

ELECTRICITY INDUSTRY PARTICIPATION CODE
RECONCILIATION PARTICIPANT AUDIT REPORT



For

PIONEER ENERGY LTD
NZBN: 9429038759758

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EXECUTIVE SUMMARY

This Electricity Industry Participation Code Reconciliation Participant audit was performed at the request of **Pioneer Energy Limited (Pioneer)**, 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 V7.1.

Pioneer supplies 1,348 active HHR and NHH ICPs.

Registry information management and switching is completed by Pioneer.

HHR and DUML submission is completed by **EMS**, and compliance is recorded in their audit report, apart from a technical non-compliance relating to the HHR aggregates submission.

Pioneer created NHH volume and ICP days submissions using Orion up to the March 2021 submission period which was generated in April 2021. **John Candy Consulting** has created NHH volume and ICP days submissions as Pioneer's agent since the April 2021 submission period which was generated in May 2021. All revision submissions created from May 2021 onwards are created by John Candy Consulting, and this change has resolved Pioneer's previous audit issues relating to classification of forward and historic estimate, and historic estimate calculation.

Clause 8(1) of Schedule 15.1 requires that if a reconciliation participant intends to make a "material" change to any certified facilities, processes, or procedures then the changes must be subject to an audit prior to the change taking place. A material change audit was not completed prior to the change of agents. The actual impact of not completing a material change audit was low, because the transition was smooth, and the change has resulted in an increase in compliance.

Pioneer use the audit process as an educational opportunity and there were some areas where improvements or clarifications of the code's requirements identified during this audit. These have been corrected and documentation updated to prevent such occurrences in the future. Overall, the level of compliance has improved across the operation resulting in another significant reduction to the audit risk rating from 52 to 38 in this audit. As noted in the previous two audits, the total risk rating is inflated because some very minor non-compliances affecting a short period or small number of ICPs with little to no impact may be recorded as non-compliance in many report sections. For example, ICP 0006589570RN16A had under submission of 14 kWh which occurred on the decommissioning date and was recorded as non-compliance in sections 2.1, 3.9, 12.2, and 12.7. I have considered this along with Pioneer's comments and I agree with this recommendation.

The matters raised are shown in the tables below:

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Material change audit	1.11	16A.11	Material change audit not conducted for NHH reconciliation by John Candy Consulting.	Weak	Low	3	Disputed
Relevant information	2.1	15.2	<p>One ICP with incorrect the unmetered load recorded.</p> <p>ICP 0000014870DE7D8 was sent with the correct final read of 139,357 but this read was not updated in Orion resulting in under submission of 124 kWh.</p> <p>Two RR files were rejected in error resulting in 11,638 kWh being pushed to the gaining traders.</p> <p>One photo reading which was not validated according to the code was recorded as a validated reading and used to calculate historic estimate.</p> <p>Decommissioned ICP 0006589570RN16A had 14 kWh of consumption allocated to a day with decommissioned status and excluded from submission.</p> <p>Some corrections identified in the last audit were not completed and are now outside the 14-month revision cycle.</p>	Moderate	Low	2	Identified
Electrical Connection of Point of Connection	2.11	10.33A	One metered ICP did not have meter certification provided within five business days of the change to active status.	Strong	Low	1	Identified
Changes to registry information	3.3	10 Schedule 11.1	<p>Five late status updates to active.</p> <p>Seven late status updates to inactive.</p> <p>20 late trader updates.</p> <p>Three late ANZSIC code updates.</p>	Strong	Low	1	Identified
Provision of information to the registry manager	3.5	9 Schedule 11.1	Seven late status updates to active for new connections.	Strong	Low	1	Identified
Changes to unmetered load	3.7	9 (1(f) of Schedule 11.1	One ICP with the incorrect unmetered load value recorded.	Strong	Low	1	Identified
Losing trader response to switch request and event dates -	4.2	3 and 4 Schedule 11.3	All three CO coded AN files sampled were sent with the incorrect AN code. There was a total of nine CO coded AN files sent during the audit period.	Moderate	Low	2	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
standard switch			One of the three AA coded AN files sampled was sent with the incorrect code.				
Losing trader must provide final information - standard switch	4.3	5 Schedule 11.3	Seven CS breaches. Three of the seven ICPs with high average daily consumption values and all five of the typical sample of CS files checked were not consistent with the average consumption for the last read to read period in transfer CS files.	Moderate	Low	2	Investigating
Losing trader provides information - switch move	4.8	10(1) Schedule 11.3	72 AA coded AN files were sent with the incorrect code when AD was more accurate. One CO coded AN file sent when the customer's contract had expired.	Moderate	Low	2	Identified
Losing trader must provide final information - switch move	4.10	11 Schedule 11.3	All but one of the 18 CS files sampled (made up of five with zero average, five with high average and the eight CS file move switches sampled) with high had average daily consumption values that were not consistent with the average consumption for the last read to read period in transfer CS files. Eight switch move CS files contained incorrect last actual read dates.	Moderate	Low	2	Investigating
Gaining trader changes to switch meter reading - switch move	4.11	12 Schedule 11.3	Two RR files rejected in error resulting in 11,638 kWh being pushed to the gaining trader.	Moderate	Medium	4	Identified
Losing trader provision of information - gaining trader switch	4.13	17&18 Schedule 11.3	Four CO coded AN files sent when the customers' contract had expired.	Moderate	Low	2	Identified
Gaining trader to advise the registry manager - gaining trader switch	4.15	16 Schedule 11.3	One NA breach. All three DF coded NW files sampled were incorrectly coded. CE would have been more accurate.	Strong	Low	1	Identified
Distributed unmetered load	5.4	11 Schedule 15.3, Clause 15.37B	The Grey DC DUML database does not meet compliance for three clauses.	Moderate	Low	2	Unknown
Derivation of meter readings	6.6	3(2) Schedule 15.2	One photo reading which was not validated according to the code was recorded as a validated reading.	Strong	Low	1	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
NHH meter reading application	6.7	6 Schedule 15.2	The agreed switch reading was not applied in Orion for ICP 0000014870DE7D8 resulting in 124 kWh of under submission.	Moderate	Low	2	Disputed
Interrogate meters once	6.8	7(1) and (2) Schedule 15.2	One ICP was not read during the period of supply and exceptional circumstances were not proven.	Strong	Low	1	Disputed
Identification of readings	9.1	3(3) Schedule 15.2	One photo reading which was not validated according to the code was recorded as a validated reading.	Strong	Low	1	Identified
HHR aggregates information provision to the reconciliation manager	11.4	15.8	HHR aggregates file does not contain electricity supplied information.	Strong	Low	1	Cleared
Creation of submission information	12.2	15.4	Decommissioned ICP 0006589570RN16A had 14 kWh of consumption allocated to a day with decommissioned status and excluded from submission.	Strong	Low	1	Disputed
Allocation of submission information	12.3	15.5	Zeroing did not occur for ETT0011 for June 2020 revision 7.	Strong	Low	1	Identified
Accuracy of submission information	12.7	15.12	ICP 0000014870DE7D8 was sent with the correct final read of 139,357 but this read was not updated in Orion resulting in under submission of 124 kWh. One photo reading which was not validated according to the code was recorded as a validated reading and used to calculate historic estimate. Decommissioned ICP 0006589570RN16A had 14 kWh of consumption allocated to a day with decommissioned status and excluded from submission.	Strong	Low	1	Disputed
Forward estimate process	12.12	6 Schedule 15.3	Some balancing area differences between revisions were over the threshold because of inaccurate forward estimates.	Strong	Low	1	Identified
Historical estimate reporting to RM	13.3	10 Schedule 15.3	Historic estimate thresholds were not met for some revisions.	Moderate	Low	2	Investigating
Future Risk Rating						38	

Future risk rating	0	1-3	4-14	16-40	41-55	55+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

RECOMMENDATIONS

Subject	Section	Description	Status
Losing trader must provide final information	4.3	Investigate how daily average consumption logic is working as the ICPs sampled with a high average daily consumption did not match the expected outcomes.	Investigating

ISSUES

Subject	Section	Issue
Losing trader must provide final information	4.10	All ICPs C& I TOU category 1 and 2 can't comply with the CS file requirements as these do not have a "C" flagged accumulator and no reads can be sent. This is in conflict with the TR and MI switching process.

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

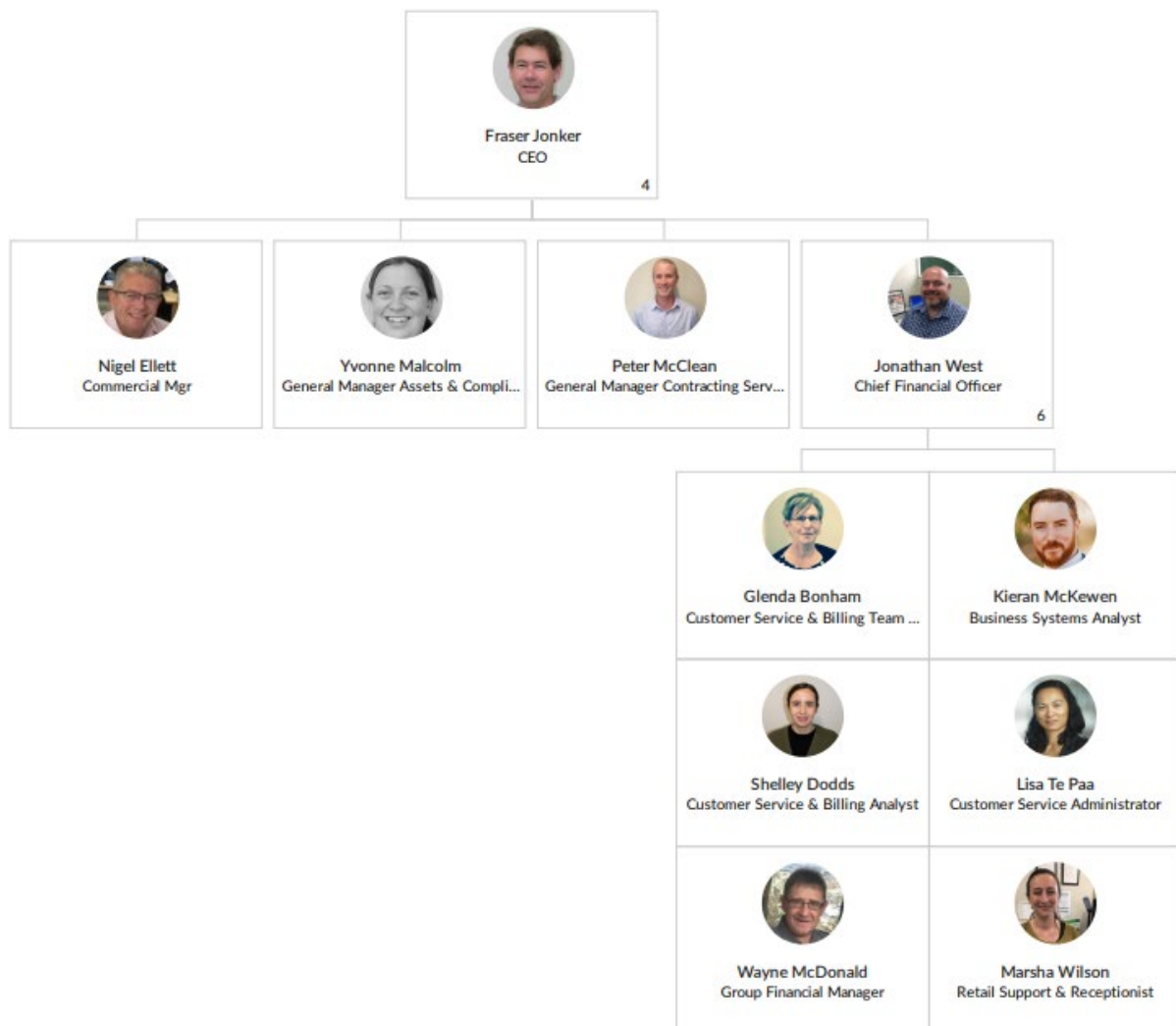
Current code exemptions were reviewed on the Electricity Authority website.

Audit commentary

There are no exemptions in place that are relevant to the scope of this audit.

1.2. Structure of Organisation

Pioneer provided a copy of their structure:



1.3. Persons involved in this audit

Auditors:

Name	Company	Role
Rebecca Elliot	Veritek Limited	Lead Auditor
Tara Gannon	Veritek Limited	Supporting Auditor

Pioneer personnel assisting with this audit:

Name	Title
Glenda Bonham	Retail Customer Service Team Leader
Jonathan West	Chief Financial Officer
Marsha Wilson	Retail Support and Receptionist
Shelley Dodds	Customer Service and Billing Analyst

EMS personnel assisting with this audit:

Name	Title
Ian Martin	Metering Services Manager

John Candy Consulting personnel assisting with this audit:

Name	Title
John Candy	Director

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

Use of agents was discussed with Pioneer.

Audit commentary

Pioneer uses the following agents:

Agent	Activity
Wells	NHH data collection.
AMS	HHR data collection.
EMS	HHR and DUMML submission.
John Candy Consulting	NHH submission for all submission files generated from May 2021 onwards.

Agent audits for Wells, AMS and EMS were completed within seven months of this audit. John Candy Consulting's processes were reviewed as part of this audit.

AMS (for Arc, AMS and Smartco meters), Intellihub (for Metrix and AMS meters), and FCLM provide data as MEPs and are subject to a separate audit regime.

All other functions are conducted in-house.

1.5. Hardware and Software

Pioneer

Pioneer uses the Orion system for functions included in the scope of the audit. Access to Orion is restricted using logins and passwords. Orion is backed up to Acronis cloud servers three times per day.

AMS, EMS and Wells

Agent systems are discussed in their agent audit reports.

John Candy Consulting

The Access Database (RM Tool) is provided and run by John Candy Consulting, along with Windows 10 and Microsoft Excel.

Online backups are made to OneDrive. Copies of files are also retained in dropbox which is shared with Pioneer.

Access to systems is restricted using logins and passwords.

1.6. Breaches or Breach Allegations

The EA confirmed that three alleged breaches occurred during the audit period:

Breach no	Breach of	Description	Outcome
2105PION1	Part 15 clause 15.2 (1) (a)	Pioneer duplicated their generation volume submissions for R3, R7 and R14 in December 2020, August 2020, and January 2020 respectively for the March 2021 consumption month.	No result yet
2105PION2	15.2(1)(a) Requirement to provide complete and accurate information	Pioneer Energy Limited (PION) failed to deliver accurate information to the reconciliation manager in their AV-080 (NHH submission file) for 202102 R3, 202010 R7 and 202003 R14. PION had a dedicated flag change at several of their NSPs. The flag changed from Y to N. PION failed to zero out the volumes at those NSPs for the previous submission under the Y flag, and therefore when submitting under the N flag, duplicated these volumes. The total volume duplicated amounted to 2,486.7MWh of X flows.	No result yet
2107PION1	Part 15 clause 15.2 (1) (a)	Pioneer Energy Limited (PION) failed to deliver accurate information to the Reconciliation Manager in their AV-080 (NHH submission file) for 202011 R7. PION had a dedicated flag change at several of their NSPs. The flag changed from Y to N. PION failed to zero out the volumes at those NSPs for the previous submission under the Y flag, and therefore when submitting under the N flag, duplicated these volumes.	No result yet

1.7. ICP Data

All active ICPs are summarised by metering category in the table below. All 18 active ICPs with a metering category of 9 or blank have unmetered load recorded.

Metering Category	12/07/21	20/08/20	29/11/19	07/03/19	22/03/18	25/05/17
1	1,160	1,283	1,266	1,664	1,143	1,205
2	104	153	177	240	285	298
3	39	62	69	98	124	117
4	16	27	41	49	56	46
5	11	11	11	10	11	17
9	8	9	9	11	6	10
Blank	10	10	16	-	-	-

All ICPs on the list file are summarised on the table below.

Status	Number of ICPs 12/07/21	Number of ICPs 20/08/20	Number of ICPs 29/11/19	Number of ICPs 07/03/19	Number of ICPs 22/03/18	Number of ICPs 25/05/17
Active (2,0)	1,348	1,555	1,589	1,906	1,349	1,428
Inactive – new connection in progress (1,12)	4	4	9	15	1	-
Inactive – electrically disconnected vacant property (1,4)	20	18	15	19	10	5
Inactive – electrically disconnected remotely by AMI meter (1,7)	1	2	2	1	1	0
Inactive – electrically disconnected at pole fuse (1,8)	4	3	2	2	2	2
Inactive – electrically disconnected due to meter disconnected (1,9)	6	1	1	1	1	1
Inactive – electrically disconnected at meter box fuse (1,10)	-	-	-	-	-	-
Inactive – electrically disconnected at meter box switch (1,11)	-	-	-	1	-	-
Inactive – electrically disconnected ready for decommissioning (1,6)	4	5	6	6	7	2
Inactive – reconciled elsewhere (1,5)	-	-	91	159	258	270
Decommissioned (3)	96	77	52	5	0	5

1.8. Authorisation Received

Pioneer provided a letter of authorisation.

1.9. Scope of Audit

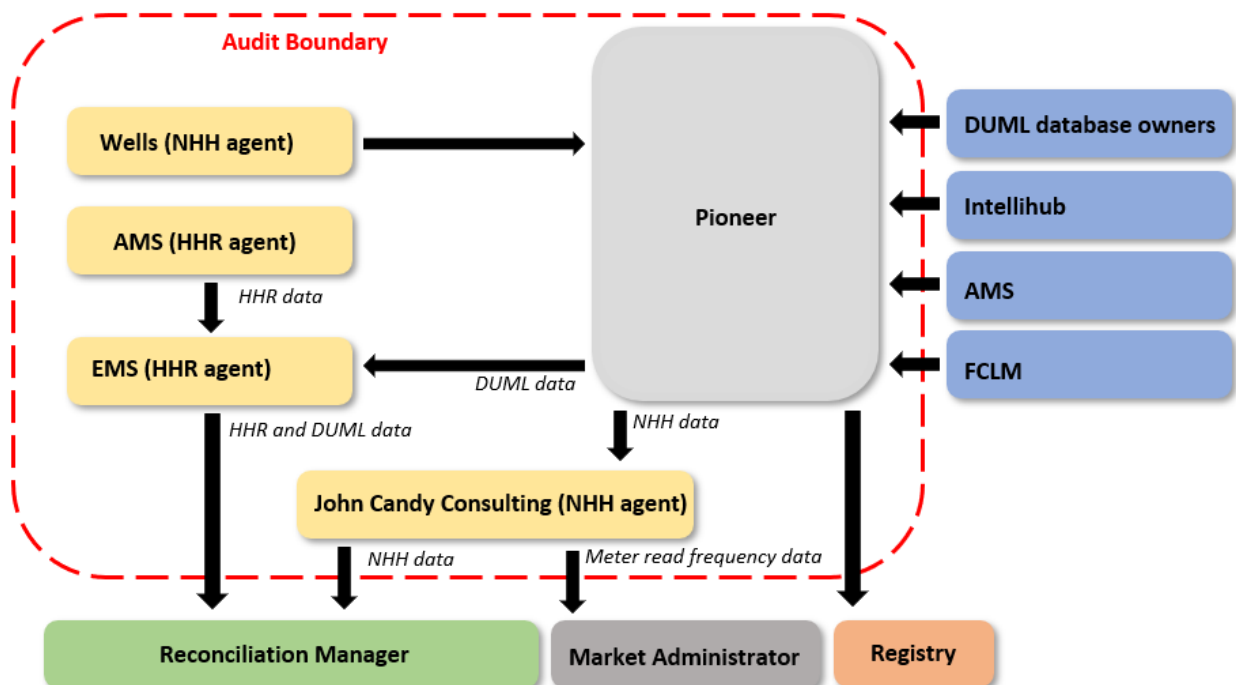
This Electricity Industry Participation Code Reconciliation Participant audit was performed at the request of Pioneer, to support their application for renewal of certification in accordance with clauses 5 and 7 of schedule 15.1.

The audit was conducted in accordance with the Guideline for Reconciliation Participant Audits V7.1, at Pioneer's premises in Alexandra on 28 & 29 September 2021, and remotely in September 2021.

The audit analysis was completed on:

- a registry list snapshot report and meter installation details report as of 12 July 2021, and
- a registry list, AC020 report, and event detail report for 1 October 2020 to 12 July 2021.

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



Tasks Requiring Certification Under Clause 15.38(1) of Part 15	Agents Involved in Performance of Tasks	MEPs Providing Data
(a) - Maintaining registry information and performing customer and embedded generator switching		
(b) – Gathering and storing raw meter data	Wells – NHH EMS – HHR AMS – HHR	AMS (for Arc, AMS and Smartco) Intellihub (for Intellihub and Metrix) FCLM
(c)(iii) - Creation and management of volume information	EMS – HHR and DUML John Candy Consulting – NHH	
(d) (i) – Calculation of ICP days	EMS – HHR John Candy Consulting – NHH	
(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	EMS – HHR	
(e) – Provision of submission information for reconciliation	EMS – HHR John Candy Consulting – NHH	
(f) - Provision of metering information to the Grid Owner	EMS	

Agent audits for Wells, AMS and EMS were completed within seven months of this audit. John Candy Consulting's processes were reviewed as part of this audit.

AMS (for Arc, AMS and Smartco meters), Intellihub (for Metrix and AMS meters), and FCLM provide data as MEPs and are subject to a separate audit regime.

1.10. Summary of previous audit

Pioneer's previous audit was conducted in November 2020 by Tara Gannon of Veritek Limited. The summary tables below show the statuses of the non-compliances, recommendations and issues raised in the previous audit. Further comment is made in the relevant sections of this report.

Table of Non-compliance

Subject	Section	Clause	Non-compliance	Status
Relevant information	2.1	15.2	<p>The registry validation is not sufficient to identify all discrepancies between Orion and the registry, including discrepancies which could impact the accuracy of reconciliation submissions.</p> <p>Four ICPs had incorrect status event dates recorded on the registry. One was corrected during the audit.</p> <p>Four ICPs had incorrect profiles recorded on the registry, but correct profiles were applied for submission.</p> <p>One trader update had an incorrect event date applied; and was corrected during the audit.</p> <p>Six ICPs have some incorrect reading information, which Pioneer intends to update prior to r14.</p>	Still existing for different issues
Electrical Connection of Point of Connection	2.11	10.33A	17 metered ICPs did not have meter certification provided within five business days of the change to active status.	Still existing for 1 ICP
Changes to registry information	3.3	10 Schedule 11.1	<p>49 late status updates to active.</p> <p>Four late status updates to inactive.</p> <p>15 late trader updates.</p> <p>Two late ANZSIC code updates.</p>	Still existing – much reduced number of late status updates
Provision of information to the registry manager	3.5	9 Schedule 11.1	<p>15 late status updates to active for new connections.</p> <p>ICP 0000814358WP62F had an incorrect active status date; and was corrected during the audit.</p> <p>ICP 1002080190LCC09 has active status recorded from 09/06/20 but was not active until 25/06/20.</p>	Still existing
ANZSIC codes	3.6	9 (1(k) of Schedule 11.1	Incorrect ANZSIC codes were applied for four ICP; and were corrected during the audit.	Cleared
Management of "active" status	3.8	17 Schedule 11.1	<p>ICP 0000814358WP62F had an incorrect active status date; and was corrected during the audit.</p> <p>ICP 1002080190LCC09 has active status recorded from 09/06/20 but was not active until 25/06/20.</p> <p>ICP 0000007765TED75 has active status recorded from 06/09/19 but was active from 05/09/19.</p>	Cleared

Subject	Section	Clause	Non-compliance	Status
Management of "inactive" status	3.9	19 Schedule 11.1	ICP 0000033661DEA96 has an incorrect disconnection date applied but cannot be easily corrected because the ICP is now decommissioned.	Cleared
Inform registry of switch request for ICPs - standard switch	4.1	2 Schedule 11.3	Transfer switches were requested for ICPs 0000033072CPC61 (20/05/20), 0000489550CE5C5 (30/04/20), and 0000567442TP9E5 (04/02/20) when the customer had confirmed that they were moving into the address.	Cleared
Losing trader response to switch request and event dates - standard switch	4.2	3 and 4 Schedule 11.3	The "CO" AN response code was incorrectly applied for ICPs 0000510111CE82C (01/04/20) and 0008448484NVAC2 (20/07/20).	Still existing
Losing trader must provide final information - standard switch	4.3	5 Schedule 11.3	Two late TR CS files. At least eight CS average daily consumption values were not consistent with the average consumption for the last read to read period in transfer CS files, because the Orion EDC is applied instead of consumption for the last read to read period. At least three transfer CS files contained incorrect last actual read dates.	Still existing
Gaining trader informs registry of switch request - switch move	4.7	Clause 9 Schedule 11.3	The switch move NTs for 0000501294CEA6B (04/02/20) and 0006632640ALE93 (06/02/20) were raised more than two business days after pre-conditions were cleared.	Cleared
Losing trader provides information - switch move	4.8	10(1) Schedule 11.3	Three late MI CS files.	Still existing
Losing trader must provide final information - switch move	4.10	11 Schedule 11.3	At least 13 CS average daily consumption values were not consistent with the average consumption for the last read to read period in transfer CS files, because the Orion EDC is applied instead of consumption for the last read to read period. At least three switch move CS files contained incorrect last actual read dates. The CS file 0000507601DEF19 (14/02/20) contained readings which did not match the AMI data, or readings recorded in Orion. Eight switch move CS files did not have CSMETERCHANNEL, CSMETERCOMP and CSMETERINSTALL lines supplied.	Still existing

Subject	Section	Clause	Non-compliance	Status
Gaining trader changes to switch meter reading - switch move	4.11	12 Schedule 11.3	The agreed switch reading was not applied in Orion for 0001425261UN6BF (01/06/20) resulting in forward estimate being created instead of historic estimate. The agreed switch reading was not applied in Orion for ICP 0000507601DEF19 (14/02/20) resulting in 71 kWh of under submission.	Still existing for a different issue
Gaining trader to advise the registry manager - gaining trader switch	4.14	16 Schedule 11.3	One late HH CS file.	Cleared
Metering information	4.16	21 Schedule 11.3	For one switch move CS file issued by Pioneer, the switch event readings did not reflect the actual reading or estimated reading on the event date.	Cleared
Distributed unmetered load	5.4	11 Schedule 15.3, Clause 15.37B	The Grey and Gore DC DUML databases are not accurate.	Still existing for Grey DC only
Electricity conveyed & notification by embedded generators	6.1	10.13 and 15.13	ICPs 0000033279CE035, 0000101696DE14B, 0000500005CE26E and 0000204054DEBB3 have submission against the RPS and PV1 profiles, but only RPS profile is recorded on the registry.	Still existing for a different issue
NHH meter reading application	6.7	6 Schedule 15.2	The agreed switch reading was not applied in Orion for ICP 0000507601DEF19 (14/02/20) resulting in 71 kWh of under submission.	Still existing
NHH meters 90% read rate	6.10	9(1) and (2) Schedule 15.2	An inaccurate four month read ICP total was provided in the April 2020 meter read attainment report for CYD0331-DUNE.	Cleared
Meter data used to derive volume information	9.3	3(3) Schedule 15.2	AMI meter reading data is rounded on import into the Orion.	Cleared
Calculation of ICP days	11.2	3(5) of schedule 15.2	The AV110 report excludes ICPs from revision submissions for periods where they were active if the ICP's current status is decommissioned and includes inactive ICP days where an ICP has switched in with inactive status.	Cleared
Electricity supplied information provision to the reconciliation manager	11.3	15.8	The AV120 report included information on ICPs which were billed by Pioneer but reconciled by another trader. They should have been excluded from Pioneer's billed submission.	Cleared

Subject	Section	Clause	Non-compliance	Status
HHR aggregates information provision to the reconciliation manager	11.4	15.8	HHR aggregates file does not contain electricity supplied information.	Still existing
Accuracy of submission information	12.7	15.12	<p>The agreed switch reading was not applied in Orion for ICP 0000507601DEF19 (14/02/20) resulting in 71 kWh of under submission.</p> <p>The agreed switch reading was not applied in Orion for 0001425261UN6BF (01/06/20) resulting in forward estimate being created instead of historic estimate.</p> <p>Six ICPs have some incorrect reading information, which Pioneer intends to update prior to r14.</p>	Still existing
Permanence of meter readings for reconciliation	12.8	4 Schedule 15.2	Some estimates were not replaced by revision 14.	Cleared
Historical estimate process	12.11	3 Schedule 15.3	Historic estimate is not calculated as expected for some tests which used opening and/or closing reads to calculate historic estimate.	Cleared
Forward estimate process	12.12	6 Schedule 15.3	Some balancing area differences between revisions were over the threshold because of inaccurate forward estimates.	Still existing
Historical estimate reporting to RM	13.3	10 Schedule 15.3	Historic estimate thresholds were not met for some revisions.	Still existing

Table of Recommendations

Subject	Section	Description	Recommendation	Status
Relevant Information	2.1	Data validation	<p>At least monthly, Orion and registry data should be reconciled. As a minimum this should include all fields which impact on reconciliation submissions:</p> <ul style="list-style-type: none"> • Status • Network • NSP code • Dedicated NSP • Reconciliation type • Profile • Loss category code • Flow direction (which can be cross checked against installation type at ICP level) • Unmetered daily kWh. <p>In addition, the following data should be checked for consistency (preferably monthly):</p>	Adopted

Subject	Section	Description	Recommendation	Status
			<ul style="list-style-type: none"> Pioneer's earliest active date, the distributor's initial electrical connection date and the MEP's meter certification date for newly connected ICPs. ICPs with installation type B or G, generation capacity, a generation fuel type and/or injection flow metering which do not have a profile consistent with distributed generation details (EG1, PV1 or HHR) recorded. ICPs with a profile consistent with generation (EG1 or PV1) which do not have installation type B or G, generation capacity, a generation fuel type and injection flow metering. 	
Losing trader response to switch request and event dates - standard switch	4.2	Application of the "CO" (contracted customer) AN response code	Investigate when and why the "CO" AN response code is applied in Orion. Update processes as necessary to ensure that AN codes are correctly applied.	Adopted
Losing trader must provide final information - standard switch	4.3	Manual review and update of CS files	Where CS files are updated to include AMI readings received after the file is generated, ensure that the last actual read date field is also updated to reflect the last actual reading during Pioneer's period of supply.	Adopted
Gaining trader changes to switch meter reading - switch move	4.11	Agreed switch readings	Update processes to ensure that when processing billing corrections after switch completion, the agreed switch reading is recorded in Orion with a read type consistent with the CS information.	Adopted
Historical estimate process	12.11	Requirements to complete material change audits	<p>When making changes to systems and/or processes, consider whether a material change audit is required. If in doubt, the Authority should be consulted.</p> <p>Clause 8(1) of Schedule 15.1 requires that if a reconciliation participant intends to make a "material" change to any certified facilities, processes, or procedures then the changes must be subject to an audit prior to the change taking place.</p>	Not adopted

1.11. Material Change Audit

Code reference

Clause 16A.11

Code related audit information

If there is a material change to any of a participant's systems or processes that are the subject of regular audits under clause 10.17A, 11.8B, 11.10, 15.37A or 15.37B, the participant must arrange for an additional audit, which must be completed in accordance with this Part no later than 5 business days before the change is implemented.

(2) For the purposes of subclause (1), a material change to a system or process is a change that is likely to affect the ability of the participant to comply with any relevant provision of this Code.

Audit observation

I checked whether there were any material changes to operations where a material change audit was required.

Audit commentary

A material change audit was not conducted prior John Candy Consulting commencing NHH reconciliation as an agent in May 2021.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 1.11 With: Clause 16A.11 From: 01-May-21 To: 01-May-21	Material change audit not conducted for NHH reconciliation by John Candy Consulting. Potential impact: High Actual impact: Low Audit history: None Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as weak because it was not identified that this change was a risk and that an audit was required. The potential impact was high, but the actual impact is low because the change has resulted in an increase in compliance for NHH reconciliation.		
Actions taken to resolve the issue		Completion date	Remedial action status
Argument still stands we made the change (as the example indicates) but we deemed it was not likely to affect our ability to comply (As per Jonathan West)		09/11/2021	Disputed
Preventative actions taken to ensure no further issues will occur		Completion date	Post Audit Auditor comment: A material change was required as the outsourcing of functions <u>could</u> have affected Pioneer Energy's <u>ability</u> to comply, rather than actually affecting compliance.
We will not be doing a material change audit		09/11/2021	

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 processes to find and correct incorrect information was examined. The registry validation processes were examined in detail in relation to the achievement of this requirement.

The registry list and AC020 reports were examined to identify any registry discrepancies, and to confirm that all information was correct and not misleading.

Audit commentary

Registry and static data accuracy

Status and trader updates are completed manually using the registry web interface, and data is updated in Orion at the same time. As part of this process, the user checks that the registry update is successful, and that the data recorded in Orion's history and on the registry matches.

Registry acknowledgement and notification files are reviewed manually and acted upon.

Notification files are also imported into Orion. Where a field maintained by the distributor which is recorded in Orion changes, such as the NSP, dedicated NSP, reconciliation type or loss factor, Orion's history is automatically updated from the event date. Some distributor fields, such as installation type, generation details and distributor unmetered load are not recorded in Orion, and changes to this information is identified through the manual review of the notification files.

Some data validation is in place:

- when information is added or updated, it is validated at the time of processing,
- as part of the pre reconciliation submission checks, Pioneer checks that all active ICPs are included in reconciliation submissions, and
- trader unmetered load details are reconciled to distributor unmetered load details annually, to identify any changes or discrepancies.

A recommendation was raised in the previous audit to complete regular database wide reconciliations between Orion and the registry. Pioneer have put reporting in place to validate all registry fields between Orion and the registry. This is expected to be carried out on a monthly basis but due to workload is sometimes not run as frequently as this.

The analysis of the list file and AC020 returned the following findings:

Item No.	Issue	Jul 2021	Aug 2020	Nov 2019	Mar 2019	Comments
1	Status or status date mismatch between registry and Pioneer	-	4	9	-	Compliant.
2	Active ICPs with blank MEP and no MEP nominated and UML = N	-		-	1	Compliant.
3	Incorrect submission flag or inconsistencies between submission type and profile	-	-	-	-	Compliant.
4	Active with blank ANZSIC codes	-	-	-	-	Compliant.
5	Active with ANZSIC "T999" not stated	-	-	-	-	Compliant.
6	Active with ANZSIC "T994" don't know	-	-	-	-	Compliant.
7	Active ICP with cat 9 and UML= N	-	-	-	-	Compliant.
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	5	6	5	-	These are all DUML ICPs. See section 3.7 .
10	ICPs with incorrect unmetered load	1	-	-	-	One ICP identified with the incorrect daily unmetered kWh load recorded. See section 3.7 .
11	ICPs with incorrect shared unmetered load	-	-	-	-	Compliant, no shared unmetered load is supplied.
12	ICPs with Distributed Generation indicated but no DG profile	-	4	3	2	Compliant.
13	ICP at status "new connection in progress" (1,12) or "ready" (0,0) with an initial electrical connection date populated by the Distributor	1	1	1	-	Compliant, this was a timing difference. See sections 3.5 and 3.8 .

Item No.	Issue	Jul 2021	Aug 2020	Nov 2019	Mar 2019	Comments
14	Active date variance with initial electrical connection date	13	16	10	-	Compliant All 13 discrepancies were checked and found seven active status dates were confirmed to be correct, and six were timing differences and the records were updated prior to the audit and were correct.
15	Meter cat 3 or known commercial site with residential ANZSIC code	-	-	-	1	Compliant.

The following incorrect status dates identified during the previous audit had not been resolved as they have both since switched away and it was thought that the corrections could not be made. This has been clarified and is not expected to occur in the future. The ICPs are detailed below for reference:

- ICP 1002080190LCC09 has active status recorded from 9 June 2020 but was not active until 25 June 2020, and
- ICP 0000007765TED75 has active status recorded from 6 September 2019 but was active from 5 September 2019.

Switching

Two RR files were rejected in error resulting in 11,638 kWh being pushed to the gaining traders. This is detailed further in **section 4.11**.

Read and volume data accuracy

Switch out read not applied in Orion

ICP 0000014870DE7D8 was sent with the correct final read of 139,357 but this read was not updated in Orion resulting in under submission of 124 kWh. This is recorded as non-compliance below and in **sections 6.7** and **12.7**.

Corrections

Read and volume accuracy issues are identified in the validation processes described in detail in **sections 9.5 and 9.6**. I checked a sample of NHH corrections as described in the table below:

Defective meters	Faulty meter corrections are processed by either updating the removal read to an estimated closing read to include any missing consumption or adding a manual amendment for reconciliation submissions. No defective or faulty meters were identified during the audit period.
Bridged meters	Where a meter is bridged, it will not record consumption during the bridged period and a correction for missing consumption is required on unbridging. Pioneer has a bridged meter correction process. Where the meter is replaced, the meter will be removed on an estimated closing read which is equal to the removal read + unmetered consumption during the bridged period. One bridged meter was identified during the audit period, and consumption was estimated for the bridged period.
Consumption while inactive	<p>Inactive ICPs with consumption are identified through the NHH read validation process discussed in section 9.5, and John Candy Consulting's pre submission checks.</p> <p>I found ICP 0006589570RN16A was decommissioned on 26/05/21 and had its status event and reading both recorded on the decommissioning date, which is when they physically occurred. The Code requires status events to apply effective from the beginning of the day on the status event date and reads to apply effective from the end of day on the read date. This resulted in 14.11 kWh of the consumption within the read period from 22/05/21 to 26/05/21 being apportioned to 26/05/21 (which had decommissioned status and was excluded from reporting).</p> <p>To ensure that all consumption is reported, Pioneer would either need to modify the status date to be the first full day that the ICP was decommissioned, or the read date to be the day before decommissioning. Neither option is technically correct.</p> <p>To assess whether this issue was isolated I checked all ICPs on the May 2021 and June 2021 AV080 submissions where the ICP had an end date during the submission month, and the start and end reads occurred during the submission month (i.e., all consumption in the read-to-read period was expected to be reported). The ICPs checked included switches out, meter changes, and disconnected ICPs.</p> <p>I found that apart from ICP 0006589570RN16A, the total volume reported matched the read-to-read period consumption in the latest revision for each ICP. I saw evidence that where inactive consumption was identified, the status was corrected to active for the affected period and all consumption was included in the latest revision.</p> <p>No other inactive ICPs with consumption were identified during the audit period. This appears reasonable because Pioneer currently only has 35 inactive ICPs excluding ICPs at "inactive new connection in progress" status.</p>
Incorrect multipliers	No incorrect multipliers were identified during the audit period, and there have been no multiplier corrections. Multipliers are based on the registry information for the meter.
Unmetered load corrections	Unmetered load submissions are based on the registry average daily kWh and number of active days for the reconciliation period. No changes or corrections to unmetered load details were identified on the event detail report.

Alleged breaches

The EA confirmed that three alleged breaches relating to submission data accuracy occurred during the audit period:

Breach no	Breach of	Description	Outcome
2105PION1	Part 15 clause 15.2 (1) (a)	Pioneer duplicated their generation volume submissions for R3, R7 and R14 in December 2020, August 2020, and January 2020 respectively for the March 2021 consumption month.	No result yet
2105PION2	15.2(1)(a) Requirement to provide complete and accurate information	Pioneer Energy Limited (PION) failed to deliver accurate information to the reconciliation manager in their AV-080 (NHH submission file) for 202102 R3, 202010 R7 and 202003 R14. PION had a dedicated flag change at several of their NSPs. The flag changed from Y to N. PION failed to zero out the volumes at those NSPs for the previous submission under the Y flag, and therefore when submitting under the N flag, duplicated these volumes. The total volume duplicated amounted to 2,486.7MWh of X flows.	No result yet
2107PION1	Part 15 clause 15.2 (1) (a)	Pioneer Energy Limited (PION) failed to deliver accurate information to the Reconciliation Manager in their AV-080 (NHH submission file) for 202011 R7. PION had a dedicated flag change at several of their NSPs. The flag changed from Y to N. PION failed to zero out the volumes at those NSPs for the previous submission under the Y flag, and therefore when submitting under the N flag, duplicated these volumes.	No result yet

Classification of customer and photo readings

ICP 0000043407DE457 did not have its photo reading on 3 July 2021 validated against a set of readings from another source but was recorded as a customer reading and sent to John Candy Consulting as validated due to the incorrect read type being selected on data entry. The reading matched a photo of the meter and there is not likely to be any impact.

Previous audit issues

Previous audit issues relating to the accuracy of NHH submission data have been resolved with migration of the process to John Candy Consulting.

The November 2020 audit found that a small number of ICPs did not have the agreed switch reading recorded in Orion. For ICPs where revisions have been completed by John Candy Consulting, agreed switch readings are taken directly from the registry and revised data has been provided. I followed up corrections where revised data was not provided by John Candy Consulting:

ICP	Issue	kWh	Comment
0000001074ED314 19/07/19	Final read incorrectly labelled as (E) instead of (A)	-	Not corrected and Revision 14 has been completed.
0000507601DEF19 14/02/20	The agreed switch readings were replaced with new estimated closing readings, resulting in under submission of 71 kWh.	71	Not corrected and Revision 14 has been completed.
0000483126CE356 01/11/19	Orion reading differs from agreed switch reading	39	Not corrected because accounts were closed

ICP	Issue	kWh	Comment
0000001074ED314 19/07/19	Final read incorrectly labelled as (E) instead of (A)	-	Not corrected and Revision 14 has been completed.
0000507601DEF19 14/02/20	The agreed switch readings were replaced with new estimated closing readings, resulting in under submission of 71 kWh.	71	Not corrected and Revision 14 has been completed.
0000500468CEEC4 01/11/19	Orion reading differs from agreed switch reading	16	on AMI reads. Revision 14 has been completed.
0000508237CE214 04/11/19	Orion reading differs from agreed switch reading	99	
0000509672CE05F 04/11/19	Orion reading differs from agreed switch reading	-73	
0000001074ED314 19/07/19	Orion read type differs from agreed switch reading	-	Corrected.
0000491652CE3A2 31/08/19	The difference between the CS reading and AMI readings was less than 50 kWh and Pioneer elected to use their own reading as the gaining trader. No corrections have been processed, and no further action has been taken.	<50 kWh	Corrected.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 2.1</p> <p>With: Clause 10.6, 11.2, 15.2</p> <p>From: 21-Jul-20</p> <p>To: 31-Jul-21</p>	<p>Two ICPs with incorrect unmetered loads recorded.</p> <p>ICP 0000014870DE7D8 was sent with the correct final read of 139,357 but this read was not updated in Orion resulting in under submission of 124 kWh.</p> <p>Two RR files were rejected in error resulting in 11,638 kWh being pushed to the gaining traders.</p> <p>One photo reading which was not validated according to the code was recorded as a validated reading and used to calculate historic estimate.</p> <p>Decommissioned ICP 0006589570RN16A had 14 kWh of consumption allocated to a day with decommissioned status and excluded from submission.</p> <p>Some corrections identified in the last audit were not completed and are now outside the 14-month revision cycle.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Multiple times</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>Controls are rated as moderate as they are sufficient to ensure that data is recorded correctly most of the time.</p> <p>The audit risk rating is assessed to be low overall as the errors found were small in number.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Reads that are within the 14-month revision cycle will be corrected		01/02/2022	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Updated Promapp processes		01/11/2021	

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 several sections in this report. I saw evidence during the audit that discrepancies identified were promptly investigated and updated.

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.

HHR

All HHR data is collected by EMS, and data transmission was reviewed as part of their agent audit.

NHH

NHH and AMI data is received from AMS (for Arc, AMS and Smartco meters), Intellihub (for Metrix and AMS meters), and FCLM as MEPs, and Wells as an agent. The data is imported into Pioneer's data warehouse and then extracted for import into Orion for billing, and for import into John Candy Consulting's database for reconciliation. Switch event readings are obtained directly from the registry by John Candy Consulting.

Generation

Pioneer has operated the Aniwhenua Hydro Power Station since ownership of the station changed from Nova Energy to Southern Generation Limited Partnership on 29 July 2016. ANI0331BOPDNP is connected to MAT1101BOPDGN, and there is an indirect connection to EDG0331HEDLGN. Pulse Energy is currently listed as the reconciliation participant on the NSP table.

The Authority investigated which parties were responsible for ANI0331BOPDNP in 2019 and found that Pioneer is responsible for collection of generation data and provision of that information to the grid owner daily under clauses 13.136 to 13.140. EMS confirmed that they provide this daily information to the grid owner according to their normal procedures, and compliance was assessed during EMS' agent audit.

Audit commentary

HHR

HHR data transmission was reviewed as part of AMS and EMS' agent audits and found to be compliant.

NHH

All data transmissions to Pioneer are via SFTP, which ensures the security and integrity of the data. Upon receipt, reading files are archived to a folder on the network.

I traced readings for 32 ICPs from the data files provided by Pioneer to the historic estimate calculations and confirmed that they were transferred accurately. I traced a diverse sample of readings for a further 14 ICPs from the source files provided by the MEP or agent through to Orion and John Candy Consulting's historic estimate calculations and confirmed that they were recorded correctly.

Generation

Data transmission was reviewed during EMS' agent audit, and compliance is recorded.

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

For NHH data, I viewed audit trails in Orion and John Candy Consulting's database for a small sample of events.

For HHR and generation data, the agent audit reports were reviewed.

Audit commentary

Orion and John Candy Consulting audit trails include the activity identifier, date and time, and an operator identifier.

Compliance is recorded in the EMS and AMS audit reports.

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 Pioneer's standard terms and conditions for the supply of energy.

Audit commentary

Pioneer's standard terms and conditions with their customers includes consent to access for authorised parties for the duration of the contract.

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 Pioneer's standard terms and conditions for the supply of energy; and discussed compliance with these clauses.

Audit commentary

Pioneer's current terms and conditions with their customers includes consent to access for authorised parties for the duration of the contract. Pioneer confirmed that there have been no instances where access could not be arranged for other parties during the audit period.

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 Pioneer's terms and conditions, but the existing practices in the electrical industry achieve compliance. The registry list was reviewed.

Audit commentary

Pioneer supplies 27 active ICPs with metering category 3 or above, and EMS confirmed that none require error or loss compensation.

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 subclause (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 Pioneer's standard terms and conditions for the supply of energy.

Audit commentary

Pioneer's terms and conditions have specific clauses covering this requirement.

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 1 or more metering installations for the point of connection.*

Audit observation

The new connection processes were examined in detail to evaluate the strength of controls, and the registry list, audit compliance, and switch breach history reports were examined to confirm process compliance. Late updates to active for new connections are discussed in **section 3.5**.

Audit commentary

Pioneer's new connection process requires all ICPs to be taken to the "new connection in progress" status in the registry and the MEP is nominated at the same time. Review of a sample of 15 new connections confirmed that "new connection in progress" status was applied.

The design of the new connections process does not allow ICPs to be connected without authorisation by Pioneer, or an arrangement with an MEP.

Trader acceptance for new connections is normally provided on a case-by-case basis via email. Pioneer is investigating a blanket acceptance agreement with one network which is expected to be implemented next year.

New connections are monitored using a spreadsheet, which tracks progress with the new connections and any actions taken. Progress is checked weekly, and Pioneer follows up with contractors close to the expected livening date if confirmation of connection is not received.

Review of the AC020 report confirmed that all new connections had an MEP nominated, and no ICPs had a blank MEP.

Audit outcome

Compliant

2.10. Temporary Electrical Connection of an ICP (Clause 10.33)

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.

Audit commentary

Pioneer claims ICPs at 1,12 "inactive - new connection in progress" status which helps to ensure that the trader is recorded on the registry if an ICP is temporarily electrically connected. No temporary electrical connections were identified.

Audit outcome

Compliant

2.11. Electrical Connection of Point of Connection (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 2 business days of electrical connection*
 - *if the ICP has metered load, 1 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 AC020 report was examined to confirm process compliance and that controls are functioning as expected.

Audit commentary

MEP information for active ICPs

All ICPs recorded as active with metering installed have an MEP recorded.

Certification on connection

Active ICPs are required to have full metering certification recorded within five business days of the date they become “active”. Review of the AC020 audit compliance report found:

- one late certification for new connection ICP 0000025345NT26A; this is a category 5 site and was certified late by the MEP, and
- no late certifications for reconnections.

Certification on unbridging

ICP 0000021467DEABF's meter was bridged from 10 June 2021 until 18 June 2021 and was re-certified on unbridging.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.11 With: Clause 10.33A From: 04-Nov-20 To: 10-Dec-20	One metered ICP did not have meter certification provided within five business days of the change to active status. Potential impact: Low Actual impact: Low Audit history: Twice Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as strong, because meter certification is an MEP responsibility and Pioneer sometimes cannot achieve compliance. The impact is assessed to be low because one meter was not certified within the required timeframe. Uncertified metering installations are likely to be less accurate than certified metering installations, so there could be a minor impact on settlement.		
Actions taken to resolve the issue		Completion date	Remedial action status
Received paperwork late. Pioneer follows up with MEPs on a regular basis to ensure timely return of completion paperwork		09/11/2021	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Continue to monitor new connections and meter changes closely		09/11/2021	

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. The registry list with history was reviewed to identify networks which Pioneer traded on during the audit period.

Audit commentary

Pioneer has use of system agreements or arrangements in place with all the networks they trade on and did not begin trading on any new networks during the audit period.

Networks which Pioneer has arrangements with are loaded in Orion. ICPs cannot be loaded if the network they are connected to is not available in Orion.

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. The registry list with history was reviewed to identify MEPs used by Pioneer during the audit period.

Audit commentary

Pioneer has arrangements in place with the MEPs for all their ICPs and did not begin using any new MEPs during the audit period.

MEPs which Pioneer has arrangements with are loaded in Orion. ICPs cannot be loaded if the MEP is not available in Orion.

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.

I matched reconnections to withdrawal acknowledgements to identify ICPs which had been reconnected and then undergone a withdrawal; and checked compliance.

Audit commentary

If an ICP was reconnected as part of the switching process and the switch was later withdrawn, Pioneer would restore the disconnection and reimburse the losing trader for any direct costs incurred if requested.

I checked all seven ICPs which were reconnected and also had a withdrawal processed during the audit period. In all cases the status was updated before the withdrawal was initiated, or after the withdrawal process was complete. Pioneer was the trader at the time of reconnection.

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. The event detail report was reviewed to identify all ICPs which were disconnected during the audit period where an NT was received from another trader during the audit period, and compliance was checked.

Audit commentary

Pioneer will only disconnect a customer if they are responsible for the ICP on the registry.

I checked all 15 ICPs which were disconnected and received an NT from another trader during the audit period. I found the disconnection event date was prior to the NT being received from the other trader. In all cases Pioneer was the trader on the disconnection date.

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 unbridge a load control switch – if the load control switch does not control a to me 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

Pioneer has robust processes in place. They do not undertake such work. A job is raised for any such incidents and issued to the MEP to return to site and reseal and recertify the meter.

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 1 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 bridged meters were reviewed.

Audit commentary

Bridged meters are typically identified through the read validation process, or reconnection paperwork returned from the contractor. Meters will only be bridged if they cannot be reconnected without bridging and delaying reconnection would cause significant disadvantage to the customer because they would be without hot water or power.

ICP 0000021467DEABF's meter was bridged from 10 June 2021 to 18 June 2021 and was recertified on unbridging. The meter was bridged because reconnection could not be completed without bridging, and the customer did not have access to hot water. A correction was processed once the meter was unbridged.

Audit outcome

Compliant

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

The process to ensure that the ICP identifier is printed on every invoice or document relating to the sale of electricity was discussed, and an invoice was reviewed.

Audit commentary

Review of a sample of invoices confirmed that the ICP number is included on invoices and documents relating to the sale of electricity.

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 discussed. Pioneer's website and a sample of customer communications were reviewed.

Audit commentary

Clear and prominent information on Utilities Disputes is provided on Pioneer's:

- invoices,
- email footers for all outbound email communications,
- website, and
- terms and conditions.

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 discussed. Pioneer's website and a sample of customer communications were reviewed.

Audit commentary

Clear and prominent information on Powerswitch is provided on Pioneer's:

- invoices,
- email footers for all outbound email communications, and
- website.

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 connection 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

This requirement is well understood and managed by Pioneer. The new connection process is detailed in **section 2.9**.

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 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

The new connection processes are detailed in **section 2.9** above. The process in place ensures that trader information is populated as required by this clause.

I walked through the registry update process for a sample of 14 new connections. The accuracy and timeliness of registry updates is discussed in **section 3.5**.

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 report was reviewed. A sample of late status updates, trader updates, and MEP nominations were checked as described in the audit commentary.

Audit commentary

The AC020 trader compliance report was reviewed to determine the timeliness of registry updates.

Status updates

Status updates are completed manually using the registry web interface, and data is updated in Orion at the same time. As part of this process, the user checks that the registry update is successful, and that the data recorded in Orion's history and on the registry matches. The status is only updated once paperwork confirming the correct status and date has been received.

The timeliness of status updates to active (for reconnections) is set out on 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
07/03/19	23	65.7%	Up to 257 business days
29/11/19	8	38.46%	75.54
20/08/20	49	51.00%	9.01
12/07/21	5	82.14%	16.68

This shows an excellent improvement in the timeliness of updates to the registry. The five late updates were made between seven and 192 business days after the event date. These were examined and found:

- two were due to backdated switches and they were actioned as soon as the switch completed to Pioneer,
- two were due to corrections to the active date; this was due to the incorrect information being provided in one instance and the other was a correction to an event date found through the registry discrepancy reporting process, and
- one was due to late paperwork back from the field.

All of the late updates recorded the correct status and event date.

The timeliness of status updates to inactive is set out on 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
07/03/19	54	85.4%	Up to 365 business days
29/11/19	7	84.09%	7.27
20/08/20	4	90.00%	2.15
12/07/21	7	85.19%	21.63

The seven late updates were made between six and 421 business days after the event date. These were examined and found:

- three were due to late information being provided by the networks,
- two required an investigation before they could be confirmed to be disconnected causing the update to be late,
- ICP 0000025345NT26A is a backdated new connection and the status of “inactive - new connection in progress” was made after the ICP was made “active” and is therefore non-compliant, and
- ICP 0004557746TC090 was due to a correction to the inactive status reason only and therefore has no impact on reconciliation.

All of the late updates recorded the correct status and event date.

Trader updates

Trader updates are completed manually using the registry web interface, and data is updated in Orion at the same time. As part of this process, the user checks that the registry update is successful, and that the data recorded in Orion's history and on the registry matches. Trader information is only updated once the correct values have been confirmed.

MEP nominations are made at the time the service request for a meter change is made. For new connections MEP nominations are made at the time the ICP is claimed at 1,12 "new connection in progress" status.

The timeliness of trader updates is set out on 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
29/11/19	7	84.44%	2.56
20/08/20	15	58.33%	16.83
12/07/21	20	56.52%	86.59

Ten of the late updates were within 30 business days of the event date. The latest update was 750 business days after the event date. The late updates related to ANZSIC code changes, MEP nominations, profile, and submission type changes.

I checked the ten latest updates and a further five late MEP nominations. The late updates were examined and found:

- eight were backdated MEP nominations made at the MEP's request,
- three were corrections to profiles made as a result of the last audit,
- three were corrections to ANZSIC codes and the event date wasn't updated on the registry therefore the last effective date was applied making these appear to be backdated, and
- one was a profile change for distributed generation in line with the metering being installed.

All but three of the trader updates were applied from the correct date. The effective date of the ANZSIC code updates defaulted to the last event date due to human error but this has no material impact.

The AC020 also identified four newly connected or switched in ICPs where the ANZSIC code was not populated within 20 business days:

- two were delayed by backdated CS files which were provided a maximum of two days before the ANZSIC code update,
- one was not a genuine ANZSIC code update, it replaced an existing trader record with the same ANZSIC code value, and
- one was a correction of ANZSIC code for ICP 0000008550CE2FF.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.3 With: Clause 10 Schedule 11.1 From: 08-Oct-20 To: 02-Jul-21	Five late status updates to active. Seven late status updates to inactive. 20 late trader updates. Three late ANZSIC code updates. 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 rated as strong. Pioneer make every effort to update the registry within the required timeframe, but accuracy of information always takes priority causing a small number of updates to be late. The risk is low as accuracy is good and the number of late updates is very small.		
Actions taken to resolve the issue		Completion date	Remedial action status
Received paperwork late. Pioneer follows up with MEPs on a regular basis to ensure timely return of completion paperwork		09/11/2021	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Continue to monitor new connections and meter changes closely		09/11/2021	

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)):*
 - o *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

Retailers Responsibility to Nominate and Record MEP in the Registry

The new connection process is discussed in detail in **sections 2.9** and **3.5**. Pioneer nominates the MEP at the same time as taking the ICP to the “inactive - new connection in progress” status. All new connections have an MEP nominated.

Review of the AC020 report confirmed that all active metered ICPs have an MEP recorded. All 18 active ICPs with a metering category of 9 or blank have unmetered load recorded.

Pioneer identifies and actions rejected MEP nominations through their review of registry notification files. None of the 69 MEP nominations issued which received an MN response were rejected, and all new connections had an MEP nomination accepted within 14 business days.

ICP Decommissioning

When an ICP becomes vacant, the customer account is closed, and responsibility for the ICP is transferred to a vacant “occupier” account. When an ICP is disconnected, responsibility for the ICP is transferred to a disconnected “occupier” account. Reads continue to be loaded against these accounts, and any consumption will be detected through Pioneer’s read validation processes.

When an ICP is to be decommissioned, an attempt to read the meter is made at the time of meter removal. If it is not possible to obtain an actual reading on meter removal, the last actual reading (normally the disconnection read) is used. Pioneer also advises the MEP responsible that the site is to be decommissioned, or has been decommissioned, dependent on the distributor’s process. Usually, a service request is raised for the network and MEP at the same time.

18 ICPs were decommissioned during the audit period, all were dismantled. I checked a diverse sample of ten ICPs including different networks. I confirmed that Pioneer had met their obligation to attempt to obtain an actual reading and the MEP was notified.

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

New connection information timeliness

The new connection process is described in detail in **section 2.9**. MEP nomination occurs when the ICP is at 1,12 “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 on 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
29/11/19	57	32.14%	123.76
20/08/20	15	59.46%	18.35
12/07/21	7	82.93%	9.80

The level of compliance has increased significantly during the audit period and the number of late updates has reduced. Three of the late updates were within 10 business days of the event date and the latest update was 170 business days after the event date. The seven late updates were examined and found:

- three were corrections to initial electrical connection dates which had initially been populated on time, and
- four were late due to the late receipt of connection paperwork.

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

New connection information accuracy

Active dates for new connections were compared to the distributor's initial electrical connection date (IECD), and MEP's certification date (MCD) using the AC020 report. The following exceptions were identified. These were examined during the site audit and the connection paperwork was reviewed:

Exception	Total ICPs	Confirmed incorrect updates	Comment
IECD ≠ active date and MCD ≠ active date	1	0	Pioneer has the correct active date for ICP 0000025345NT26A. The MEP certified this site late and the Distributor's IECD date is incorrect.
IECD = active date and MCD ≠ active date	1		Pioneer has the correct active date. The meter was certified one day after being electrically connected.
IECD ≠ active date and MCD = active date	4		Pioneer has the correct active dates recorded. The Distributor's IECD dates are incorrect.
No IECD and MCD = active date	4		Pioneer has the correct active dates recorded.
Timing difference	3	-	All fields matched once updated. These are all on the Vector network where the IECD date is not always populated.
Total	13		

The AC020 report identified one ICP with an initial electrical connection date populated which had not been made active. The status was updated to active after the report was run and confirmed to have the correct active date recorded.

I rechecked new connection active status event date discrepancies identified in the previous audit and found all were appropriately corrected.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.5 With: Clause 9 Schedule 11.1 From: 01-Oct-20 To: 06-Jul-21	Seven late status updates to active for new connections. 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	Controls are rated as strong, as whilst processes are manual there are robust controls to mitigate risk to an acceptable level. The risk rating is low as a number of late updates was small and the data accuracy was high.		
Actions taken to resolve the issue		Completion date	Remedial action status
Continue to monitor to ensure correct dates are applied		09/11/2021	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Continue to monitor to ensure correct dates are applied		09/11/2021	

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 ANZSIC 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

ANZSIC codes are checked on switch in, and ANZSIC codes for all ICPs are periodically checked for reasonableness.

The validity of ANZSIC codes was checked using the AC020 report:

- no ICPs had blank or unknown (T99 series) ANZSIC codes, and
- no ICPs with meter category two or higher have residential ANZSIC codes.

I checked a sample of 40 ANZSIC codes by comparing them to Google streetview and registry property name information, and found they were correct.

Audit outcome

Compliant

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

Code reference Clause 9(1)(f) of Schedule 11.1

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 ICPs where:

- unmetered load is identified by the distributor, and none is recorded by Pioneer,
- unmetered load is identified by Pioneer, and none is recorded by the distributor,
- unmetered load is indicated but the unmetered daily kWh is zero or blank, and
- Pioneer's unmetered load figure does not match with the distributor's figure (where it is possible to calculate this if the distributor is using the recommended format) and the variance is greater than 0.1 kWh per day (0.1 kWh per day was chosen as a sample only; this does not indicate compliance is achieved if an error is found that is less than 0.1 kWh per day).

Audit commentary

Changes to unmetered load are identified through Pioneer's review of notification files, a monthly comparison between the daily unmetered kWh recorded in Orion and the registry, and an annual reconciliation between distributor and trader unmetered load details.

Pioneer supplies 19 ICPs with unmetered load indicated. 14 ICPs have standard unmetered load and five ICPs have distributed unmetered load. No ICPs have shared unmetered load.

Review of the AC020 report and registry list found:

- all unmetered ICPs have daily unmetered kWh recorded apart the five DUML ICPs, which have "ENG" in the daily unmetered kWh field,
- no ICPs where the distributor had unmetered load recorded, but Pioneer did not,
- no active ICPs with meter category 9 or blank where the unmetered flag was set to no,
- no active unmetered builders' temporary ICPs,
- two ICPs where Pioneer had unmetered load recorded but the distributor did not were reviewed and confirmed to be present and calculated correctly,
- two ICPs where the daily unmetered kWh was not within ± 0.1 kWh of the distributor's value were reviewed:
 - for ICP 0000794436NV646 neither the distributor or Pioneer had the correct daily kWh figure due to the incorrect ballast being applied, the difference in the trader is less than 0.1kWh so is compliant, but Pioneer are correcting this, and
 - for ICP 0000444105WPAC1 the daily kWh value is recorded by Pioneer as 0.015kWh rather than 0.15kWh which has been confirmed as correct by the Distributor; Pioneer are correcting this.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.7 With: Clause 9(1)(f) Schedule 11.1 From: 01-Oct-20 To: 06-Jul-21	One ICP with the incorrect unmetered load value recorded. 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	Controls are rated as strong, as whilst processes are manual there are robust controls to mitigate risk to an acceptable level. The risk rating is low as a number of late updates was small and the data accuracy was high.		
Actions taken to resolve the issue		Completion date	Remedial action status
Pioneer will correct the UML		09/11/2021	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Promapps updated		01/11/2021	

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 timeliness and accuracy of data for new connections is assessed in **section 3.5**.

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.

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

Audit commentary

Pioneer's policy is to only allow one active customer per ICP. It is possible to create overlapping customer accounts for an ICP in Orion. Preventative controls and detective controls are in place to prevent this from occurring.

1. An Orion system wizard is used to transfer ICPs between customer accounts, and dates are automatically populated to ensure that there is no overlap between customers.
2. If an error occurred and more than one active account was open for an ICP, Orion's read validations described in **section 9.5** would create an exception where there was more than one open account for an ICP meter register combination.

Orion requires all ICPs to have an MEP and meter recorded. Unmetered ICPs have a dummy meter with an unmetered daily kWh recorded against it.

New connection information accuracy

Active dates for new connections were compared to the distributor's initial electrical connection date (IECD), and MEP's certification date (MCD) using the AC020 report. The following exceptions were identified:

Exception	Total ICPs	ICPs confirmed to have incorrect updates	Comment
IECD ≠ active date and MCD ≠ active date	1	0	Pioneer has the correct active date for ICP 0000025345NT26A. The MEP certified this site late and the Distributor's IECD date is incorrect.
IECD = active date and MCD ≠ active date	1		Pioneer has the correct active date. The meter was certified one day after being electrically connected.
IECD ≠ active date and MCD = active date	4		Pioneer has the correct active dates recorded. The Distributor's IECD dates are incorrect.
No IECD and MCD = active date	4		Pioneer has the correct active dates recorded.
Timing difference	3	-	All fields matched once updated. These are all on the Vector network where the IECD date is not always populated.
Total	13		

The AC020 report identified one ICP with an initial electrical connection date populated which had not been made active. The status was updated to active after the report was run and confirmed to have the correct active date recorded.

I rechecked new connection active status event date discrepancies identified in the previous audit and found all were appropriately corrected.

Some late status changes to active are recorded as non-compliance in **section 3.5**.

Reconnection information accuracy

A sample of ten of the 25 reconnections on the event detail report were checked, and all had the correct status and status date applied. Some late status changes to active are recorded as non-compliance in **section 3.3**.

Previous audit exceptions

The following incorrect status dates identified during the previous audit had not been resolved as they have both since switched away and it was thought that the corrections could not be made. This has been clarified and is not expected to occur in the future. The ICPs are detailed below for reference:

- ICP 1002080190LCC09 has active status recorded from 9 June 2020 but was not active until 25 June 2020, and
- ICP 0000007765TED75 has active status recorded from 6 September 2019 but was active from 5 September 2019.

This is recorded in **section 2.1** as it relates to the previous audit period.

Status of ICP 0800539060LCBFF

Following creation of the new ICP 1002050361LC60D on 30 September 2018, ICP 0800539060LCBFF was not disconnected or decommissioned due to a metering issue. All consumption on ICP 1002050361LC60D is recorded by its metering, but part of the consumption is also recorded on ICP 0800539060LCBFF's metering because of the location of the CTs, resulting in duplication. Pioneer intends to resolve the metering issue as part of a substation upgrade by January 2023, and/or arrange for the old ICP 0800539060LCBFF to be disconnected and decommissioned. In the meantime, to prevent double submission for the duplicated load recorded on ICP 0800539060LCBFF submission data for this ICP is zeroed.

I checked the status of ICP 0800539060LCBFF, which has active status, but submission is usually zeroed and settled under ICP 1002050361LC60D. Pioneer confirmed that the status with the best fit was applied; in the event of an outage for ICP 1002050361LC60D, the installation could be supplied from ICP 0800539060LCBFF. ICP 0800539060LCBFF is discussed further in **section 12.2**.

Audit outcome

Compliant

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” for more than 24 months.

Audit commentary

Disconnection information accuracy

Pioneer processes all status updates manually on the registry once paperwork is received. When an ICP is disconnected, responsibility for the ICP is transferred to a disconnected “occupier” account. Consumption on disconnected accounts is expected to be zero, and any consumption on disconnected accounts will appear on the read exception reports.

I reviewed a sample of 15 updates to inactive status, including at least four (or all) active updates to each inactive status. I confirmed the status reason codes and event dates were correctly applied.

No ICPs had inactive status reason “electrically disconnected remotely by AMI meter” which did not have AMI metering.

No ICPs currently at “inactive new connection in progress” status have been at the status for over two years.

Some late status updates to inactive are recorded as non-compliance in **section 3.3**.

Inactive ICPs with consumption

NHH read validation processes identify inactive consumption and affected ICPs are moved to active status for the period with consumption so that ICP days and volumes are submitted.

ICP 0006589570RN16A was decommissioned on 26 May 2021. The inactive status record and read date were both recorded on 26 May 2021, which is the day that the ICP was physically disconnected and decommissioned. The Code requires status events to apply effective from the beginning of the day on the status event date and reads to apply effective from the end of day on the read date. Because the historic estimate process does not report consumption for inactive and decommissioned days, it calculated historic estimate for the portion of the read-to-read period which was active (22 May 2021 to 25 May 2021) and under reported the 14.11 kWh for the portion of the read-to-read period which was decommissioned (26 May 2021) as shown below.

Start read date	End read date	Start date end of day read	End date end of day read	Read to read (kWh)	Historic estimate (kWh)	Difference (kWh)
18/05/2021	19/05/2021	967	967	0	0	0
19/05/2021	21/05/2021	967	979.56	12.56	12.56	0
21/05/2021	26/05/2021	979.56	1044	64.44	50.33	14.11
Total				77	62.89	14.11

To ensure that all consumption is reported, Pioneer would either need to modify the status date to be the first full day that the ICP was decommissioned, or the read date to be the day before decommissioning. Neither option is technically correct. Recording the status event and read date on the correct date has resulted in a small amount of under submission, which is recorded as non-compliance in **sections 2.1** and **12.7**. Compliance is recorded in this section because the disconnection and subsequent decommissioning date is correct.

To assess whether this issue was isolated I checked all ICPs on the May 2021 and June 2021 AV080 submissions where the ICP had an end date during the submission month, and the start and end reads occurred during the submission month (i.e., all consumption in the read-to-read period was expected to be reported). The ICPs checked included switches out, meter changes, and disconnected ICPs.

I found that apart from ICP 0006589570RN16A, the total volume reported matched the read-to-read period consumption in the latest revision for each ICP. I saw evidence that where inactive consumption was identified, the status was corrected to “active” for the affected period and all consumption was included in the latest revision.

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 the process in place to manage and respond to such requests.

I analysed registry list of ICPs with “new” or “ready” status and Pioneer as the proposed trader, and reviewed processes to monitor new connections.

Audit commentary

A relatively small number of new connections are completed annually. New connections are monitored using a spreadsheet, which tracks progress with the new connections and any actions taken. Progress is checked weekly, and Pioneer follows up with contractors close to the expected livening date if confirmation of connection is not received.

Pioneer applies the “inactive - new connection in progress” status once the ICP is made “ready” by the distributor if a customer application has been received.

Analysis of the registry list found five ICPs had “new” or “ready” status for more than two years:

ICP	ICP created	Status	Findings
0000508465DE284	7/11/2018	0	An application has been received and the new connection has been followed up with the electrician. Work is expected to proceed once consent for the subdivision is received.
0000508551CE369	20/11/2018	999	These ICPs are vacant tenancies in a new building. They were followed up with the building owner and have been confirmed as still required.
0000508553CE3EC	20/11/2018	999	These ICPs are vacant tenancies in a new building. They were followed up with the building owner and have been confirmed as still required.
0000508554CEE26	20/11/2018	999	These ICPs are vacant tenancies in a new building. They were followed up with the building owner and have been confirmed as still required.
0000509420CE2D5	19/06/2019	999	This has been confirmed as no longer required and has since been decommissioned as set up in error.

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.

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 Pioneer deem all conditions to be met. A typical sample of five ICPs were checked to confirm that these were notified to the registry within two business days, and that the correct switch type was selected.

Audit commentary

Pioneer's processes are compliant with the requirements of Section 36M of the Fair Trading Act 1986. NT files are sent as soon as all pre-conditions are met, and the withdrawal process is used if the customer changes their mind.

All switching files are produced directly from Orion, after being manually triggered. NT files are issued once staff responsible for the customer account advise that an agreement is in place with the customer and the switch can be requested. Transfer switch type is applied where a customer is transferring between retailers at an address.

Review of the event detail report found 16 transfer switch NTs were issued. I confirmed that none had a metering category of three or above.

The five NT files checked were sent within two business days of pre-conditions being cleared. The NT files checked contained the correct switch type.

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 10 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 two months.

Audit observation

The event detail report was reviewed to:

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

The switch breach history report was examined for the audit period.

Audit commentary

AN files are produced directly from Orion after being manually triggered. A hierarchy is used to determine the code which should be applied. AN files are checked by the Customer Service and Billing Analyst before they are sent to the registry. If any information in the file is found to be incorrect, such as an incorrect AN response code or proposed event date, it is manually edited before being transferred to the registry SFTP.

I checked a sample of three ANs per response code for accuracy. Only the AA and CO codes were used. For the sample of three AA coded AN files, one was found to have advanced metering and should have been sent with the AD code.

All three CO coded AN files sampled were not in contract and therefore the incorrect code was sent. This issue was identified in the previous audit and a recommendation was made to investigate which has been completed, finding that Orion automatically applies a contract end date when new customers are set up, regardless of whether there is a contract in place or not. Pioneer now removes the contract date when setting up non-contracted clients, so this is less likely to occur going forward. There was a total of nine CO coded AN files sent during the audit period.

The event detail report was reviewed for all 50 transfer ANs to assess compliance with the setting of event dates requirements:

- 49 ANs (98%) had proposed event dates within five business days of the NT receipt date.
- All 50 ANs had proposed event dates within ten business days of the NT receipt date.

No AN breaches were recorded on the switch breach history report.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.2 With: Clauses 3 and 4 Schedule 11.3 From: 21-Jul-20 To: 31-Jul-21	All three CO coded AN files sampled were sent with the incorrect AN code. There was a total of nine CO coded AN files sent during the audit period. One of the three AA coded AN files sampled was sent with the incorrect code. 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 rated as moderate. Both preventative and detective controls are in place for AN codes but did not operate as intended because 1) Orion applied an incorrect code and 2) the incorrect code was not detected through the manual review. The impact is assessed to be low because the switches were completed as expected.		
Actions taken to resolve the issue		Completion date	Remedial action status
With the auditor’s assistance, further training has been completed		09/11/2021	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Promapps updated		01/11/2021	

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 report was reviewed to identify CS files issued by Pioneer during the audit period. The accuracy of the content of CS files was confirmed by checking a sample of records. 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 report for the audit period was reviewed to identify late CS files.

Audit commentary

CS timeliness

Pioneer uses the switch breach report to identify files which are due and aims to process all files as soon as possible.

The switch breach report recorded seven CS breaches for transfer switches not sent within five business days of the event date. These were all backdated TR switch requests which prevented Pioneer from sending the CS file on time.

CS content

CS files are produced directly from Orion after being manually triggered, using reading and meter information stored in Orion. CS files are checked by the Customer Service and Billing Analyst before they are sent to the registry. If any information in the file is found to be incorrect or the CS reading is estimated and an AMI reading is available for Pioneer's last day of supply, the files are manually edited before being transferred to the registry SFTP. If a reading is replaced, the new reading is also recorded in Orion.

The Registry Functional Specification v22.35 states that average daily consumption within the CS file should be the average kWh per day for the last read period. Orion's EDC (estimated daily consumption) is applied as the average daily consumption. The EDC is stored on the meters tab at meter register level and is updated when readings are added to Orion. The total is aggregated to installation level for inclusion in the CS file. While this is not technically consumption for the last read to read period, it provides a reasonable indication of the average daily consumption.

Analysis estimated daily kWh provided in CS files on the event detail report identified:

Average daily kWh	Count of transfer CS files	Findings
Negative	-	Compliant.
Zero	1	The average daily kWh was confirmed to be consistent with the last read to read period.
More than 200 kWh	7	The five ICPs with the highest average daily kWh were checked... Two CS files were checked and found to be compliant. The remaining three ICPs were checked and found not to be consistent with the last read to read period daily average consumption. The differences ranged from +28 kWh to +322 kWh. I recommend below that how Orion is calculating these figures be investigated as it did not match the expected outcomes using the Orion logic described above.

Description	Recommendation	Audited party comment	Remedial action
Losing trader must provide final information	Investigate how daily average consumption logic is working as the ICPs sampled with a high average daily consumption did not match the expected outcomes.	Pioneer is working with our provider Agility to understand if the EDC is calculated from the last read to read period or over longer periods of time	Investigating

No inconsistencies between last actual read dates and event read types, or incomplete CS files were identified for transfer switches. The content of a sample of five transfer CS files were checked and found:

- all five ICPs had an incorrect average daily kWh, because Orion applied the EDC value instead of consumption for the last read to read period, and
- ICP 0000014870DE7D8 was sent with the correct final read of 139,357 but this read was not updated in Orion resulting in under submission of 124 kWh; this is recorded as non-compliance in **sections 2.1, 6.7 and 12.7**.

The issue found in the last audit where incorrect last actual read dates were sent in the CS files was not found in this audit.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.3 With: Clause 5 Schedule 11.3 From: 21-Jul-20 To: 31-Jul-21	Seven CS breaches. Three of the seven ICPs with high average daily consumption values and all five of the typical sample of CS files checked were not consistent with the average consumption for the last read to read period in transfer CS files. Potential impact: Medium 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 there is good process documentation and process checks in place to mitigate risk to an acceptable level. The audit risk rating has the potential to be medium based if the incorrect high daily average consumption figures were used but I am unable to confirm if this has been used by the gaining trader, therefore I have recorded the actual impact is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Pioneer is working with our provider Agility to understand if the EDC is calculated from the last read to read period or over longer periods of time		01/02/2022	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
Pioneer is manually checking the EDC in CS files		09/11/2021	

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

The losing trader and the gaining trader must both use the same switch event meter reading as determined by the following procedure:

- *if the switch event meter reading provided by the losing trader differs by less than 200 kWh from a value established by the gaining trader, the gaining trader must use the losing trader's validated meter reading or permanent estimate (clause 6(a)); or*
- *the gaining trader may dispute the switch meter reading if the validated meter reading or permanent estimate provided by the losing trader differs by 200 kWh or more (clause 6(b)).*

If the gaining trader disputes a switch meter reading because the switch event meter reading provided by the losing trader differs by 200 kWh or more, the gaining trader must, within 4 calendar months of the registry manager giving the gaining trader written notice of having received information about the switch completion, provide to the losing trader a changed switch event meter reading supported by two validated meter readings.

- *the losing trader can choose not to accept the reading however must advise the gaining trader no later than five business days after receiving the switch event meter reading from the gaining trader (clause 6A(a)); or*
- *if the losing trader notifies its acceptance or does not provide any response, the losing trader must use the switch event meter reading supplied by the gaining trader (clause 6A(b)).*

Audit observation

The process for the management of read change requests was examined. The event detail report was analysed to identify all read change requests and acknowledgements during the audit period.

I also checked for CS files with estimated readings provided by other traders where no RR was issued.

The switch breach history report for the audit period was reviewed.

Audit commentary

RR

When a high or low read is identified through the read validation process for a new switch in, the ICP is investigated to determine whether a read change is required. Pioneer will issue an RR file once they have obtained readings which confirm that the difference between the event reading and expected reading on the event date is more than ± 200 kWh. Orion is manually updated to reflect the outcome of the RR process once it is complete.

No RR files were issued for transfer switches, and the switch breach history report did not record any late RR files.

AC

Pioneer uses the switch breach report to identify files when AC files are due and aims to process all files as soon as possible. Orion is manually updated to reflect the outcome of the RR process once it is complete.

No AC files were issued for transfer switches, and the switch breach history report did not record any late AC files.

CS files with estimated readings where no RR is issued

Review of the event detail report did not identify any incoming transfer CS files with estimated reading where no RR was issued.

Previous audit corrections

The January 2020 audit found that the agreed switch reading was not applied for five ICPs. I rechecked these in November and found corrections had not been processed, and Pioneer intended to process corrections by revision 14. These were rechecked and found:

ICP	Issue	kWh	Comment
0000001074ED314 19/07/19	Final read incorrectly labelled as (E) instead of (A)	-	Not corrected and Revision 14 has been completed.
0000483126CE356 01/11/19	Orion reading differs from agreed switch reading	39	Not corrected because accounts were closed on AMI reads. Revision 14 has been completed.
0000500468CEEC4 01/11/19	Orion reading differs from agreed switch reading	16	
0000508237CE214 04/11/19	Orion reading differs from agreed switch reading	99	
0000509672CE05F 04/11/19	Orion reading differs from agreed switch reading	-73	
0000001074ED314 19/07/19	Orion read type differs from agreed switch reading	-	Corrected.

The five corrections that have not been completed are recorded as non-compliance in **section 2.1**.

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 event detail report was reviewed to identify all read change requests and acknowledgements where clause 6(2) and (3) of schedule 11.3 applied.

Audit commentary

Pioneer did not issue or receive any read change requests where clause 6(2) and (3) of schedule 11.3 applied.

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

Disputes were discussed with Pioneer.

Audit commentary

Pioneer confirmed that no disputes have needed to be resolved in accordance with this clause.

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 Pioneer deem all conditions to be met. A typical sample of five ICPs were checked to confirm that these were notified to the registry within two business days, and that the correct switch type was selected.

Audit commentary

Pioneer's processes are compliant with the requirements of Section 36M of the Fair Trading Act 1986. NT files are sent as soon as all pre-conditions are met, and the withdrawal process is used if the customer changes their mind.

All switching files are produced directly from Orion, after being manually triggered. NT files are issued once staff responsible for the customer account advise that an agreement is in place with the customer and the switch can be requested. A switch move is selected where a customer has moved into an address.

Review of the event detail report found 90 switch move NTs were issued. I confirmed that none had a metering category of three or above.

The five NT files checked had the correct switch type selected and all were sent to the registry within two business days after the pre-conditions were cleared.

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 5 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 10 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 report was reviewed to:

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

The switch breach history report was examined for the audit period.

Audit commentary

AN files are produced directly from Orion after being manually triggered. A hierarchy is used to determine the code which should be applied. AN files are checked by the Customer Service and Billing Analyst before they are sent to the registry. If any information in the file is found to be incorrect, such as an incorrect AN response code or proposed event date, it is manually edited before being transferred to the registry SFTP.

I checked a sample of three (or all) ANs per response code for accuracy. The sample checked found:

- all three AA coded AN files were sent with the incorrect AA code when AD is expected; this was due to a misunderstanding and the 2019 memo that sets this out has been provided - 72 of the 94 AA coded AN files sent had an AMI capable meter present,
- the one CO coded AN file was sent with the incorrect code as the customer's contract ended on 30 September 2020 and the ICP switched out 1 October 2020, and
- the three OC coded AN files were correct.

The event detail report was reviewed for all 232 switch move ANs to assess compliance with the setting of event dates requirements:

- all ANs had proposed event dates within ten business days of NT receipt, and
- all AN proposed event dates matched the gaining trader's NT proposed event date.

The switch breach report did not record any late AN or CS files for switch moves.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.8 With: Clauses 10(1) Schedule 11.3 From: 21-Jul-20 To: 31-Jul-21	72 AA coded AN files were sent with the incorrect code when AD was more accurate. One CO coded AN file sent when the customer's contract had expired. 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. Both preventative and detective controls are in place for AN codes but did not operate as intended because 1) Orion applied an incorrect code and 2) there was a misunderstanding of when to use the AD code. The impact is assessed to be low because the switches were completed as expected.		
Actions taken to resolve the issue		Completion date	Remedial action status
With the auditor's assistance, further training has been completed to gain a better understanding of the use of the AD code		09/11/2021	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Promapps to be updated		01/02/2022	

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 date, then within 10 business days of receiving notice the losing trader must also complete the switch by providing to the registry manager as described in subclause (1)(a):

- *the event date proposed by the losing trader; and*
- *a valid switch response code; and*
- *final information as required under clause 1.*

Audit observation

The event detail report was reviewed to identify AN files issued by Pioneer during the audit period, and assess compliance with the requirement to meet the setting of event dates requirement.

Audit commentary

Analysis found all 232 switch move ANs had a valid switch response code. All AN proposed event dates matched the gaining trader's NT proposed event date. 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 report was reviewed to identify CS files issued by Pioneer during the audit period. The accuracy of the content of CS files was confirmed by checking a sample of records. 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

CS files are produced directly from Orion after being manually triggered, using reading and meter information stored in Orion. CS files are checked by the Customer Service and Billing Analyst before they are sent to the registry. If any information in the file is found to be incorrect or the CS reading is estimated and an AMI reading is available for Pioneer's last day of supply, the files are manually edited before being transferred to the registry SFTP. If a reading is replaced, the new reading is also recorded in Orion.

The Registry Functional Specification v22.35 states that average daily consumption within the CS file should be the average kWh per day for the last read period. Orion's EDC (estimated daily consumption) is applied as the average daily consumption. The EDC is stored on the meters tab at meter register level and is updated when readings are added to Orion. The total is aggregated to installation level for inclusion in the CS file. While this is not technically consumption for the last read to read period, it provides a reasonable indication of the average daily consumption.

Analysis estimated daily kWh provided in CS files on the event detail report identified:

Average daily kWh	Count of switch move CS files	Findings
Negative	-	Compliant.
Zero	17	A sample of five files were checked. Four were found to be consistent with the read-to-read period daily average consumption. ICP 0007197203RN8D2 had an average daily consumption figure of 35.82.
More than 200 kWh	30	The five highest values were checked and found not to be consistent with the last read to read period daily average consumption. The differences ranged from -210 kWh to +598 kWh. I recommend in section 4.3 , that how Orion is calculating these figures be investigated as it did not match the expected outcomes using the Orion logic described above.

I compared CS event dates, last actual read dates and event read types for consistency and identified the following discrepancies:

- one switch move CS files had a last actual read date the day before the event date, and two registers with actual readings and one register with an estimated reading; this was due to the last register being incorrectly labelled as an estimate, but it was an actual read,
- eight switch move CS files had a last actual read date more than one day before the event date with an actual read type; I checked a sample of five and found that this was due to a misunderstanding and these reads should have been labelled as estimates as the read was not for the event date - this is now understood and is not expected to happen in the future, and
- 19 switch move CS files contained a CSPREMISES row only when CSMETERCHANNEL, CSMETERCOMP and CSMETERINSTALL were expected; all of the affected ICPs had the HHR flag set to "Y" except for one DUMI ICP, and I note that HH switches are normally completed with a CSPREMISES line only if the HH switch type is applied (the same issue was raised in the previous two audits and is a registry issue and not an Orion issue, as these switches were created manually on the registry and the lines were still missing; all of the ICPs were flagged C&I TOU with an accumulator type of "A" recorded and the registry functional specification will only send meter channel lines if there is an accumulator type of "C").

For each Metering Installation that has channels requiring readings			Where the Actual Transfer Date is on or after the go-live date: there must be exactly the same number of installation rows as found in the Metering event applicable at the Actual Transfer Date for this ICP where the installation contains non-removed metering components with at least one Channel with an accumulator type = 'C' and settlement indicator = 'Y'. They will be separated by intervening 'M' and 'R' rows. For RR message types the 'I' row is not to be submitted.
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This has occurred when the change was made to the code in 2015 to only allow category 3 and higher ICPs to be switched using the gaining trader switch process. It has no impact on any participants as no reads are expected for these ICPs when they switch. I raise this an issue for the Electricity Authority to investigate.

Description	Issue	Auditor comments
Losing trader must provide final information	All ICPs C& I TOU category 1 and 2 can't comply with the CS file requirements as these do not have a "C" flagged accumulator and no reads can be sent. This conflicts with the TR and MI switching process.	Include in the switch review project.

A further two CS files were checked for accuracy and found all details were correct with the exception of the average daily consumption figures which has been discussed above and in **section 4.3**.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 4.10</p> <p>With: Clause 11</p> <p>Schedule 11.3</p> <p>From: 21-Jul-20</p> <p>To: 31-Jul-21</p>	<p>All but one of the 18 CS files sampled (made up of five with zero average, five with high average and the eight CS file move switches sampled) with high had average daily consumption values that were not consistent with the average consumption for the last read to read period in transfer CS files.</p> <p>Eight switch move CS files contained incorrect last actual read dates.</p> <p>Potential impact: Medium</p> <p>Actual impact: Low</p> <p>Audit history: Twice</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>Controls are rated as moderate as there is good process documentation and process checks in place to mitigate most of the time. Documentation is expected to have been updated post the audit to correct the read type being applied in the CS files.</p> <p>The audit risk rating has the potential to be medium based if the incorrect high daily average consumption figures were used but I am unable to confirm if this has been used by the gaining trader, therefore I have recorded the actual impact is low.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Pioneer is working with our provider Agility to understand if the EDC is calculated from the last read to read period or over longer periods of time. With the auditor's assistance, the misunderstanding around the wrong read type used in CS files (e.g. Actual in the place of Estimate) has been corrected		01/02/2022	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
Pioneer is manually checking the EDC in CS files		09/11/2021	

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

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. If the gaining trader elects to use this new switch event meter reading, the gaining trader must advise the losing trader of the switch event meter reading and the actual event date to which it refers as follows:

- *if the switch 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 (clause 12(2)(a)); or*

- *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 meter reading. In this case, the gaining trader, within 4 calendar months of the date the registry manager gives the gaining trader written notice of having received information about the switch completion, must provide to the losing trader a changed validated meter reading or a permanent estimate supported by 2 validated meter readings and the losing trader must either (clause 12(2)(b) and clause 12(3)):*
- *advise the gaining trader if it does not accept the switch event meter reading and the losing trader and the gaining trader must resolve the dispute in accordance with the dispute procedure in clause 15.29 (with all necessary amendments) (clause 12(3)(a)); or*
- *if the losing trader notifies its acceptance or does not provide any response, the losing trader must use the switch event meter reading supplied by the gaining trader (clause 12(3)(b)).*

12(2A) 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,

- *the gaining trader will trade electricity from a meter with a half hour submission type in the registry (clause 12(2A)(b));*
- *the gaining trader no later than 5 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 (clause 12(2B)).*

Audit observation

The process for the management of read change requests was examined. The event detail report was analysed to identify all read change requests and acknowledgements during the audit period. A sample of RR and AC files issued for switch moves were checked to confirm that the content was correct, and that Orion 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 Orion.

The switch breach history report for the audit period was reviewed.

Audit commentary

RR

When a high or low read is identified through the read validation process for a new switch in, the ICP is investigated to determine whether a read change is required. Pioneer will issue an RR file once they have obtained readings which confirm that the difference between the event reading and expected reading on the event date is more than ± 200 kWh. Orion is manually updated to reflect the outcome of the RR process once it is complete.

Pioneer issued three RR files for switch moves. One was rejected and then accepted on reissue with different readings, and the other two were accepted. There was a genuine reason for the RRs to be issued, they were based on reads confirmed by the other trader, and Orion reflected the correct outcome of the RR process.

The switch breach history report did not record any late RR files.

AC

Pioneer uses the switch breach report to identify files when AC files are due and aims to process all files as soon as possible. Orion is manually updated to reflect the outcome of the RR process once it is complete.

Eight AC files were issued by Pioneer. Two were rejected, one was accepted on reissue with different reads and the other was not reissued. I reviewed the AC files and confirmed that two of the rejected files were rejected in error. The requesting trader was advised of this by email and asked to re-request, but no further RRs were received:

ICP	CS Read	RR read	kWh difference	Comment
0000855786NVC9D 28/01/21	39,714 (E)	39,537 (E)	177	424 units pushed to the gaining trader.
	14,726 (E)	14,479 (E)	247	
0007446935NV50B 25/05/21	62,201 (E)	51,039 (E)	11,162	11,214 units pushed to the gaining trader.
	2,059 (E)	2,007 (E)	52	

This will have resulted in 11,638 kWh being pushed to the gaining trader. This is recorded as non-compliance below and in **section 2.1**.

The switch breach history report did not record any late AC files.

CS files with estimated readings where no RR is issued

Five switch move CS files with estimated reads where no RR was issued were reviewed, and I confirmed the correct readings were applied in Orion.

Previous audit corrections

I rechecked ICP 0000507601DEF19 (14 February 2020) found in the last audit where the switch event reading applied in the CS file was not the actual reading on the switch event date, and also did not match the estimated closing reading recorded in Orion. This has not been corrected and is now outside the revision cycle. This is recorded as non-compliance in **section 2.1**.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.11 With: Clause 12 Schedule 11.3 From: 28-Jan-21 To: 09-Jun-21	Two RR files rejected in error resulting in 11,638 kWh being pushed to the gaining trader. Potential impact: Medium Actual impact: Medium Audit history: Twice Controls: Moderate Breach risk rating: 4		
Audit risk rating	Rationale for audit risk rating		
Medium	Controls are rated as moderate as the process is manual and human error can occur. The RRs were identified as having been rejected in error and the gaining trader advised but no further RRs were received. The audit risk rating is medium based on the kWh differences identified.		
Actions taken to resolve the issue		Completion date	Remedial action status
RR files sent for 0000855786NVC9D and 0007446935NV50B		09/11/2021	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Future RR files that are received from the gaining retailer will be investigated more thoroughly		09/11/2021	

4.12. Gaining trader informs registry of switch request - gaining trader switch (Clause 14 Schedule 11.3)

Code reference

Clause 14 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 at an ICP at which the losing trader trades electricity with the customer or embedded generator, and one of the following applies at the ICP:

- *the gaining trader will trade electricity through a half hour metering installation that is a category 3 or higher metering installation; or*
- *the gaining trader will trade electricity through a non-AMI half hour metering installation and the losing trader trades electricity through a non-AMI non half hour metering installation; or*
- *the gaining trader will trade electricity through a non-AMI non half hour metering installation and the losing trader trades electricity through a non-AMI half hour metering installation*

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 3 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 Pioneer deem all conditions to be met.

HH NTs on the event detail report were matched to the registry list reports to confirm whether the correct switch type was selected for the metering category, and all four HH NTs were checked to confirm that they were notified to the registry within three business days.

Audit commentary

All switching files are produced directly from Orion, after being manually triggered. NT files are issued once staff responsible for the customer account advise that an agreement is in place with the customer and the HH switch can be requested.

Pioneer issued four HH NTs during the audit period, all had a metering category of 3 or higher and were issued within three business days of pre-conditions being cleared.

None of the 96 TR and MI NTs checked had a metering category of 3 or higher.

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 report was reviewed to identify AN files issued by Pioneer during the audit period, and a sample of two (or all) ANs per response code were reviewed to determine whether the codes had been correctly applied.

The switch breach history report was examined for the audit period.

Audit commentary

HH AN files are produced directly from Orion after being manually triggered. A hierarchy is used to determine the code which should be applied. AN files are opened by the Customer Service and Billing Analyst and reviewed before they are sent to the registry. If any information in the file is found to be incorrect, such as an incorrect AN response code, it is manually edited before being transferred to the registry SFTP.

The 35 HH ANs recorded on the event detail report were reviewed, and I found all but four had the AA response code correctly applied. These four CO coded AN files were for customers who had previously been in contract, but their contracts had expired so the code was sent incorrectly. This is recorded as non-compliance.

The switch breach report is monitored daily to identify ICPs which require AN files, and no late AN files were identified.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.13 With: Clauses 15 Schedule 11.3 From: 29-Aug-20 To: 01-Jan-21	Four CO coded AN files sent when the customers’ contract had expired. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are rated as moderate as the process is manual and these were slipped through due to human error. The impact is assessed to be low because the switches were completed as expected.		
Actions taken to resolve the issue		Completion date	Remedial action status
With the auditor’s assistance, further training has been completed to gain a better understanding of the use of the AN codes		09/11/2021	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Future AN files will be manually checked to ensure the correct code is used. Promapps updated		09/11/2021	

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

HH CS files are produced directly from Orion after being manually triggered, and the switch breach report is monitored to identify ICPs which require CS files. CS files are checked by the Customer Service and Billing Analyst before they are sent to the registry. If any information in the file is found to be incorrect, it is manually edited before being transferred to the registry SFTP.

The switch breach report and registry acknowledgements are monitored daily to identify ICPs which require HH CS files.

Four HH CS files were issued during the audit period. The content of two CS files was found to be correct, and the other two files contained CSMETERINSTALL, CSMETERCOMP, and CSMETERCHANNEL rows. This is due to the same issue as raised in **section 4.10**. The ICPs both had meters greater than category 3 and were not flagged C&I TOU and both had an accumulator flag of "C" therefore the registry expected reads to be sent but there were no reads to be sent.

No HH CS breaches were recorded on the switch breach history report.

Audit outcome

Compliant

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)):*
 - o *the participant identifier of the trader making the withdrawal request (clause 18(c)(i));*
 - and*
 - o *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 10 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

An event detail report was reviewed to:

- identify all switch withdrawal requests issued by Pioneer and check the content of a sample of at least three (or all) ICPs from the event detail report for each withdrawal code,
- identify all switch withdrawal acknowledgements issued by Pioneer, and check a sample, and
- check the timeliness of NW files.

The switch breach history report was checked for any late NWs and AWs.

Audit commentary

NW

NW files are produced directly from Orion after being manually triggered, and Orion selects the NW code based on the information it has available. NW files are checked by the Customer Service and Billing Analyst before they are sent to the registry. If any information in the file is found to be incorrect, such as the NW advisory code, it is manually edited before being transferred to the registry SFTP.

The switch breach history report recorded:

- one NA breach is recorded as the NW was sent more than two months from the event date for ICP 0007113975RN6AB as this was gained in error, and
- two SR breaches which were not genuine, because the AW responses were within five business days of receipt of the corresponding NW.

A diverse sample of 15 NWs were checked, including all response codes applied. The NW content was confirmed to be correct for all ICPs with the exception of the use of the “DF” code. The correct code to have been applied was “CE”. This is now understood and is not expected to occur going forward. This is recorded as non-compliance below.

AW

Three of the 17 AWs issued by Pioneer were rejections. The files were rejected based the information available at the time the response was issued.

The switch breach history report did not record any late AW files.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.15 With: Clauses 17 and 18 Schedule 11.3 From: 21-Jul-20 To: 31-Jul-21	One NA breach. All three DF coded NW files sampled were incorrectly coded. CE would have been more accurate. 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 rated as strong as there is good process documentation and process checks in place to mitigate risk to an acceptable level. Documentation is expected to have been updated post the audit to correct the read type being applied in the CS files. The audit risk is assessed to be low as there is no direct impact on reconciliation for the breaches identified.		
Actions taken to resolve the issue		Completion date	Remedial action status
With the auditor's assistance, further training has been completed to gain a better understanding of the use of the NW codes		09/11/2021	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Future NW files will be manually checked to ensure the correct code is used. Promapps updated		09/11/2021	

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 in **section 4.3** for transfer switches, **section 4.10** for switch moves, and **sections 4.4** and **4.11** for read changes. The meter readings used in the switching process are validated meter readings or permanent estimates.

As detailed in **section 4.3**, ICP 0000014870DE7D8 was sent with the correct final read of 139,357 but this read was not updated in Orion resulting in under submission of 124 kWh. Compliance is recorded below as the switch read supplied was correct, but this is recorded as non-compliance in **sections 2.1** and **12.7**.

Pioneer's policy regarding the management of meter reading expenses is compliant.

Audit outcome

Compliant

4.17. Switch saving protection (Clause 11.15AA to 11.15AB)

Code reference

Clause 11.15AA to 11.15AB

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 contact 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 report was analysed to identify all withdrawn switches with a CX code applied 180 days of switch completion.

Audit commentary

Three NWs with the CX (customer cancellation) withdrawal reason code were issued within 180 days of switch completion where Pioneer was the losing trader. All were confirmed to be customer initiated and Pioneer did not make any offers or enticements.

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

The processes to identify and monitor shared unmetered load were discussed. The registry list and AC020 report were reviewed to identify all ICPs with shared unmetered load and assess compliance.

Audit commentary

Pioneer does not supply any ICPs with shared unmetered load. Processes to monitor new and existing ICPs for additions and changes to unmetered load are discussed in **section 3.7**.

Audit outcome

Compliant

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 report was examined to identify any unmetered load over 3,000 kWh per annum.

Audit commentary

Pioneer supplies 14 ICPs with standard unmetered load indicated, and none have annual load over 3,000 kWh.

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 10 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:*
 - o *the date the limit was calculated or estimated to have been exceeded*
 - o *the details of the corrective measures that the retailer proposes to take or is taking to reduce the unmetered load.*

Audit observation

The AC020 report was examined to identify any unmetered load over 3,000 kWh per annum.

Audit commentary

Pioneer supplies 14 ICPs with standard unmetered load indicated, and none have annual load over 3,000 kWh.

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

Pioneer supplies five ICPs with distributed unmetered load, which are recorded in the Grey District Council database.

Audit commentary

EMS provides DUML submission information, and process compliance is recorded in their agent audit report.

The Electricity Authority issued a memo on 18 June 2019 confirming that the code requirement to calculate the correct monthly load must:

- take into account when each item of load was physically installed or removed, and
- wash up volumes must take into account where historical corrections have been made to the DUML load and volumes.

Pioneer is provided with the Grey DC DUML database at the end of each month. This is then sent through to EMS who uses this information combined with data logger files to derive submission information. The use of a database snapshot to derive submission is recorded as non-compliance below.

Grey DC is the only DUML database managed by Pioneer as Gore DC has switched to another trader. The DUML audit results are set out in the table below.

			Compliance Achieved (Yes/No)									Potential Annual KWh Submission Variance +=over -=under
Database	Next audit due date	DUML Audit completed 16A.26 and 17.295F	Deriving submission information 11(1) of schedule 15.3	ICP identifier 11(2)(a) of schedule 15.3	Location of items of load 11(2)(b) of schedule 15.3	Description of load 11(2)(c)&(d) of schedule 15.3	All load recorded in database 11(2A) of schedule 15.3	Tracking of load changes 11(3) of schedule 15.3	Audit trail 11(4) of schedule 15.3	Database accuracy 15.2 and 15.37B(b)	Volume information accuracy 15.2 and 15.37B(c)	
Grey DC	01/12/2021	Yes	No	Yes	Yes	Yes	No	Yes	Yes	No	No	-3,100

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 5.4 With: Clause 11 Schedule 15.3, Clause 15.37B & 16A.26 From: 21-Jul-20 To: 31-Jul-21	The Grey DC DUMML database does not meet compliance for three clauses. 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 effectiveness of the controls is recorded as moderate as Pioneer are working to resolve the issues found. The impact on settlement is low as the database accuracy based on the kWh difference detailed in the table above.		
Actions taken to resolve the issue		Completion date	Remedial action status
GDC contract finishes with Pioneer Energy on the 31/01/2022 and will not be renewed, therefore we doubt the database issue will be fixed before they switch away		09/11/2021	Unknown
Preventative actions taken to ensure no further issues will occur		Completion date	
GDC Streetlight audit has been completed for 2021		09/11/2021	

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 Clause 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 electrically connected 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 to ensure metering is installed and unmetered load is quantified were examined.

The AC020 trader compliance report, meter event details report, and registry list files were reviewed to determine compliance.

Audit commentary

Metering installations installed

All active, metered ICPs have an MEP, and at least one meter channel.

Pioneer's new connection process includes a check that metering is installed before electrical connection occurs, and that any unmetered load is quantified.

No load is submitted by subtraction. Part of ICP 1002050361LC60D's load is recorded in duplicate on ICP 0800539060LCBFF's metering and this duplicated load is zeroed for submission. This is discussed further in **section 12.2**.

Distributed generation

Pioneer receives notifications from customers and the networks that distributed generation is to be installed. Pioneer liaises with the customer to arrange for compliant metering to be installed and submits the generation volumes with an appropriate profile.

Pioneer reviews registry notification files, which should detect changes to installation types and addition of generation fuel types and capacities by distributors.

Pioneer supplies 30 active ICPs with distributed generation recorded by the distributor. Review of the AC020 report confirmed that there were no ICPs with generation recorded by the distributor and an import/export meter where Pioneer did not record a generation profile. All ICPs with a generation profile also had generation recorded by the distributor.

Where generation profiles were recorded, they were consistent with the generation fuel type.

Bridged meters

ICP 0000021467DEABF's meter was bridged from 10 June 2021 to 18 June 2021 and was recertified on unbridging. A correction was processed to estimate consumption during the bridged period. Electricity was estimated in accordance of the code.

Audit outcome

Compliant

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 10 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.

Audit commentary

Review of the NSP table confirmed that Pioneer is not responsible for any GIPs.

Audit outcome

Not applicable

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 list and AC020 trader compliance report were reviewed to determine compliance.

Audit commentary

Pioneer has only used the DST, HHR, PV1, RPS, and UML 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 lead 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.

Reporting of defective HHR metering installations was reviewed as part of the EMS and AMS audits.

Audit commentary

Defective meters are typically identified through the meter reading validation process, or from information provided by the MEP or customer. Upon identifying a possible defective meter, Pioneer raises a field services job for the MEP to investigate.

EMS and AMS have processes to validate data, which are sufficient to identify defective meters. Where a possible meter defect is found, a field services job is raised to investigate and resolve the defect.

The following meter defects were identified during the audit period:

- ICP 0110000107EL2E3 has a phase failure and Pioneer confirmed that a fault has been raised to investigate; a correction will be processed once the fault has been resolved, and
- ICP 0000021467DEABF was bridged from 10 June 2021 to 18 June 2021; the MEP was notified, the meter was certified on un-bridging, and a correction was processed to estimate consumption during the bridged 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 it does not exceed the maximum interrogation cycle in 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

HHR

HHR data is collected by EMS and AMS, and data transmission and clock synchronisation processes were reviewed as part of their agent audits.

NHH and AMI

Pioneer receives meter readings from AMS (for Arc, AMS and Smartco meters), Intellihub (for Metrix and AMS meters), and FCLM as MEPs, and Wells as an agent. Clock synchronisation processes for agents and MEPs were reviewed as part of their agent and MEP audits. Agents are required to advise Pioneer of clock synchronisation discrepancies and adjustments.

Audit commentary

HHR

HHR data transmission and clock synchronisation was reviewed as part of EMS and AMS' agent audits, and compliance is recorded. No defective HHR meters or clock synchronisation events outside the permissible thresholds have been identified during the audit period.

NHH and AMI

All information used to determine volume information is collected from the services interface or the metering installation by Pioneer, their agents, or the MEP. Fulfilment of the interrogation systems requirements, and clock synchronisation was examined as part of the MEP and agent audits.

MEPs advise Pioneer of clock synchronisation events via email, and action is taken as necessary. No events requiring action have been identified 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 Wells' agent audit. Pioneer's processes to manage meter condition information were reviewed.

Processes for customer and photo reads were reviewed.

Audit commentary

Wells readings

Compliance is recorded in Wells' audit report.

During manual interrogation, the meter register value is collected and entered into a hand-held device. This reading enters Pioneer's systems and is labelled as a reading, which denotes that it is a meter reading collected and validated by a meter reader.

Wells monitors meter condition as required by schedule 15.2. Wells provides information on meter condition along with the daily reads, and a monthly summary report containing missing seal and broken seal events. Wells also phones or emails Pioneer when they identify an issue which requires urgent resolution.

Wells notes (including supporting information on meter condition and reasons meters are unread) are imported into Orion and reviewed when investigating data validation and read attainment issues for individual ICPs. Daily, each Wells notes file is opened and manually reviewed to identify any ICPs which require action. I reviewed a sample of these notes files and noted that read attainment issues were much more common than other meter condition events. Wells' most recent agent audit did not identify any meter condition issues requiring action by Pioneer.

I traced readings for eight ICPs read by Wells from the data files provided by Pioneer to the historic estimate calculations and confirmed that they were transferred accurately. I traced a sample of readings for a further nine ICPs read by Wells from the source files through to Orion and John Candy Consulting's historic estimate calculations and confirmed that they were recorded correctly.

Customer and photo readings

Customer and customer provided photo readings are recorded as validated readings only if they pass validation against a set of actual validated readings from another source, otherwise they are recorded as customer readings. Validated customer readings are sent to John Candy Consulting along with other validated readings.

I checked a sample of ten customer and photo readings. Nine had been appropriately validated against a set of readings from another source and were treated as validated readings by the historic estimate process. ICP 0000043407DE457 did not have its photo reading on 3 July 2021 validated against a set of readings from another source but was recorded as a customer reading and sent to John Candy Consulting as validated because the incorrect read type was selected on manual data entry. The reading matched a photo of the meter and there is not likely to be any impact.

In the rare event that customer readings are obtained by Wells, a no read is recorded, and the customer reading is inserted in the notes. I checked two customer readings provided by Wells and confirmed that they were ignored by the historic estimate process.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 6.6 With: Clause 3(2) Schedule 15.2 From: 03-Jul-21 To: 03-Jul-21	<p>One photo reading which was not validated according to the code was recorded as a validated reading.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: None</p> <p>Controls: Strong</p> <p>Breach risk rating: 1</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>There is a process to ensure that customer and photo readings are entered with an estimated read type unless they have been validated against two actual readings from another source. Validated readings are used to calculate historic estimate, and estimated readings are ignored by the reconciliation process. The controls are strong because this appears to be an isolated exception where the wrong read type was accidentally selected when the reading was entered.</p> <p>The impact is expected to be low. The reading applied matches a photo of the meter and there are no known accuracy meter accuracy issues. The reading is likely to be correct.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
With the auditor's assistance, further training has been completed to gain a better understanding of validating reads		09/11/2021	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Future photo reads will be correctly validated against historic read history		09/11/2021	

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.

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 Wells are applied correctly.

Application of reads was reviewed as part of the historic estimate checks in **section 12.11** and found to be compliant.

The content of CS and RR files was examined in **sections 4.3, 4.4, 4.10 and 4.11**. The CS file readings were consistent with the readings up to 11.59pm on Pioneer's last day of responsibility. As detailed in **section 4.3**, ICP 0000014870DE7D8 was sent with the correct final read of 139,357 but this read was not updated in Orion resulting in under submission of 124 kWh. This is recorded as non-compliance below and in **sections 2.1 and 12.7**.

I walked through the process for NHH to HHR and HHR to NHH meter changes. EMS is responsible for HHR submission and ensures that all HHR consumption is captured and reported for any day which HHR metering is present. Pioneer is responsible for the NHH consumption and ensures that all consumption is captured and reported.

- No downgrades occurred during the audit period.
- One upgrade occurred during the audit period. The meter change occurred on 29 September 2021 and the ICP was reported as HHR from 29 September 2021. All NHH consumption was captured up to the meter removal read which was recorded on 28 September 2021.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 6.7 With: Clause 6 Schedule 15.2 From: 28-Sep-20 To: 28-Sep-20	The agreed switch reading was not applied in Orion for ICP 0000014870DE7D8 resulting in 124 kWh of under submission. Potential impact: Low Actual impact: Low Audit history: Twice Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as moderate, I found that the correct switch event reading was applied for all other examples checked. The audit risk rating is low based on the kWh difference.		
Actions taken to resolve the issue		Completion date	Remedial action status
As this non-compliance issue is under 200 units, Pioneer will not be correcting it		09/11/2021	Disputed
Preventative actions taken to ensure no further issues will occur		Completion date	Post Audit Auditor comment:
Future CS files will be manually checked to ensure the correct switch reading is provided		09/11/2021	Whilst the under submission is under 200 kWh, the code requires complete and accurate information regardless of the kWh volume.

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 was examined, including a review of the reports used in the process and evidence of action taken on unread ICPs.

A sample of ICPs not read during the period of supply were reviewed.

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”.

The process for missed reads was examined. Unread ICPs are identified through review of the Wells notes discussed in **section 6.6**, and review of the ICP level supporting data for the meter read compliance reports submitted to the Authority. All ICPs with Wells notes, and ICPs unread for more than four months on the meter read compliance reports are reviewed to determine whether action is required. The action taken varies depending on the issue preventing read attainment, and when action was last taken. For example:

- if an AMI meter is not receiving regular readings, the ICP will be added to a Wells meter reading route and a service request will be raised for the MEP to investigate and correct the issue; Orion will continue to load any AMI readings received while the meter is in a Wells reading route,
- if the meter is unable to be read due to access issues or the meter reader being unable to locate the meter, Pioneer will contact the customer to attempt to resolve the issue, and
- if the meter is unable to be read due to a fault or blank screen Pioneer will contact the customer to confirm the situation and raise a service request for the MEP where necessary.

Pioneer provided reporting on ICPs not read during the period of supply, where the period of supply ended between 1 October 2020 and 30 June 2021. One ICP switched in on an actual read and compliance is confirmed. ICP 0000650310WP19D had an AMI meter, but a read was not able to be obtained before the ICP switched out 20 days later. The ICP was investigated as part of Pioneer’s read attainment reporting, but no action was taken because it had already switched out.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 6.8 With: Clause 7(1) and (2) Schedule 15.2 From: 21-Dec-20 To: 10-Jan-21	One ICP was not read during the period of supply and exceptional circumstances were not proven. Actual impact: Low Audit history: None Controls: Strong Breach risk rating:1		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as strong, and the ICP was unread due to a very short period of supply. The impact is low because only one ICP was unread during the period of supply.		
Actions taken to resolve the issue		Completion date	Remedial action status
No comment provided.			Disputed
Preventative actions taken to ensure no further issues will occur		Completion date	Post Audit Auditor comment:
Premise added to Wells Meter Reading Schedule, however due to the short time period it was with Pioneer (21/12/20 – 10/01/21) and the time of year it switched in, it was not read. Had this premise been with Pioneer longer the team would have followed our processes to obtain an actual read (either by Wells, phone or photo read received by email)		09/11/2021	The Electricity Authority do not consider a short period of supply to override this requirement.

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 for October 2020 to June 2021 were provided and reviewed to determine whether they met the requirements of clauses 8 and 9 of schedule 15.2.

A sample of unread ICPs on the NSPs where less than 100% read attainment was achieved for June 2021 were reviewed to determine whether exceptional circumstances existed.

Audit commentary

As discussed in **section 6.8**, there are processes in place to monitor read attainment, and attempt to resolve issues preventing read attainment. 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
Oct-20	56	1	1	99.41%
Nov-20	56	2	2	99.83%
Dec-20	56	4	4	99.65%
Jan-21	56	1	1	99.91%
Feb-21	55	1	1	99.91%
Mar-21	56	1	1	99.91%
Apr-21	48	11	14	99.88%
May-21	49	11	14	99.88%
Jun-21	46	11	14	98.86%

ICPs on NSPs where less than 100% read attainment was achieved for June 2021 were reviewed, and I found exceptional circumstances existed.

The increase in unread ICPs and NSPs which do not meet the thresholds from April 2021 is because John Candy's Consulting's report includes inactive ICPs, but Pioneer's did not. The non-half hour meter read frequency guidelines version state that reporting is required where "that reconciliation participant trades continuously". It can be argued that disconnection is a break in continuous supply, or that the trader remains responsible for the ICP in the registry when it is disconnected, so I have recorded compliance for both methods.

The reports reviewed for October 2020 to June 2021 all met the reporting requirements. I checked a sample of three reports and confirmed that they 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 4 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 metered ICPs.

A report is to be sent to the Authority 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. Monthly reports for October 2020 to June 2021 were reviewed. Reports from April 2021 onwards were produced by John Candy Consulting.

Unread ICPs on the NSPs where less than 90% read attainment was achieved for June 2021 were reviewed to determine whether exceptional circumstances existed.

Audit commentary

As discussed in **section 6.8**, there are processes in place to monitor read attainment, and attempt to resolve issues preventing read attainment. The monthly meter reading reports provided were reviewed.

Month	Total NSPs where ICPs were supplied > 4 months	NSPs <90% read	Total ICPs unread for 4 months	Overall percentage read
Oct-20	59	1	5	99.61%
Nov-20	58	-	5	99.60%
Dec-20	58	1	7	99.44%
Jan-21	60	-	4	99.68%
Feb-21	60	-	4	99.68%
Mar-21	60	-	4	99.68%
Apr-21	52	5	27	97.97%
May-21	52	4	29	97.82%
Jun-21	51	4	25	98.09%

I reviewed all ICPs connected to NSPs where less than 90% of ICPs were read in the previous four months for June 2021, and found exceptional circumstances existed.

As recorded in **section 6.9** above, the increase in unread ICPs and NSPs which do not meet the thresholds from April 2021 is because John Candy's Consulting's report includes inactive ICPs, but Pioneer's did not.

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

NHH data is collected by MEPs and Wells. The data interrogation log requirements were reviewed as part of their agent and MEP audits.

Audit commentary

Compliance with this clause has been demonstrated by Pioneer'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

HHR data is collected by AMS and EMS. The data collection requirements were reviewed as part of their agent audits.

Audit commentary

Compliance with this clause has been demonstrated by the agents as part of their own audits.

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

HHR data is collected by AMS and EMS. The interrogation data requirements were reviewed as part of their agent audits.

Audit commentary

Compliance with this clause has been demonstrated by the agents as part of their own audits.

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

HHR data is collected by AMS and EMS. The data interrogation log requirements were reviewed as part of their agent audits.

Audit commentary

Compliance with this clause has been demonstrated by the agents as part of their own audits.

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 $\pm 0.1\%$ (± 2 seconds).

Audit observation

HHR data is collected by AMS and EMS. Trading period duration was reviewed as part of their agent audits.

Audit commentary

Compliance with this clause has been demonstrated by the agents as part of their own audits.

Audit outcome

Compliant

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. The oldest raw meter data available was viewed, to confirm it is retained. Audit trails were reviewed in **section 2.4**.

Audit commentary

HHR

Compliance with this clause has been demonstrated by AMS and EMS as part of their own audits.

NHH

Compliance with this clause has been demonstrated by Wells as part of their own audit.

Data is retained for more than 48 months. To confirm this I viewed:

- raw meter reading information from June 2017 on Pioneer's network.
- Pioneer data in John Candy Consulting's database from 2019 and confirmed that data is intended to be retained for the foreseeable future.

Review of audit trails in **section 2.4** confirmed that reads cannot be modified without an audit trail being created. Access to modify readings is restricted through log on privileges.

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

Streetlight capacity information is received by Pioneer and provided to EMS. Streetlight on and off times are collected and archived by EMS, associated processes were reviewed as part of their agent audit.

Audit commentary

Pioneer collects unmetered data in relation to streetlights, which is appropriately archived and retained indefinitely.

Compliance with this clause has been demonstrated by EMS as part of their own audit.

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) Schedule 15.2)

Code reference

Clause 19(1) Schedule 15.2

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 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.

Audit commentary

Readings received from MEPs and agents are imported into Pioneer's data warehouse and then extracted for import into Orion for billing, and for import into John Candy Consulting's database for reconciliation. Switch event readings are obtained directly from the registry by John Candy Consulting.

Readings are validated in Orion by Pioneer, and volumes are validated by John Candy Consulting prior to submission. Where Pioneer or John Candy Consulting identify potentially invalid reads, they are discussed by the two parties. If confirmed to be invalid, they will be made misreads in Orion and an estimate will be applied, and they will be ignored by the historic estimate process and forward estimate will be generated.

One example of transposed meters was provided. A manual correction was processed to move the readings to the correct meter register.

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:

- (i) The total of all substituted intervals matches the total consumption recorded on a meter, if available; and*
- (ii) 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 were reviewed as part of EMS' agent audit, and information on corrections was requested.

Audit commentary

HHR corrections are processed by EMS, and compliance was recorded in their agent audit. No HHR corrections were required during the audit period.

0110000107EL2E3 has a phase failure and a correction will be processed once the fault has been resolved.

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

The physical meter location point is not specifically mentioned in Pioneer's terms and conditions, but the existing practices in the electrical industry achieve compliance. The registry list was reviewed.

Audit commentary

Pioneer supplies 66 active ICPs with metering category 3 or above, and EMS confirmed that none require error or loss compensation.

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 own audits.

Audit commentary

HHR corrections are processed by EMS, and compliance was recorded in their agent audit.

Raw NHH meter data is held by the MEPs and agents. Compliance was confirmed as part of their agent and MEP audits. Pioneer and John Candy Consulting only correct working data and keep an appropriate audit trail.

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 Pioneer's systems in **section 2.3**.

Provision of estimated reads to other participants during switching was reviewed in **sections 4.3, 4.4, 4.10 and 4.11**.

Correct identification of estimated reads, and review of the estimation process was completed in **sections 8.1, 8.2 and 9.4**.

Audit commentary

HHR

Compliance is recorded in the EMS agent report.

NHH

All estimated readings and validated readings are clearly identified as required by this clause. Opening switch event readings are marked as actuals, but reference information denotes the source of the read and read sub-type. Closing switch estimate reads are recorded as closing estimates.

ICP 0000043407DE457 did not have its photo reading on 3 July 2021 validated against a set of readings from another source but was recorded as a customer reading and sent to John Candy Consulting as validated because the incorrect read type was selected on manual data entry. The reading matched a photo of the meter and there is not likely to be any impact.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 9.1 With: Clause 3(3) Schedule 15.2 From: 03-Jul-21 To: 03-Jul-21	One photo reading which was not validated according to the code was recorded as a validated reading. 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 is a process to ensure that customer and photo readings are entered with an estimated read type unless they have been validated against two actual readings from another source. The controls are strong because this appears to be an isolated exception where the wrong read type was accidentally selected when the reading was entered. The impact is expected to be low. The reading applied matches a photo of the meter and there are no known accuracy meter accuracy issues. The reading is likely to be correct.		
Actions taken to resolve the issue		Completion date	Remedial action status
With the auditor's assistance, staff have been reminded to double check all reads that are being entered, to ensure they are validated correctly		09/11/2021	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Promapp updated and staff training completed		09/11/2021	

9.2. Derivation of volume information (Clause 3(4) Schedule 15.2)

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

Review of submission data confirmed that it is based on readings as required by this clause.

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

A sample of submission data was reviewed in **sections 11** and **12**, to confirm that volume was based on readings as required.

HHR data is collected by AMS and EMS and compliance was assessed as part of their agent audits.

NHH data is collected by MEPs and Wells as an agent, and compliance was assessed as part of their agent audits. I traced a sample of meter data from the source files to Pioneer's systems, and John Candy Consulting's system.

Audit commentary

HHR

AMS and EMS' processes were reviewed as part of their agent audits and found to be compliant for Pioneer.

NHH

The MEP or agent retains raw, unrounded data. Compliance was demonstrated by Pioneer's MEPs and agents during their own audits.

I confirmed that data received from the MEP is not rounded until the point of submissions by tracing a diverse sample of readings for a further 14 ICPs from the source files provided by the MEP or agent through to Orion and John Candy Consulting's historic estimate calculations.

Audit outcome

Compliant

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

Processes for the estimation of HHR meter readings were reviewed. Information on HHR estimates since January 2020 was requested from EMS.

Audit commentary

HHR estimates are by EMS, and compliance was recorded in their agent audit, and information on estimations was requested.

HHR estimates are created by EMS where data is missing for Pioneer ICPs in accordance with their audited estimation procedures, which meet the reasonable endeavours requirements.

Audit outcome

Compliant

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 0 values.

Audit observation

I reviewed and observed the NHH data validation process, including checking a sample of data validations and viewing system validation settings. I reviewed the “Add NHH (Wells Meter Reads) to Orion” process document.

Audit commentary

NHH data is validated by several processes.

Meter reader validation

Compliance is recorded in Wells’ agent audit report.

For meters read by Wells, a localised validation occurs at the hand-held device to ensure the reading is within expected high/low parameters. Readings which fail this validation are required to be re-entered, and if the two readings are the same the second reading will be accepted. If the second reading is different (potentially indicating the first reading was incorrect) then the second reading is required to be re-entered. Wells also provide meter condition information which is reviewed by Pioneer as discussed in **section 6.6**.

Orion validation

Read information is validated on upload into Orion. The read import process identifies the following exceptions, which appear on the read exceptions report:

1. meter read is exceptionally high,
2. meter read is exceptionally low,
3. cannot identify an open site for this read,
4. cannot identify an open meter for this read,
5. this read is already in the system,
6. more than one open account or more than one matching meter,
7. there is already a read for this meter this day (different),
8. you cannot enter a read for a future date,
9. attempted import of opening read from meter read file,
10. this read is earlier than previously billed reads,
11. unknown meter reader,
12. meter not found for this premise,
13. cannot enter a substitute read on an inactive meter, and
14. the meter could not be read.

Each ICP on the exception report is reviewed, and the reads are either validated and forced into Orion, or not validated and forced into Orion as misreads. For exceptions where there are metering discrepancies, such as an unknown meter or a meter which cannot be found, metering information will be checked and updated as necessary before processing the read.

Procedural documentation contains guidance on how to investigate and resolve discrepancies.

Vacant and disconnected ICPs

When an ICP becomes vacant, the customer account is closed, and responsibility for the ICP is transferred to a vacant “occupier” account. Pioneer attempts to sign up a new customer for the ICP, by sending a vacant form to the address and attempting to contact the landlord (if appropriate). If a new customer does not sign up, a vacant disconnection process is followed.

When a vacant ICP is disconnected, responsibility for the ICP is transferred to a disconnected “occupier” account. Consumption on disconnected accounts is expected to be zero, and any consumption on disconnected accounts will appear on the read exception reports.

Vacant and inactive occupier accounts continue to receive meter readings. Consumption for active vacant ICPs is submitted for reconciliation, and consumption for inactive vacant ICPs is identified and submitted. I saw evidence that where inactive consumption was identified, the status was corrected to “active” for the affected period and all consumption was included in the latest revision.

One ICP with consumption on its decommissioning date was identified and is recorded as non-compliance in **section 3.9**.

Pre submission checks

Reconciliation submissions are also reviewed prior to submission, this process is 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 0 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

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

I reviewed the HHR and AMI data validation processes, including meter event logs and validation checks.

Audit commentary

HHR

This function was examined as part of the agent audits and found to be compliant. One event which could affect accuracy was identified during the audit period; 0110000107EL2E3 has a phase failure and a correction will be processed once the fault has been resolved.

NHH

Pioneer receives meter readings from AMS (for Arc, AMS and Smartco meters), Intellihub (for Metrix and AMS meters), and FCLM as MEPs, and other NHH readings are provided by Wells as an agent.

Pioneer conducts validation for all AMI ICPs using the same processes as for NHH ICPs described in **section 9.5**. This achieves compliance with the requirement to conduct the following validations:

- checks of unexpected zero values (where a reading is exceptionally low), and
- comparison with expected or previous flow patterns.

Missing and invalid data will be identified when Pioneer attempts to import the data.

MEPs provide details of meter events which require action via SFTP or email, and these are reviewed and actioned if and when they are received. No examples of meter events affecting meter accuracy were identified during the audit period.

Audit outcome

Compliant

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

The NSP table on the registry was reviewed, and processes were discussed.

Audit commentary

Pioneer is not listed as being responsible for any NSPs on the NSP table.

Pioneer has operated the Aniwhenua Hydro Power Station since ownership of the station changed from Nova Energy to Southern Generation Limited Partnership on 29 July 2016. ANI0331BOPDNP is connected to MAT1101BOPDGN, and there is an indirect connection to EDG0331HEDLGN. Pulse Energy is currently listed as the reconciliation participant for ANI0331BOPDNP on the NSP table.

The Authority investigated which parties were responsible for ANI0331BOPDNP in 2019 and found that Pioneer:

1. is the generator for ANI0331BOPDNP,
2. responds to dispatch instructions for ANI0331BOPDNP,
3. is responsible for collecting generation metering information, and
4. is responsible for providing of generation metering information to the grid owner on a daily basis under clauses 13.136 to 13.140.

Pulse Energy is responsible for meeting all other reconciliation participant obligations for ANI0331BOPDNP, including data collection, data validation, provision of monthly NSP volumes, and maintaining meter certification.

EMS obtains daily metering data and provides it to the grid owner. Information is provided to the grid owner in accordance with EMS' normal procedures, which were assessed and found to be compliant during their agent audit.

Audit outcome

Compliant

10.2. Unoffered & intermittent generation provision of metering information (Clause 13.137)

Code reference

Clause 13.137

Code related audit information

Each generator must provide the relevant grid owner half-hour metering information for:

- *any unoffered generation from a generating station with a point of connection to the grid 13.137(1)(a)*
- *any electricity supplied from an intermittent generating station with a point of connection to the grid. 13.137(1)(b)*

The generator must provide the relevant grid owner with the half-hour metering information required under this clause in accordance with the requirements of Part 15 for the collection of that generator's volume information (clause 13.137(2))

If such half-hour metering information is not available, the generator must provide the pricing manager and the relevant grid owner a reasonable estimate of such data (clause 13.137(3)).

Audit observation

The NSP table on the registry was reviewed, and processes were discussed.

Audit commentary

As recorded in **section 10.1**, Pioneer responds to dispatch instructions for ANI0331BOPDNP and is required to provide generation metering information to the grid owner on a daily basis under clauses 13.136 and 13.140.

EMS obtains daily metering data and provides it to the grid owner. Information is provided to the grid owner in accordance with EMS' normal procedures, which were assessed and found to be compliant during their agent audit.

Audit outcome

Compliant

10.3. Loss adjustment of HHR metering information (Clause 13.138)

Code reference

Clause 13.138

Code related audit information

The generator must provide the information required by clauses 13.136 and 13.137,

13.138(1)(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

13.138(1)(b)- in the manner and form that the pricing manager stipulates

13.138(1)(c)- by 0500 hours on a trading day for each trading period of the previous trading day.

The generator must provide the half-hour metering information required under this clause in accordance with the requirements of Part 15 for the collection of the generator's volume information.

Audit observation

The NSP table on the registry was reviewed.

Audit commentary

As recorded in **section 10.1**, Pioneer responds to dispatch instructions for ANI0331BOPDNP and is required to provide generation metering information to the grid owner on a daily basis under clauses 13.136 and 13.140.

EMS obtains daily metering data and provides it to the grid owner. Information is provided to the grid owner in accordance with EMS' normal procedures, which were assessed and found to be compliant during their agent audit.

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

The NSP table on the registry was reviewed.

Audit commentary

As recorded in **section 10.1**, Pioneer responds to dispatch instructions for ANI0331BOPDNP and is required to provide generation metering information to the grid owner on a daily basis under clauses 13.136 and 13.140.

EMS obtains daily metering data and provides it to the grid owner. Information is provided to the grid owner in accordance with EMS' normal procedures, which were assessed and found to be compliant during their agent audit.

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 give notice to 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

Processes to create buying and selling notifications were reviewed. I checked whether any breach allegations had been made.

Audit commentary

There have not been any breach allegations in relation to this clause during the audit period.

Pioneer has used the DST, HHR, PV1, RPS, and UML profiles. Only the DST profile requires trading notifications. Pioneer did not begin trading at any NSPs using the DST profile. Pioneer ceased trading at GOR0331 using DST, but because they continued to supply other ICPs at the NSP it was not possible to create a trading notification.

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

HHR ICP days submission is completed by EMS and was examined during their agent audit.

The process for the calculation of NHH ICP days was examined by checking all NSPs for the July 2021 initial submission to confirm the AV110 ICP days calculation was correct.

I reviewed GR100 reports from February 2020 to June 2021 and investigated a diverse sample of six NSP level ICP days differences, to determine why the difference had occurred.

Alleged breaches were reviewed.

Audit commentary

The process for the calculation of ICP days was examined by checking all NSPs for the July 2021 initial submission. The ICP days calculation was confirmed to be correct. HHR ICP days submission is completed by EMS, and compliance is recorded in the agent audit.

The following table shows the ICP days difference between Pioneer's database and the RM return file (GR100) for 12 months.

Month	Ri	R1	R3	R7	R14
Feb 2020	0.13%	-0.16%	0.17%	-	-0.04%
Mar 2020	0.02%	0.07%	0.15%	-	-0.07%
Apr 2020	0.07%	0.09%	-0.05%	-	-0.13%
Sep 2020	0.30%	0.18%	-	-0.06%	-
Oct 2020	0.15%	-0.09%	-	-0.07%	-
Nov 2020	-0.01%	-	-	-0.13%	-
Jan 2021	-	-	-0.07%	-	-
Feb 2021	-	-	-0.07%	-	-
Mar 2021	-	-0.13%	-0.28%	-	-
Apr 2021	-0.11%	-0.52%	-	-	-
May 2021	-0.31%	-0.49%	-	-	-
Jun 2021	-0.07%	-	-	-	-

I reviewed a sample of six differences between the registry and retailer ICP days for HHR and NHH ICPs and found they all related to timing differences and the current registry days for each period NSP, and submission type matched the latest submission data.

The ICP days submission issues that were present during the last audit have been resolved through Pioneer's review of GR100 ICP comparison reports to identify any ICP days discrepancies which required investigation and correction prior to the next revision, and the migration to John Candy Consulting's process.

Breach information provided by the Electricity Authority did not identify any late ICP days submissions.

Upgrades and downgrades

I walked through the process for NHH to HHR and HHR to NHH meter changes. EMS is responsible for HHR submission and ensures that all HHR consumption is captured and reported for any day which HHR metering is present. Pioneer is responsible for the NHH consumption and ensures that all consumption is captured and reported.

- No downgrades occurred during the audit period.
- One upgrade occurred during the audit period. EMS recorded HHR consumption from the opening reading for the new meter on the day of the meter change, and Pioneer recorded NHH consumption up to the closing reading on the old meter on the day of the meter change. The ICP days reported were aligned with the submission type recorded on the registry, and no ICP days differences were recorded at the NSP.

Audit outcome

Compliant

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 to confirm the AV120 calculation was correct.

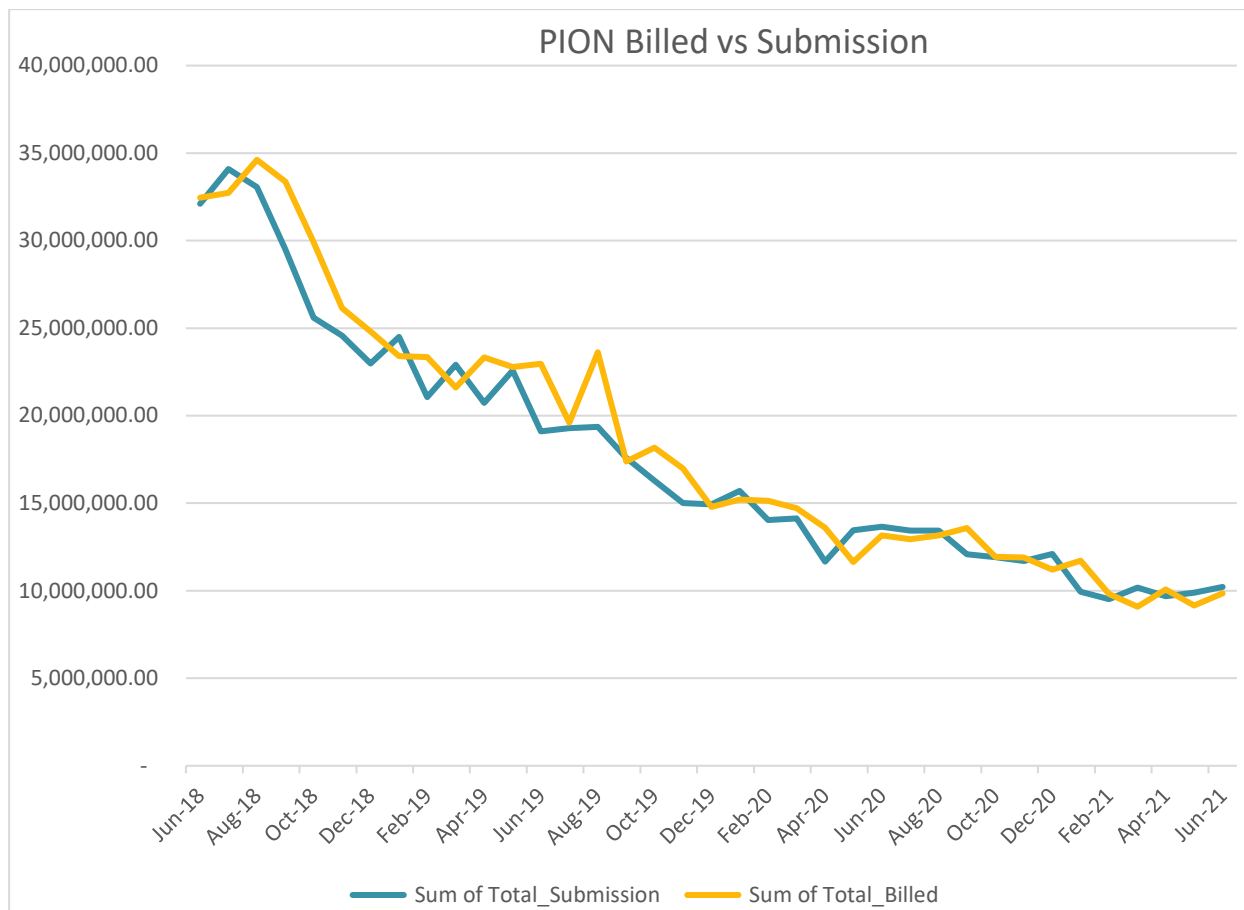
GR130 reports for June 2018 to June 2021 were reviewed to confirm whether the relationship between billed and submitted data appears reasonable.

Audit commentary

Pioneer produces the AV120 submissions and provides them to John Candy Consulting for submission via a dropbox.

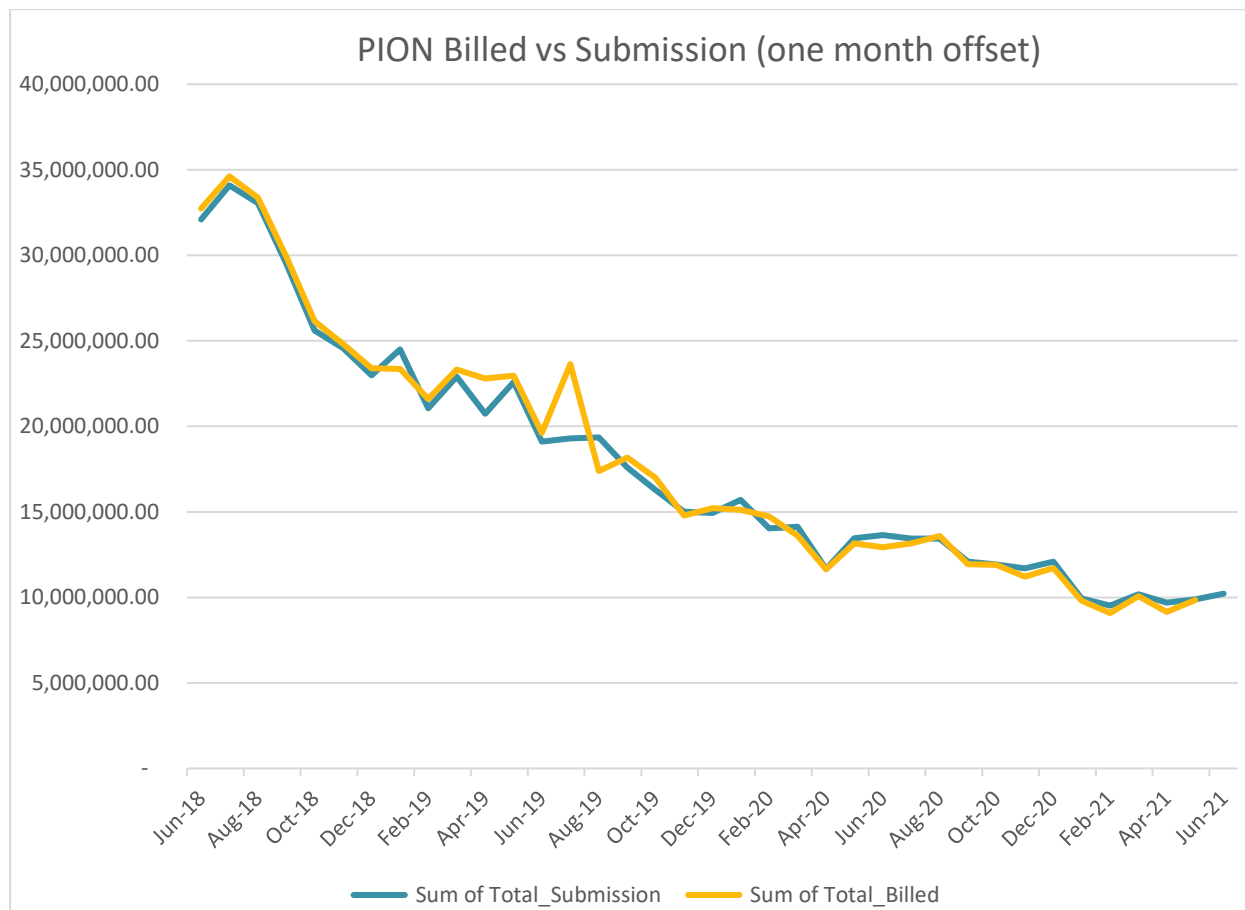
The process for the calculation of as billed volumes was examined by checking five NSPs with a small number of ICPs against Pioneer's invoice information for June 2021. Compliance was confirmed.

I also checked the difference between submission and electricity supplied information for a 25-month period, and the results are shown in the chart below. The total difference is 0.2% for the year ended June 2021 (billed higher than submission), and 2.8% for the two years ended July 2020 (billed higher than submission).



Due to Pioneer's billing cycle, there is a one month offset between billed and submitted consumption. Once the billing and submission periods are aligned, the close relationship between billed and submitted data is visible.

As stated in the previous audit, the large difference in August 2019 occurred prior to the audit period and was primarily caused by embedded network ICPs billed to the customer by Pioneer being included in the AV120 submissions. This volume should have been excluded because it is reconciled by TENCO not Pioneer, and revision 14 has now passed.



Audit outcome

Compliant

11.4. HHR aggregates information provision to the reconciliation manager (Clause 15.8)

Code reference

Clause 15.8

Code related audit information

A retailer or direct purchaser (excluding direct consumers) must deliver to the reconciliation manager its total monthly quantity of electricity supplied 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

EMS creates HHR aggregates and volumes information, and compliance was assessed as part of their audit.

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 14 submissions.

The GR090 ICP Missing files were examined for February 2020 to June 2021 and all missing ICPs were checked.

Audit commentary

EMS' processes for provision of HHR aggregates information were assessed during their agent audit. Non-compliance was found because the HHR aggregates report contains submission information, not electricity supplied information as specified under clause 15.8. Although the reports EMS' produces are consistent with the Reconciliation Manager Functional Specification, this is recorded as technical non-compliance below.

I checked the process for aggregation of HHR data is correct, by matching HHR aggregates information to the volumes for 14 submissions. All the submissions reconciled within ± 8 kWh.

Prior to approval, Pioneer checks the HHR aggregates submissions against previous months and revisions for reasonableness, and confirms the volumes are consistent with the aggregates.

The GR090 ICP Missing files were examined for all revisions for February 2020 to June 2021. All the differences were caused by backdated switches and switch withdrawals. Late switching files are discussed in **section 4**.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 11.4 With: Clause 15.8 From: 01-Jan-20 To: 28-Oct-20	HHR aggregates file does not contain electricity supplied information. 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 issue relating to content of the aggregates file is an error in the code, Pioneer is providing submission information as expected.		
Actions taken to resolve the issue		Completion date	Remedial action status
As the above rationale explains, Pioneer is providing submission information as expected		09/11/2021	Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	
N/A		09/11/2021	

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

All HHR data is collected by EMS, and daylight savings adjustments were reviewed as part of their agent audit.

Audit commentary

Daylight savings adjustments were reviewed as part of EMS' agent audit and found to be compliant. EMS uses the trading period run on technique.

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

HHR submissions are created by EMS, and their processes were reviewed as part of their agent audit. Submissions were checked in **section 11.4**.

Pioneer prepared NHH submissions using Orion up to the March 2021 initial submission in April 2021. John Candy Consulting has produced NHH submissions as an agent from May 2021 onwards including the initial submission for April 2021, and all revision submissions created in May 2021 or later.

Alleged breaches during the audit period were reviewed to determine whether any reconciliation submissions were late.

Audit commentary

HHR

Submission of HHR information was reviewed as part of EMS' agent audit and found to be compliant.

ICP 1002050361LC60D was connected on 30 September 2018 at 5.30am and records the load formerly associated with ICP 0800539060LCBFF. ICP 0800539060LCBFF has installation type B, but 1002050361LC60D has installation type L because all generation is used internally by the installation.

Following creation of the new ICP 1002050361LC60D, ICP 0800539060LCBFF was not disconnected or decommissioned due to a metering issue. All consumption on ICP 1002050361LC60D is recorded by its metering, but part of the consumption is also recorded on ICP 0800539060LCBFF's metering because of the location of the CTs, resulting in duplication. The gross load on old ICP 0800539060LCBFF and new ICP 1002050361LC60D is consistent.

Pioneer intends to resolve the metering issue as part of a substation upgrade project, expected to be completed in January 2023, and/or arrange for the old ICP 0800539060LCBFF to be disconnected and decommissioned.

In the meantime, to prevent double submission for the duplicated load recorded on ICP 0800539060LCBFF submission data for this ICP is zeroed, and I confirmed this by reviewing submission data for 15 months and revisions. There have been no changes to this process during the audit period.

I checked the status of ICP 0800539060LCBFF, which has active status, but submission is usually zeroed and settled under ICP 1002050361LC60D. Pioneer confirmed that the status with the best fit was applied; in the event of an outage for ICP 1002050361LC60D, the installation could be supplied from ICP 0800539060LCBFF.

NHH

Pioneer prepares reconciliation submissions using reconciliation consumption generated by Orion. Further information on calculation of historic estimate is recorded in **section 12.11**, and aggregation of the AV080 report is checked in **section 12.3**.

A sample of NHH ICPs were checked to make sure they are handled correctly, including vacant, disconnected, unmetered, and distributed generation ICPs.

Vacant consumption

Active vacant ICPs remain active in Orion and continue to be read and have volumes submitted. ICPs are transferred to an "occupier" customer in Orion for any vacant periods. All vacant ICPs are included in submission information.

Inactive consumption

When an ICP is disconnected, responsibility for the ICP is transferred to a disconnected "occupier" account. The ICPs continue to be read, and inactive consumption is identified through the read validation process, with corrections to "active" status completed as necessary.

In **section 3.9**, I found ICP 0006589570RN16A was decommissioned on 26 May 2021 and had its status event and reading both recorded on the decommissioning date, which is when they physically occurred. The Code requires status events to apply effective from the beginning of the day on the status event date and reads to apply effective from the end of day on the read date. This resulted in 14.11 kWh of the consumption within the read period from 22 May 2021 to 26 May 2021 being apportioned to 26 May 2021 which had decommissioned status and was excluded from reporting.

Start read date	End read date	Start date end of day read	End date end of day read	Read to read (kWh)	Historic estimate (kWh)	Difference (kWh)
18/05/2021	19/05/2021	967	967	0	0	0
19/05/2021	21/05/2021	967	979.56	12.56	12.56	0
21/05/2021	26/05/2021	979.56	1044	64.44	50.33	14.11
Total				77	62.89	14.11

To ensure that all consumption is reported, Pioneer would either need to modify the status date to be the first full day that the ICP was decommissioned, or the read date to be the day before decommissioning. Neither option is technically correct.

To assess whether this issue was isolated I checked all ICPs on the May 2021 and June 2021 AV080 submissions where the ICP had an end date during the submission month, and the start and end reads occurred during the submission month (i.e., all consumption in the read-to-read period was expected to be reported). The ICPs checked included switches out, meter changes, and disconnected ICPs.

I found that apart from ICP 0006589570RN16A, the total volume reported matched the read-to-read period consumption in the latest revision for each ICP. I saw evidence that where inactive consumption was identified, the status was corrected to “active” for the affected period and all consumption was included in the latest revision.

Unmetered consumption

Unmetered load submissions are calculated as the registry daily unmetered kWh x the number of active days in the period. I recalculated the unmetered load submissions for all 14 ICPs with standard unmetered load for the June 2021 revision 1 submission and confirmed that the calculation was correct.

Distributed generation

Submission information for five NHH ICPs with distributed generation was reviewed, and correct consumption was submitted.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.2 With: Clause 15.4 From: 26-May-21 To: 26-May-21	Decommissioned ICP 0006589570RN16A had 14 kWh of consumption allocated to a day with decommissioned status and excluded from submission. Potential impact: None Actual impact: None Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are strong because there is a process to identify and report inactive consumption. The under submission for ICP 0006589570RN16A was caused by a conflict between the code’s effective times for read and events. The impact is expected to be low because 14 kWh was under submitted for ICP 0006589570RN16A.		
Actions taken to resolve the issue		Completion date	Remedial action status
No further actions taken at this time due to the low number of units in question		09/11/2021	Disputed
Preventative actions taken to ensure no further issues will occur		Completion date	Post Audit Auditor comment:
Pioneer will continue to use the processes in place to ensure correct reads are submitted		09/11/2021	Whilst the under submission is under 200 kWh, the code requires complete and accurate information regardless of the kWh volume.

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 in 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**.

The process to ensure that AV080 submissions are accurate was discussed, and reports used in the process were viewed.

The process for aggregating the AV080 was examined by checking the total submitted against each aggregation factor combination against detailed ICP level information for the June 2021 revision 1 submission.

The GR170 to AV080 files for six revision submissions were compared, to confirm zeroing occurs.

Audit commentary

The process for aggregating the AV080 was examined by checking the total submitted against each aggregation factor combination against detailed ICP level information for the June 2021 revision 1 submission. NHH volume calculation was confirmed to be correct.

I compared the detailed submission information for June 2021 revision one to the registry list with history and confirmed that:

- the aggregation factor values applied for each ICP were consistent with the registry values,
- all ICPs that appeared on the AV080 were active with NHH submission type for at least part of June 2021, and
- all ICPs that appeared on the registry list which were active with NHH submission type for at least part of June 2021 appeared on the AV080.

During the previous audit period, Pioneer implemented a process to ensure that aggregation lines present in an earlier revision but not the current revision are zeroed. John Candy Consulting also has a zeroing process. I compared the GR170 to AV080 files for 21 revision submissions. For some submissions prior to the migration of the process to John Candy Consulting zeroing was missed, but for later revisions produced by John Candy Consulting zeroing consistently occurred. For June 2020 revision seven a zero was missed for ETT0011 and this is expected to be resolved by revision 14 which will be completed by John Candy Consulting.

John Candy Consulting refreshes reconciliation data from the registry immediately prior to running reconciliation reports to ensure that aggregation factors and statuses are correct. Submissions are compared to previous submissions at total and network level initially, and any discrepancies can be checked at more detailed levels to validate the data.

Pioneer also checks AV080 NHH volumes and AV110 ICP days submissions against previous months and revisions for reasonableness prior to submission.

Other consumption validation checks are discussed in **section 9.5**.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.3 With: Clause 15.5 From: 01-Jun-20 To: 30-Jun-20	Zeroing did not occur for ETT0011 for June 2020 revision 7. Potential impact: None Actual impact: None Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are strong because a consistent zeroing process is now in place. The impact is expected to be low because revised data will be washed up.		
Actions taken to resolve the issue		Completion date	Remedial action status
Revised data will be washed up		09/11/2021	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Controls are in place		09/11/2021	

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 Pioneer is not a grid owner.

Audit commentary

Pioneer 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

Pioneer 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

The registry list and NSP table were reviewed.

Audit commentary

Pioneer is not a grid connected generator.

Audit outcome

Not applicable

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 8.1** and **8.2**.

Audit commentary

Late provision of submission information

No alleged breaches were recorded for late submission data during the audit period.

Accuracy of submission data

Switch out read not applied in Orion

ICP 0000014870DE7D8 was sent with the correct final read of 139,357 but this read was not updated in Orion resulting in under submission of 124 kWh. This is recorded as non-compliance below and in **sections 2.1** and **6.7**.

Classification of customer and photo readings

ICP 0000043407DE457 did not have its photo reading on 3 July 2021 validated against a set of readings from another source but was recorded as a customer reading and sent to John Candy Consulting as validated due to the incorrect read type being selected on data entry. The reading matched a photo of the meter and there is not likely to be any impact.

Unreported inactive consumption for ICP 0006589570RN16A

NHH read validation processes identify inactive consumption and affected ICPs are moved to “active” status for the period with consumption so that ICP days and volumes are submitted.

In **section 3.9**, I found ICP 0006589570RN16A was decommissioned on 26 May 2021 and had its status event and reading both recorded on the decommissioning date, which is when they physically occurred. The Code requires status events to apply effective from the beginning of the day on the status event date and reads to apply effective from the end of day on the read date. This resulted in 14.11 kWh of the consumption within the read period from 22 May 2021 to 26 May 2021 being apportioned to 26 May 2021 which had decommissioned status and was excluded from reporting.

Start read date	End read date	Start date end of day read	End date end of day read	Read to read (kWh)	Historic estimate (kWh)	Difference (kWh)
18/05/2021	19/05/2021	967	967	0	0	0
19/05/2021	21/05/2021	967	979.56	12.56	12.56	0
21/05/2021	26/05/2021	979.56	1044	64.44	50.33	14.11
Total				77	62.89	14.11

To ensure that all consumption is reported, Pioneer would either need to modify the status date to be the first full day that the ICP was decommissioned, or the read date to be the day before decommissioning. Neither option is technically correct.

To assess whether this issue was isolated I checked all ICPs on the May 2021 and June 2021 AV080 submissions where the ICP had an end date during the submission month, and the start and end reads occurred during the submission month (i.e., all consumption in the read-to-read period was expected to be reported). The ICPs checked included switches out, meter changes, and disconnected ICPs.

I found that apart from ICP 0006589570RN16A, the total volume reported matched the read-to-read period consumption in the latest revision for each ICP. I saw evidence that where inactive consumption was identified, the status was corrected to “active” for the affected period and all consumption was included in the latest revision.

Alleged breaches

The EA confirmed that three alleged breaches relating to submission data accuracy occurred during the audit period:

Breach no	Breach of	Description	Outcome
2105PION1	Part 15 clause 15.2 (1) (a)	Pioneer duplicated their generation volume submissions for R3, R7 and R14 in December 2020, August 2020, and January 2020 respectively for the March 2021 consumption month.	No result yet
2105PION2	15.2(1)(a) Requirement to provide complete and accurate information	Pioneer Energy Limited (PION) failed to deliver accurate information to the reconciliation manager in their AV-080 (NHH submission file) for 202102 R3, 202010 R7 and 202003 R14. PION had a dedicated flag change at several of their NSPs. The flag changed from Y to N. PION failed to zero out the volumes at those NSPs for the previous submission under the Y flag, and therefore when submitting under the N flag, duplicated these volumes. The total volume duplicated amounted to 2,486.7MWh of X flows.	No result yet
2107PION1	Part 15 clause 15.2 (1) (a)	Pioneer Energy Limited (PION) failed to deliver accurate information to the Reconciliation Manager in their AV-080 (NHH submission file) for 202011 R7. PION had a dedicated flag change at several of their NSPs. The flag changed from Y to N. PION failed to zero out the volumes at those NSPs for the previous submission under the Y flag, and therefore when submitting under the N flag, duplicated these volumes.	No result yet

Previous audit issues

Previous audit issues relating to the accuracy of NHH submission data have been resolved with migration of the process to John Candy Consulting.

The November 2020 audit found that a small number of ICPs did not have the agreed switch reading recorded in Orion. For ICPs where revisions have been completed by John Candy Consulting, agreed switch readings are taken directly from the registry and revised data has been provided. I followed up corrections where revised data was not provided by John Candy Consulting:

ICP	Issue	kWh	Comment
0000507601DEF19 14/02/20	The agreed switch readings were replaced with new estimated closing readings, resulting in under submission of 71 kWh.	71	Not corrected and Revision 14 has been completed.
0000001074ED314 19/07/19	Orion read type differs from agreed switch reading	-	Corrected.
0000483126CE356 01/11/19	Orion reading differs from agreed switch reading	39	Not corrected because accounts were closed on AMI reads. Revision 14 has been completed.
0000500468CEEC4 01/11/19	Orion reading differs from agreed switch reading	16	
0000508237CE214 04/11/19	Orion reading differs from agreed switch reading	99	
0000509672CE05F 04/11/19	Orion reading differs from agreed switch reading	-73	
0000491652CE3A2 31/08/19	The difference between the CS reading and AMI readings was less than 50 kWh and Pioneer elected to use their own reading as the gaining trader. No corrections have been processed, and no further action has been taken.	<50 kWh	Corrected.

This is reported in **section 2.1** as non-compliance as it relates to the last audit period.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 12.7 With: Clause 15.12</p> <p>From: 26-May-21 To: 03-Jul-21</p>	<p>ICP 0000014870DE7D8 was sent with the correct final read of 139,357 but this read was not updated in Orion resulting in under submission of 124 kWh.</p> <p>One photo reading which was not validated according to the code was recorded as a validated reading and used to calculate historic estimate.</p> <p>Decommissioned ICP 0006589570RN16A had 14 kWh of consumption allocated to a day with decommissioned status and excluded from submission.</p> <p>Potential impact: None</p> <p>Actual impact: None</p> <p>Audit history: Twice</p> <p>Controls: Strong</p> <p>Breach risk rating: 1</p>		
Audit risk rating	Rationale for audit risk rating		
<p>Low</p>	<p>Controls are strong.</p> <ul style="list-style-type: none"> There is good process documentation in place. This was a one off human error. There is a process to ensure that customer and photo readings are entered with an estimated read type unless they have been validated against two actual readings from another source. Validated readings are used to calculate historic estimate, and estimated readings are ignored by the reconciliation process. The controls are strong because this appears to be an isolated exception where the wrong read type was accidentally selected when the reading was entered. There is a process to identify and report inactive consumption. The under submission for ICP 0006589570RN16A was caused by a conflict between the code's effective times for read and events. <p>The impact is expected to be low:</p> <ul style="list-style-type: none"> 124 kWh was under submitted for ICP 0000014870DE7D8. The reading applied matches a photo of the meter and there are no known accuracy meter accuracy issues. The reading is likely to be correct. 14 kWh was under submitted for ICP 0006589570RN16A. 		
Actions taken to resolve the issue	Completion date	Remedial action status	
<p>As this non-compliance issues both under 200 units, we will not be correcting them</p>	<p>09/11/2021</p>	<p>Disputed</p>	
Preventative actions taken to ensure no further issues will occur	Completion date	<p>Post Audit Auditor comment:</p> <p>Whilst the under submission is under 200 kWh, the code requires complete and accurate information regardless of the kWh volume.</p>	
<p>Future CS files will be manually checked to ensure the correct switch readings are provided. Pioneer will also continue to use the processes in place to ensure the correct reads are submitted</p>	<p>09/11/2021</p>		

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 for March to May 2020 to identify any forward estimate still existing.

Audit commentary

A process is in place to identify ICPs without readings obtained by revision 14 and enter permanent estimates. Review of the 14-month revisions for March to May 2020 showed that no forward estimate remained.

Audit outcome

Compliant

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.

Audit commentary

Compliance with this clause was assessed:

- all ICPs with metering category 3 or above are submitted as NHH,
- unmetered load submissions were checked in **section 12.2** and found to be compliant,
- 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.

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 following techniques to create historical estimates and forward estimates (clause 3(1)).

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

I reviewed 22 AV080 submissions for revisions 1 to 14, 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 22 AV080 submissions for a diverse sample of months and revisions and confirm 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 historic estimates of volume information for each ICP when the relevant seasonal adjustment shape is available.

If a seasonal adjustment shape is not available, 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

Pioneer created NHH volume and ICP days submissions using Orion up to the March 2021 submission period which was generated in April 2021. John Candy Consulting has created NHH volume and ICP days submissions as Pioneer's agent since the April 2021 submission period which was generated in May 2021. All revision submissions created from May 2021 onwards are created by John Candy Consulting.

The previous audit found some issues with Orion's historic estimate calculations under certain scenarios, and Pioneer put work arounds in place to minimise their impact, and revisions will be provided by John Candy Consulting.

John Candy Consulting provided full data for submissions to date, which was used to check the accuracy of historic estimate calculations for the scenarios listed below.

Audit commentary

The process for managing shape files was examined. Shape files are downloaded from the reconciliation manager's portal and imported into the RM tool.

Compliance was confirmed for all scenarios that have occurred, and the correct shape files were used to calculate submissions.

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.	Has not occurred
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.	Has not occurred
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.	Has not occurred during the audit period
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 are validated against a set of actual reads not provided by the customer.	Compliant, customer reads are not treated as validated reads

Test	Scenario	Test Expectation	Result
n	ICP with a photo read during the month	Photo reads are not used to calculate historic estimate, unless they are validated against a set of actual reads not provided by the customer.	Compliant
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 for 14 months.

Audit commentary

John Candy Consulting has created NHH volume submissions as Pioneer's agent since the April 2021 submission period which was generated in May 2021. All revision submissions created from May 2021 onwards are created by John Candy Consulting, and this change has resolved Pioneer's previous audit issues relating to generation of invalid zero forward estimate where invoices were created after submission.

Forward estimate is calculated by John Candy Consulting based on the average daily consumption for the previous read to read period for each meter register. If previous read period information is not available, the forward estimate consumption is based on the estimated daily consumption provided by the previous retailer in the CS file.

The accuracy of the initial submission, in comparison to each subsequent revision is required to be within $\pm 15\%$ and within $\pm 100,000\text{kWh}$. The target was met for most balancing areas and revisions reviewed.

Quantity of balancing areas with differences over 15% and 100,000 kWh

Month	Revision 1	Revision 3	Revision 7	Revision 14	Total Balancing Areas
Feb 2020	0	0	0	0	45
Mar 2020	1	1	1	1	41
Apr 2020	1	0	0	0	39
May 2020	0	0	0		41
Jun 2020	0	0	0		42
Jul 2020	0	0	0		42
Aug 2020	1	1	1		41
Sep 2020	1	0	0		41
Oct 2020	0	0	0		42
Nov 2020	0	0	0		40
Dec 2020	0	0			40
Jan 2021	0	0			40
Feb 2021	0	0			40
Mar 2021	0	0			40
Apr 2021	0				52
May 2021	0				52

The total variation between revisions at an aggregate level is shown below.

Month	Revision 1	Revision 3	Revision 7	Revision 14
Feb 2020	-8.23%	-2.00%	-0.47%	-0.33%
Mar 2020	-19.95%	-12.70%	-8.16%	-8.74%
Apr 2020	-10.58%	-6.02%	-5.90%	-6.57%
May 2020	-1.80%	1.08%	1.45%	
Jun 2020	-7.69%	-6.22%	-6.58%	
Jul 2020	-5.41%	-1.76%	-2.16%	
Aug 2020	-7.49%	-4.61%	-5.00%	
Sep 2020	-8.84%	-1.72%	-2.03%	
Oct 2020	-5.82%	-0.87%	-0.31%	
Nov 2020	-6.24%	0.31%	-1.83%	
Dec 2020	-6.08%	-0.78%		
Jan 2021	-1.67%	-1.95%		
Feb 2021	-5.45%	-2.98%		
Mar 2021	-6.92%	-2.82%		
Apr 2021	0.31%			
May 2021	-4.81%			

I investigated the balancing area differences over the threshold for March 2020, April 2020, August 2020, and September 2020 to confirm the reasons for the differences. I found they were caused by Orion creating forward estimates of zero for the initial submission, where billing estimates were unavailable prior to Pioneer's process change to manually add reasonable forward estimates.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.12 With: Clause 6 Schedule 15.3 From: Mar-20, Apr-20, Aug-20 and Sep-10	Some balancing area differences between revisions were over the threshold because of inaccurate forward estimates. Potential impact: Medium Actual impact: Low Audit history: Twice Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are rated as strong, as John Candy Consulting has appropriate forward estimate processes in place. The audit risk rating is low because revised submission data will be washed up.		
Actions taken to resolve the issue		Completion date	Remedial action status
Pioneer is expecting no further issues to occur due to John Candy Consulting having appropriate forward estimate processes and controls in place		09/11/2021	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
John Candy Consulting has appropriate forward estimate processes and controls in place		09/11/2021	

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 examined to identify all ICPs which had a profile change during the audit period.

Audit commentary

One profile change relating to a meter upgrade was identified, and actual readings were obtained for the removed meter and replacement meter.

Audit outcome

Compliant

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**, and aggregation of HHR volumes is discussed in **section 11.4**.

Audit commentary

Submission information is provided to the reconciliation manager 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.

NHH volumes and HHR volumes aggregation was confirmed to be compliant. The submitted data was also compared to billed data in **section 11.3** and appeared reasonable.

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 AV080, AV090 and AV140 reports as part of the aggregation checks.

Audit commentary

Submission information is rounded to no more than two decimal places.

Audit outcome

Compliant

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 nine months of AV080 reports to determine whether historic estimate requirements were met.

Audit commentary

The quantity of historical estimates is contained in the submission file and is not a separate report. The proportion of HE in the revision files was checked for nine separate months, and the table below shows that compliance has not been achieved in all instances.

Quantity of NSPs where revision targets were met

Month	Revision 3 80% Met	Revision 7 90% Met	Revision 14 100% Met	Total
Mar-20		63	87	87
Apr-20		62	86	86
May-20		63	85	85
Jun-20		55		55
Jul-20		59		59
Aug-20		58		58
Sep-20		60		60
Oct-20	58	85		85
Nov-20	58	86		86

Month	Revision 3 80% Met	Revision 7 90% Met	Revision 14 100% Met	Total
Dec-20	58	86		86
Jan-21	57			58
Feb-21	84			86
Mar-21	85			86
Apr-21	85			86

The table below shows that the percentage HE at a summary level for all NSPs is at or above the required targets for all revisions.

Month	Revision 3 80% Target	Revision 7 90% Target	Revision 14 100% Target
Mar 2020	-	99.54%	100.00%
Apr 2020	-	99.40%	100.00%
May 2020	-	99.39%	100.00%
Jun 2020	-	99.88%	-
Jul 2020	-	99.91%	-
Aug 2020	-	99.29%	-
Sep 2020	-	99.80%	-
Oct 2020	99.42%	99.81%	-
Nov 2020	99.24%	99.94%	-
Dec 2020	98.37%	99.89%	-
Jan 2021	95.16%	-	-
Feb 2021	99.43%	-	-
Mar 2021	99.37%	-	-

Month	Revision 3 80% Target	Revision 7 90% Target	Revision 14 100% Target
Apr 2021	98.98%	-	-

I checked three aggregation rows with less than 90% historic estimate for revision 7, and four aggregation rows with less than 80% historic estimate for revision three. I confirmed that forward estimate remained because actual readings did not cover the whole reconciliation period.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 13.3 With: Clause 10 of Schedule 15.3 From: Mar-May 20 (r14 and r7), Oct 20-Apr 21 (r3)	Historic estimate thresholds were not met for some revisions. 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 were sufficient to ensure that most NSPs are close to the target values, but there was room for improvement. The impact is assessed to be low. Some of the forward estimate relates to unmetered load which is true historic estimate, but is incorrectly classified, and some relates to invalid forward estimate.		
Actions taken to resolve the issue		Completion date	Remedial action status
Pioneer is working with Agility to update our system to ensure historic estimates are correct		09/11/2021	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
A development job is in progress with Agility		09/11/2021	

14. GLOSSARY OF TERMS

CS breach for transfer switch	CS arrival date is more than five business days after the CS Actual Transfer Date AND; no NW has been provided
NA breach	NW arrival date is more than two calendar months after the CS Actual Transfer Date.
SR breach	NW arrival date is more than 10 business days after the initial NW for the same trader requesting the withdrawal. The trader sending the corresponding AW (either accepting or rejecting the withdrawal) only receives a breach on the AW if it is sent more than five days after the latest NW as in the original rule.

CONCLUSION

Pioneer supplies 1,348 active HHR and NHH ICPs.

Registry information management and switching is completed by Pioneer.

HHR and DUML submission is completed by **EMS**, and compliance is recorded in their audit report, apart from a technical non-compliance relating to the HHR aggregates submission.

Pioneer created NHH volume and ICP days submissions using Orion up to the March 2021 submission period which was generated in April 2021. **John Candy Consulting** has created NHH volume and ICP days submissions as Pioneer's agent since the April 2021 submission period which was generated in May 2021. All revision submissions created from May 2021 onwards are created by John Candy Consulting, and this change has resolved Pioneer's previous audit issues relating to classification of forward and historic estimate, and historic estimate calculation.

Clause 8(1) of Schedule 15.1 requires that if a reconciliation participant intends to make a "material" change to any certified facilities, processes, or procedures then the changes must be subject to an audit prior to the change taking place. A material change audit was not completed prior to the change of agents. The actual impact of not completing a material change audit was low, because the transition was smooth, and the change has resulted in an increase in compliance.

Pioneer use the audit process as an educational opportunity and there were some areas where improvements or clarifications of the code's requirements identified during this audit. These have been corrected and documentation updated to prevent such occurrences in the future. Overall, the level of compliance has improved across the operation resulting in another significant reduction to the audit risk rating from 52 to 38 in this audit. As noted in the previous two audits, the total risk rating is inflated because some very minor non-compliances affecting a short period or small number of ICPs with little to no impact may be recorded as non-compliance in many report sections. For example, ICP 0006589570RN16A had under submission of 14 kWh which occurred on the decommissioning date and was recorded as non-compliance in sections 2.1, 3.9, 12.2, and 12.7. I have considered this along with Pioneer's comments and I agree with this recommendation.

PARTICIPANT RESPONSE

Pioneer have reviewed this report and their comments are included in the body of the report. No further comments were provided.