunction with Nova's responses, which indicate that process improvements have or will be made to resolve a number of the issues identified. I agree that Nova's requested audit period of 16 months is reasonable based on the audit findings.

PARTICIPANT RESPONSE

TODD, WISE & HNET thank Provera for their work preparing this audit report, as well as our teams' work throughout the audit period.

Nova continues to demonstrate a high level of commitment to compliance and continuous improvement. Several key areas identified in the 2023 audit have been addressed.

- No new instances of non-compliance for the following areas:
    - Exceptional circumstances not upheld for several meters which were not read as well as best endeavours not shown for failure to read.
    - ICPs were not interrogated within their maximum interrogation cycle.
    - MEP not advised of bridged meters.
    - ICPs with inactive consumption failed to have their status updated to 'active'.
- Adoption of or in progress work for the implementation of changes as per auditor recommendations.

Nova acknowledges that there are still areas of non-compliance, with improvement to systems and processes currently in development. Resourcing constraints have largely been addressed, and current focus is process improvement and training of staff.

To enable Nova to establish changes, adopt further recommendations and prove improved compliance outcomes, and in recognition of Nova's continued high performance in achieving compliance outcomes, Nova requests an audit period of 16 months.