

ELECTRICITY INDUSTRY PARTICIPATION CODE  
RECONCILIATION PARTICIPANT AUDIT REPORT



For

PIONEER ENERGY LTD

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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 V7.2.

Pioneer supplies 1,589 active HHR and NHH ICPs.

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.

NHH submission, registry information management and switching is completed by Pioneer.

Auditors are required to record non-compliance in every relevant report section, and apply the audit risk ratings, control ratings and breach risk ratings as specified in the risk and materiality guideline.

Adherence to the guidelines has resulted in a very high audit risk rating for Pioneer, because:

1. A minor non-compliance affecting a short period, or small number of ICPs with little to no impact may be recorded as non-compliance in many report sections inflating the overall risk rating. For example, treatment of photo readings as actual readings resulted in non-compliance in **sections 6.6, 9.1 and 12.7** although I only found one photo reading which was incorrectly classified. Similarly, a small number of incorrect CS readings which occurred over a short time period caused non-compliance in sections **4.10, 4.16, 6.7, 9.1, and 12.7**.
2. Auditors have been instructed to apply a control rating only for the portion of the process which is non-compliant. This means that where controls over the whole process are strong but one small part is non-compliant, the control rating only relates to the non-compliant part. This has generally led to lower control ratings and higher scores.

The audit risk rating indicates that the next audit should be due in three months. I believe that the total audit risk rating for Pioneer is not indicative of the true audit risk, because:

1. Many of the switching and registry relating issues were caused by switching events temporarily being edited incorrectly because two new staff members started in this team around the same time in late 2019. The errors occurred while they were undergoing training. Because the incorrect files appeared as data anomalies, they were included in the audit samples so the cause could be determined, but in reality a very small proportion of files were affected and the issues were promptly resolved with further training and experience.
2. Many of the registry and submission data accuracy issues were minor and affected very small numbers of ICPs. Because the issues were of different types (e.g. two ICPs with unmetered load discrepancies, one ICP with an incorrect active date), non-compliance is recorded in a large number of sections although the impact is very low. Combined with the rules around control ratings being applied for the non-compliant portion of the process only, this has resulted in high future risk ratings.
3. Pioneer has promptly resolved discrepancies during the audit where possible, and is working to resolve the other discrepancies. They have been proactive, and treated the audit as a positive learning experience. I worked directly with all staff involved in the processes.

To support my findings I have included a summary of my findings in each area, confirming that most were minor and/or temporary issues. In many cases the action required to resolve the issues is straightforward and/or complete.

Registry information management	
Summary of findings	<b>Registry validation:</b> Validation focusses on data which has recently been modified (including review of acknowledgement and notification files), and that all ICPs are included

	<p>in Pioneer's submission information. Validation processes have improved during the audit period.</p> <p>There is currently no regular full validation between Orion and the registry, and a small number of discrepancies between the systems were identified during the audit.</p> <p><b>Registry updates:</b> Some late updates to registry status and trader information were identified, these were largely caused by backdated corrections, with a small number delayed by late receipt of paperwork or workloads with new staff being trained. There was no evidence of systemic issues causing delays in processing updates.</p> <p>A small number of inaccurate information updates were identified, largely due to changes needing to be manually processed in both Orion and registry. Implementation of reconciliations between Orion and the registry should improve Pioneer's ability to find and correct these discrepancies.</p>
Improvements required	<ol style="list-style-type: none"> <li>1. A regular full reconciliation between Orion and the registry, including all fields which impact on reconciliation submissions as a minimum.</li> <li>2. Implementation of consistency checks between Pioneer's active date, distributor's initial electrical connection date and the MEP's meter certification date for newly connected ICPs.</li> <li>3. Implementation of consistency checks between Pioneer and the distributor's distributed generation information.</li> </ol>

Switching	
Summary of findings	<p><b>NT:</b> some NHH switch types were set incorrectly because information provided by staff liaising with the customer did not specify the switch type.</p> <p><b>AN:</b> the Orion AN code hierarchy does not consistently select the correct AN code. The selection appears to be based on field values that applied when the NT was received, rather than the values that would apply on the requested event date. This can result in incorrect AN response codes being applied where a customer is about to move out, or a contract is about to expire. The files are manually checked and edited if necessary prior to sending, but occasionally incorrect codes are missed. There were no issues with AN event dates.</p> <p><b>CS:</b> Orion generates CS files, and applies the readings and read types recorded in the readings tab, and the estimated daily consumption recorded on the meters tab. Estimated daily consumption is calculated using a different methodology to the registry functional specification. The files are manually checked and edited if incorrect data is found prior to sending.</p> <p>The sample of CS files checked focussed on files where potential data anomalies had been identified, such as inconsistencies between last actual read dates, event dates and CS read types. Some of the files checked contained incorrect data which had been manually edited in error by a staff member undergoing training, who at the time had thought that the CS reading should be <u>on the event date</u>, instead of on Pioneer's last day of responsibility. The exceptions occurred over a short period, and the staff involved in switching all participated in the audit and understand the CS content requirements. This issue is not expected to recur.</p> <p>31 switch move CS files were produced from Orion without CSMETERCHANNEL, CSMETERCOMP and CSMETERINSTALL lines, and will be investigated by Agility.</p> <p><b>RR/AC:</b> I found that other participants sometimes issued RRs where Pioneer had provided an incorrect CS reading as described above. When staff assessed the RR, they compared it to the closing reading recorded in Orion, not the reading recorded in the edited CS file and</p>

	<p>invalidly rejected it in error. In a few other cases, Pioneer had rejected the RR but the agreed switch reading was not applied. As for the CS issues, these issues occurred over a very short period and further training has been provided. The issue is not expected to recur.</p> <p>Unvalidated customer reads are sometimes used as supporting readings for RRs.</p> <p><b>NW/AW:</b> There were no issues with the processes for NWs or AWs.</p>
Improvements required	<ol style="list-style-type: none"> <li>1. Ensure clear information on whether the switch is a transfer or switch move is provided to the Customer Services &amp; Billing Analyst.</li> <li>2. Investigate the 31 switch move CS files which were missing CSMETERCHANNEL, CSMETERCOMP and CSMETERINSTALL lines.</li> <li>3. Cease using unvalidated customer reads as supporting readings for RRs. RRs must be supported by at least two validated actual readings.</li> </ol>

Unmetered load	
Summary of findings	A small number of inaccuracies were identified, including for DUML databases.
Improvements required	<ol style="list-style-type: none"> <li>1. Correct the identified discrepancies, and confirm unknown unmetered load values as recommended.</li> <li>2. Investigate ICP 0000075272CE0B4 to confirm the correct load and load type, and whether it can remain as standard unmetered load or requires a meter.</li> </ol>

Reading and read validation	
Summary of findings	<p><b>Meter condition information:</b> meter condition information provided by Wells is not consistently reviewed. I requested meter condition event information directly from Wells, and found that there were no unresolved meter condition events during the audit period.</p> <p><b>Photo readings:</b> photo readings have consistently been recorded as actual readings in Orion, regardless of whether they have been validated against two validated readings from another source.</p> <p><b>Customer readings:</b> Customer readings are correctly treated for reconciliation, but have been used as supporting readings in the RR process.</p> <p><b>Read attainment:</b> controls over read attainment itself are strong. The meter reading frequency report contained some incorrect parameters, which makes read attainment appear lower than it actually is.</p> <p><b>Corrections:</b> no bridged meter corrections were required during the audit period, but a process needs to be developed to process bridged meter corrections where the meter is not replaced. The other correction processes are compliant.</p> <p><b>Validation and estimation:</b> processes are compliant.</p>
Improvements required	<ol style="list-style-type: none"> <li>1. Treat photo readings as validated readings only where they have been validated against two validated readings from another source.</li> <li>2. Resolve the meter reading frequency report content issues.</li> <li>3. Develop a correction process to add unmetered bridged consumption to reconciliation submissions where the bridged meter is not replaced.</li> </ol>

Reconciliation	
Summary of findings	<p><b>ICP days:</b> the AV110 report excludes ICPs from revision submissions for periods where they were active if the ICP's current status is decommissioned. Corrected data will be washed up where a small amount of incorrect registry information has resulted in incorrect ICP days submissions.</p> <p><b>Billed submission:</b> no issues were identified.</p> <p><b>HHR submission:</b> for one submission the volumes and aggregates did not match, and recurrence of the issue will be prevented by addition of a simple validation check as described below. A minor technical non-compliance was recorded for a code wording discrepancy (the submission contains volume not billed data).</p> <p><b>NHH submission:</b> Overall, I found processes to produce submission data were operating as intended. In some cases incorrect inputs into these processes resulted in inaccurate submission data, including not importing seasonal adjusted shape value files beyond revision 1 and a small number of ICPs where data inputs into the reconciliation process were incorrect.</p> <p>Two issues with Orion NHH (AV080) submissions were identified:</p> <ol style="list-style-type: none"> <li>1. A small amount of forward estimate is invalidly being calculated for some switched ICPs.</li> <li>2. Orion's results for the NSP change historic estimate scenario do not match the manual recalculation. Details of calculations for the ICPs tested have been provided to Pioneer for investigation.</li> </ol>
Improvements required	<ol style="list-style-type: none"> <li>1. Investigate and resolve the Orion AV110 and AV080 report issues.</li> <li>2. Reconcile the HHR aggregates and volumes information, prior to completing the rest of the HHR submission review. Only very small rounding differences are expected. Refer any discrepancies to EMS.</li> <li>3. Develop a zeroing process for the AV080.</li> <li>4. Import all PR030 files provided by the RM once submission data is available.</li> <li>5. Process corrections as indicated in the report to resolve the submission data inaccuracies.</li> <li>6. Establish a permanent estimate process for where reads are not obtained by revision 14.</li> </ol>

Submission of information to the grid owner	
Summary of findings	<p>Pioneer has operated the Aniwhenua Hydro Power Station since ownership of the station changed from Nova Energy to Southern Generation Limited Partnership on 29/07/16. 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.</p> <p>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 have been obtaining daily metering data and providing it to the grid owner continuously since generation began at Aniwhenua. 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.</p>



Improvements required	Nil.
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Based on my analysis and Pioneer's comments, I recommend that the next audit is due in 10 months. During the audit I saw evidence that where non-compliances had occurred because of training or process issues further training was completed, and that staff now understood the code requirements. These issues are not expected to recur. Where issues have not already been resolved, Pioneer has indicated that investigation and corrective action will be undertaken and recommendations for improvement will be implemented. Almost all of the non-compliances had a low impact, and Pioneer has a small customer base with a relatively small volume of switching and registry activity.

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
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 on the accuracy of reconciliation submissions.</p> <p>Nine ICPs had incorrect statuses or status event dates recorded on the registry.</p> <p>Three ICPs had incorrect profiles recorded on the registry, but correct profiles were applied for submission.</p> <p>Two ICPs had incorrect unmetered load recorded in Orion.</p> <p>Two trader updates had incorrect event dates applied.</p>	Moderate	Low	2	Identified
Electrical Connection of Point of Connection	2.11	10.33A	<p>Three metered ICPs did not have meter certification provided within five business days of the change to active status.</p> <p>One new ICP was allegedly livened by Pioneer without WEL Network's approval. An alleged breach has been raised by WEL Networks (1910PION3) and is currently being investigated.</p>	Strong	Low	1	Identified
Changes to registry information	3.3	10 Schedule 11.1	<p>57 late status updates to active.</p> <p>Seven late status updates to inactive</p> <p>Seven late trader updates.</p> <p>One late ANZSIC code update.</p>	Moderate	Low	2	Identified
Provision of information to the registry manager	3.5	9 Schedule 11.1	<p>Eight late status updates to active for new connections.</p> <p>ICPs 0000508872CE7F4, 0000509962CE5FD and 0000509722CE153 have incorrect new connection active status event dates applied.</p>	Moderate	Low	2	Identified
ANZSIC codes	3.6	9 (1)(k) of Schedule 11.1	<p>Incorrect ANZSIC codes were applied for six ICPs, and were corrected during the audit.</p>	Moderate	Low	2	Cleared
Changes to unmetered load	3.7	9(1)(f) of Schedule 11.1	<p>Incorrect unmetered load is recorded in Orion for 0000794436NV646, 0000075272CE0B4, and 0000479017CEA33.</p>	Weak	Low	3	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Management of "active" status	3.8	17 Schedule 11.1	ICPs 0000406213WPA35 and 0000007765TED75 have incorrect reconnection status event dates applied.  ICPs 0000508872CE7F4, 0000509962CE5FD and 0000509722CE153 have incorrect new connection active status event dates applied.	Moderate	Low	2	Identified
Management of "inactive" status	3.9	19 Schedule 11.1	ICP 0000003526CE9CD has an incorrect disconnection date applied.  Three ICPs incorrectly had "inactive reconciled elsewhere" status recorded on the registry and were corrected during the audit.	Moderate	Low	2	Identified
Inform registry of switch request for ICPs - standard switch	4.1	2 Schedule 11.3	Transfer switches were requested for ICPs 0000021975CEB84, 0000508488CE97E, and 0004557770TC6E7 when the customer had confirmed that they were moving into the address.	Moderate	Low	2	Identified
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 0000001636DED38 and 0000492001CE38C.  The "OC" AN response code was incorrectly applied for 0000030576DEC12.	Moderate	Low	2	Identified
Losing trader must provide final information - standard switch	4.3	5 Schedule 11.3	At least 12 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.  Eight transfer CS files contained some incorrect read, read type and/or last actual read information.	Weak	Low	3	Identified
Retailers must use same reading - standard switch	4.4	6(1) and 6A Schedule 11.3	For ICP 0000001074ED314 an incorrect read type was applied in Orion. Estimate was used instead of actual.  For ICPs 0000483126CE356 and 0000500468CEEC4. RR files issued by other traders were invalidly rejected. This occurred because the read in the original CS file had been amended and did not match Orion.  For ICPs 0000508237CE214 and 0000509672CE05F Orion did not	Moderate	Low	2	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			reflect the outcome of the RR process.				
Losing trader provides information - switch move	4.8	10(1) Schedule 11.3	One late MI CS file.	Strong	Low	1	Identified
Losing trader must provide final information - switch move	4.10	11 Schedule 11.3	At least ten 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.  Three CS files contained some incorrect read, read type and/or last actual read information.  31 switch move CS files did not have CSMETERCHANNEL, CSMETERCOMP and CSMETERINSTALL lines supplied.	Weak	Low	3	Investigating
Gaining trader changes to switch meter reading - switch move	4.11	12 Schedule 11.3	The RRs for ICPs 0110135020AP9D1 and 0000504770CE3FE used unvalidated customer reads as supporting readings, and a RR read type of "A" was incorrectly applied because a customer reading was received on the switch event date.  ICP 0000491652CE3A2 did not have the agreed switch reading applied in Orion, because the difference was less than 50 kWh and Pioneer elected to use their own AMI read without informing the losing trader.	Moderate	Low	2	Identified
Losing trader provision of information - gaining trader switch	4.13	15 Schedule 11.3	One late HH AN file.  Three HH AN files had an incorrect AN response code applied.	Strong	Low	1	Identified
Gaining trader to advise the registry manager - gaining trader switch	4.14	16 Schedule 11.3	One late HH CS file.	Strong	Low	1	Identified
Withdrawal of switch requests	4.15	17 and 18 Schedule 11.3	The NW for ICP 0000650410WPE9F was rejected in error.	Strong	Low	1	Identified
Metering information	4.16	21 Schedule 11.3	For seven CS files issued by Pioneer, switch event reads did not reflect the actual reading or best estimate of an actual reading on the event date.	Moderate	Low	2	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Distributed unmetered load	5.4	11 Schedule 15.3, Clause 15.37B	The Grey and Gore DC DUML databases are not accurate.	Moderate	Medium	4	Investigating
Electricity conveyed & notification by embedded generators	6.1	10.13 and 15.13	Load for ICP 1002050361LC60D is determined by subtraction.  ICPs 0000033279CE035, 0000101696DE14B, and 0000500005CE26E have submission against the RPS and PV1 profiles, but only RPS profile is recorded on the registry.	Strong	Low	1	Identified
Derivation of meter readings	6.6	3(1), 3(2) and 5 Schedule 15.2	Photo readings are consistently entered as actual readings, including where they are not validated against a set of actual readings from another source. An unvalidated customer reading was entered with an actual read type for ICP 0000489139CE865 on 30/10/19.	Weak	Low	3	Identified
NHH meter reading application	6.7	6 Schedule 15.2	Some switch event readings did not relate to 11.59pm on Pioneer's last day of responsibility.  NHH meter readings applied to the end of the day before the meter change for NHH to HHR changes.	Moderate	Low	2	Investigating
NHH meters interrogated annually	6.9	8(1) and (2) Schedule 15.2	The meter reading frequency report contains some incorrect information.  The 4 month values include ICPs which have been unread for three months or more as unread  12 month values include ICPs which have been unread for four months or more. There was only one genuine ICP which was unread for 12 months or more.	Weak	Low	3	Investigating
NHH meters 90% read rate	6.10	9(1) and (2) Schedule 15.2	ICP 0000044886WEB7A was unread for more than four months and was connected to an NSP where compliance with Clause 9(1) Schedule 15.2 was not achieved, and the best endeavours requirement was not met.	Strong	Low	1	Identified
Identification of readings	9.1	3(3) Schedule 15.2	For eight RR and CS files issued by Pioneer, switch event reads were recorded with an incorrect read type.  Photo readings are consistently entered as actual readings, including where they are not validated against a set of actual readings from another source. An unvalidated customer	Weak	Low	3	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			reading was entered with an actual read type for ICP 0000489139CE865 on 30/10/19.				
Calculation of ICP days	11.2	15.7	The AV110 report excludes ICPs from revision submissions for periods where they were active if the ICP's current status is decommissioned.	Weak	Low	3	Identified
HHR aggregates information provision to the reconciliation manager	11.4	15.8	HHR aggregates file does not contain electricity supplied information.  An incorrect version of the volumes file was submitted for the September 2019 initial submission. Corrected data was washed up for revision 1.	Strong	Low	1	Identified
Creation of submission information	12.2	15.4	Breach 1910PION1 recorded that some reconciliation submission information was provided five minutes late.	Strong	Low	1	Identified
Accuracy of submission information	12.7	15.12	Breach 1910PION1 recorded that some reconciliation submission information was provided five minutes late.  Seasonal adjusted shape value files produced by the RM after r1 are not used.  Incorrect unmetered load submissions were provided for two ICPs.  The agreed switch readings were not used to produce submission data for three ICPs.  One ICP did not have vacant consumption reported.  One unvalidated photo reading was recorded as an actual reading in Orion and used to calculate historic estimate.	Moderate	Low	2	Identified
Permanence of meter readings for reconciliation	12.8	4 Schedule 15.2	Some estimates were not replaced by revision 14.	Moderate	Low	2	Identified
Historical estimate process	12.11	3 Schedule 15.3	Historic estimate is not calculated as expected for submission months where a change of NSP has occurred.	Weak	Low	3	Investigating
Forward estimate process	12.12	6 Schedule 15.3	For at least 13 ICPs on the November 2019 AV080 submission, forward estimate was provided for a period where historic estimate could be calculated.	Moderate	Low	2	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Historical estimate reporting to RM	13.3	10 Schedule 15.3	Historic estimate thresholds were not met for some revisions.	Moderate	Low	2	Identified
Future Risk Rating						69	

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	Recommendation
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"> <li>• Status</li> <li>• Network</li> <li>• NSP code</li> <li>• Dedicated NSP</li> <li>• Reconciliation type</li> <li>• Profile</li> <li>• Loss category code</li> <li>• Flow direction (which can be cross checked against installation type at ICP level)</li> <li>• Unmetered daily kWh.</li> </ul> <p>In addition, the following data should be checked for consistency (preferably monthly):</p> <ul style="list-style-type: none"> <li>• Pioneer's earliest active date, the distributor's initial electrical connection date and the MEP's meter certification date for newly connected ICPs.</li> <li>• 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.</li> </ul> <p>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.</p>
Changes to unmetered load	3.7	Confirm unmetered load details	Confirm unmetered load and on hours for 0018081024HB16E and 0000794436NV646, so the correct daily unmetered kWh can be calculated. Update the Orion and registry daily unmetered kWh as necessary.
ICPs at new or ready status for 24 months	3.10	ICPs with incorrect proposed trader recorded	Advise Aurora Energy Limited (DUNE) of the correct proposed trader for ICPs 0000506120CEEBO, 0000506122CEE35 and 0000506123CE270.
Losing trader must provide final information - switch move	4.10	Switch move CS files with missing lines	Investigate to determine why CSMETERCHANNEL, CSMETERCOMP and CSMETERINSTALL lines were missing for 31 switch moves.

Subject	Section	Description	Recommendation
Unmetered threshold	5.2	Unmetered load over 3,000 kWh per annum	Determine the wattage and type of unmetered load connected to ICP 0000075272CE0B4 and whether it is predictable and of a type approved by the Authority.  If the load is not an approved type, it is required to be metered.
Derivation of meter readings	6.6	Review of meter condition information provided by Wells	Review all meter condition information provided by Wells, and investigate and resolve any issues identified.
Derivation of meter readings	6.6	Treatment of customer and photo readings	Treat customer and photo readings as actual readings only if they have been validated against a set of readings from another source.  Unvalidated customer and customer photo readings should be entered with the "customer" read type.
Correction of NHH meter readings	8.1	Bridged meter corrections	Develop a correction process to add unmetered bridged consumption to reconciliation submissions where the bridged meter is not replaced.
HHR aggregates information provision to the reconciliation manager	11.4	HHR submission review	Reconcile the HHR aggregates and volumes information, prior to completing the rest of the HHR submission review. Only very small rounding differences are expected. Refer any discrepancies to EMS.
Allocation of submission information	12.3	Zeroing process for AV080 submissions	Develop a process to identify instances where an AV080 aggregation line is present in a submission and not included in a later revision.  Where this occurs insert an extra line into the AV080 report with the missing aggregation line values and zero total and historic estimate, to replace the previous record in the reconciliation manager's database.

## ISSUES

Subject	Section	Description	Issue
		Nil	



## 1. ADMINISTRATIVE

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

#### Code reference

*Section 11 of Electricity Industry Act 2010.*

#### Code related audit information

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

#### Audit observation

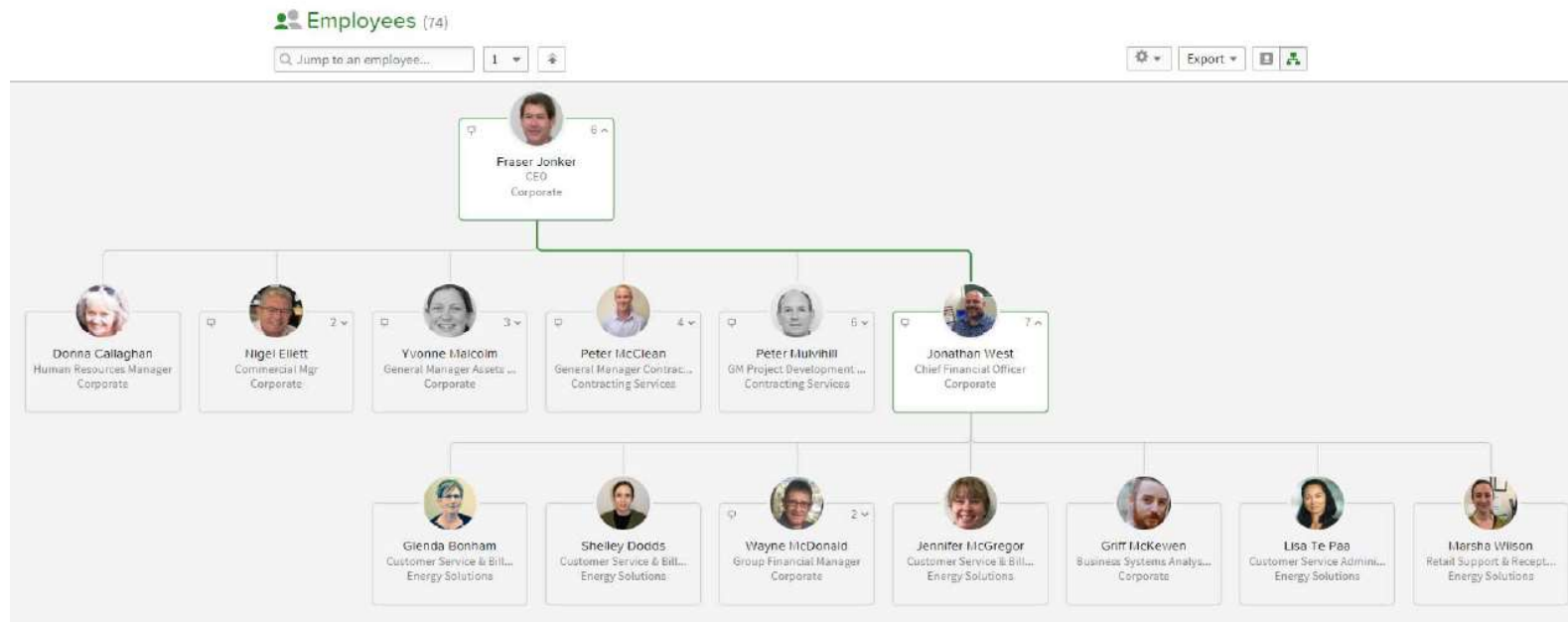
Current code exemptions were reviewed on the Electricity Authority website.

#### 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

Auditor:

Tara Gannon

**Veritek Limited**

**Electricity Authority Approved Auditor**

Pioneer personnel assisting with this audit:

Name	Title
Glenda Bonham	Retail Customer Service Team Leader
Jennifer McGregor	Customer Services & Billing Analyst
Jonathan West	Chief Financial Officer
Shelley Dodds	Customer Service and Billing Analyst

EMS personnel assisting with this audit:

Name	Title
Sunny Feng	Data Analyst
Andrew Dickie	Data Analyst

### 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 Wells to conduct NHH manual data collection where the meter is not AMI capable, or the MEP cannot provide readings. Because the Wells audit is more than seven months old, additional checks were undertaken to confirm that there were no changes to Wells' processes or systems which could have a negative impact on Pioneer's compliance, and checks were conducted for a sample of meter condition events.

Pioneer uses EMS and AMS to conduct HHR data collection and EMS to conduct HHR submission. Both were audited within approximately seven months of the audit date. Two active ICPs with FCLM category 3 or above meters are supplied, and I confirmed that EMS interrogates the meters directly and metering information is not provided by EDML.

AMS (for AMS and Arc meters), Metrix, 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 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 hourly to Pioneer's Wellington server, and the Wellington server has daily, weekly and monthly back-ups completed.

The EMS systems used for HHR data collection and submission are discussed in their agent audit report.

### 1.6. Breaches or Breach Allegations

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

Breach no	Breach of	Description	Outcome
1910PION1	Part 15 clause 15.4 (2)	Pioneer Energy Limited (PION) has failed to submit data to the reconciliation manager by 16:00 on April 17th BD 13 in breach of Part 15.4 (2) of the Code. PION submitted the data at 16:05 on the 17th April.	Closed with no further action taken, there was no impact because the submission was five minutes late.
1910PION3	Part 10 clause 10.33A (1) (a) (iii)	Pioneer allegedly connected a rest home village to WEL's network without notification.	Awaiting outcome. Refer to <b>section 2.11</b> .

### 1.7. ICP Data

All active ICPs are summarised by metering category in the table below. All 25 active ICPs with a metering category of 9 or blank have unmetered load recorded.

Metering Category	(29/11/2019)	(07/03/2019)	(22/03/18)	(25/05/17)	(11/01/17)
1	1266	1,664	1,143	1,205	1,664
2	177	240	285	298	240
3	69	98	124	117	98
4	41	49	56	46	49
5	11	10	11	17	10
9	9	11	6	10	11
Blank	16	-	-	-	-

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

Status	Number of ICPs (29/11/2019)	Number of ICPs (07/03/2019)	Number of ICPs (22/03/18)	Number of ICPs (25/05/17)
Active (2,0)	1,589	1,906	1,349	1,428
Inactive – new connection in progress (1,12)	9	15	1	-
Inactive – electrically disconnected vacant property (1,4)	15	19	10	5
Inactive – electrically disconnected remotely by AMI meter (1,7)	2	1	1	0
Inactive – electrically disconnected at pole fuse (1,8)	2	2	2	2
Inactive – electrically disconnected due to meter disconnected (1,9)	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)	6	6	7	2
Inactive – reconciled elsewhere (1,5)	91	159	258	270
Decommissioned (3)	52	5	0	5

#### 1.8. Authorisation Received

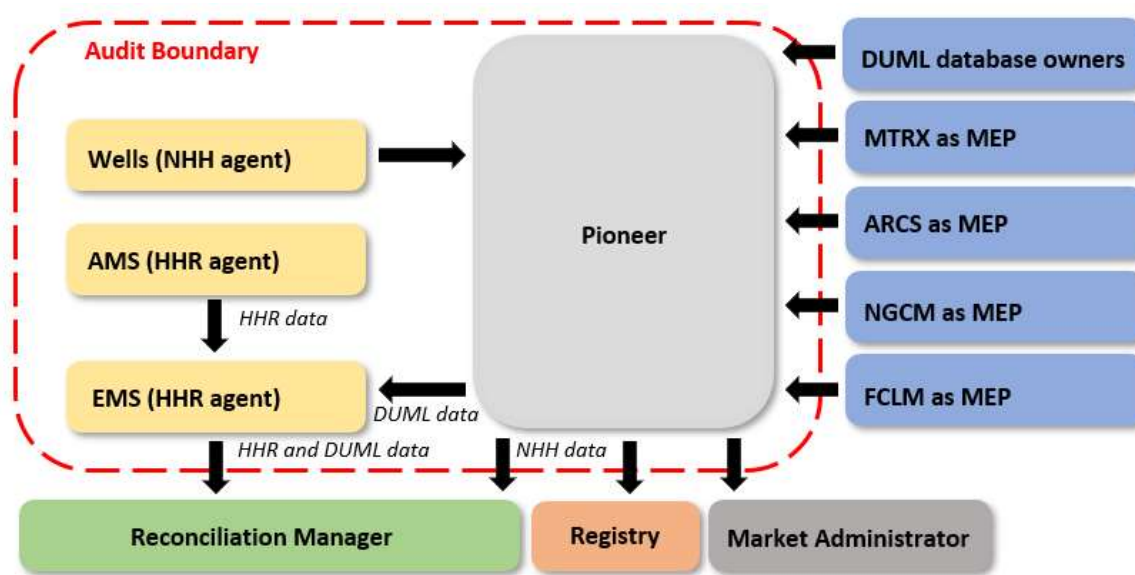
Pioneer provided a letter of authorisation.

#### 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 V7.2, at Pioneer's premises in Alexandra on 10 January 2020.

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 and AMS) Metrix FCLM
(c)(iii) - Creation and management of volume information	EMS – HHR and DUMML	
(d) (i) – Calculation of ICP days	EMS – HHR	
(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	
(f) - Provision of metering information to the Grid Owner	EMS	

Wells has been audited in accordance with the Guidelines for Reconciliation Participant Audits, and the agent audit report is expected to be submitted along with this report. Because the Wells audit is more than seven months old, additional checks were undertaken to confirm that there were no changes to

Wells' processes or systems which could have a negative impact on Pioneer's compliance, and checks were conducted for a sample of meter condition events.

Pioneer uses EMS and AMS to conduct HHR data collection and EMS to conduct HHR submission. Both were audited within approximately seven months of the audit date. Two active ICPs with FCLM category 3 or above meters are supplied, and I confirmed that EMS interrogates the meters directly and metering information is not provided by EDML.

AMS (for AMS and Arc meters), Metrix, 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 April 2019 by Ewa Glowacka. The summary tables below shows 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.

Subject	Section	Clause	Non-compliance	Status
Relevant information	2.1	11.2	Incorrect or missing information for a small number of ICPs.	Still existing
Provision of information	2.2	15.35	Two breaches recorded in relation to inaccurate submission.	Cleared
Changes to registry information	3.3	10 of Schedule 11.1	Delayed updates to ICPs "active" status (34.3%), late trader's updates to registry (12.8%).	Still existing
Changes to registry information	3.5	9 of Schedule 11.1	Registry information not updated within 5 business days of the event for a small number of ICPs.	Still existing
ANZSIC codes	3.6	9(1)(k) of Schedule 11.1	Incorrect ANZSIC code for six ICPs.	Still existing
Changes to unmetered load	3.7	9(1)(f) of Schedule 11.1	Incorrect information in "Daily Unmetered kWh" field for standard and distributed unmetered load.	Still existing
Management of "active" status	3.8	17 of Schedule 11.1	A number of ICPs have incorrectly assigned "inactive" status when they should be "active".	Still existing
Management of "inactive" status	3.9	19 of Schedule 11.1	The status "Inactive- Reconciled elsewhere" (1,5) incorrectly assigned to 158 ICPs.	Cleared, but other non-compliance exists

Subject	Section	Clause	Non-compliance	Status
Losing trader response to switch request and event dates - standard switch	4.2	4 of Schedule 11.3	The event date nominated by PION was up to 12 business days before the date of receipt of notification for 65 ICPs (ex PLEL).	Still existing
Losing trader must provide final information – standard switch	4.3	5 of Schedule 11.1	Late CS files for 19 standard switches.	Still existing
Traders must use the same readings – standard switch	4.4	6A of Schedule 11.3	One RR file.	Still existing
Losing trader provides information - switch move	4.8	10(1) of Schedule 11.3	Final information for 33 ICPs was provided to the registry later than 5 BD.	Still existing
Gaining trader to advise the registry manager - gaining trader switch	4.14	16 of Schedule 11.3	Switching for four ICPs was finalized late.	Still existing
Distributed unmetered load	5.4	11(1)(2)(c)(d)(2A) of Schedule 15.3	The Grey District Council database does not meet all requirements.	Still existing
Electricity conveyed	6.1	10.24(c)	Subtraction are used to determine submission information for 1002050361LC60D.	Still existing
NHH meters interrogated annually	6.9	8(1) of schedule 15.2	The target of 100% was not achieved for a small number of NSPs.	Still existing
NHH meters 90% read rate	6.10	9(1) of schedule 15.2	The target of 90% was not achieved.	Still existing
HHR aggregates information provision to the reconciliation manager	11.4	15.8	HHRAGGR files do not contain electricity supplied information.	Still existing



Subject	Section	Clause	Non-compliance	Status
Accuracy of submission information	12.7	15.12	Incorrect submission for NSY0331 (Jan'18, rev14).	Still existing
Permanence of meter readings for reconciliation	12.8	4 of Schedule 15.2	Permanence of meter reading for the period Apr'17 to Jan'18 not achieved.	Still existing
Reconciliation participant to prepare information	12.9	2 of Schedule 15.3	Incorrect submissions for UML & incorrect profile.	Cleared
Historical estimate process	12.11	4 of Schedule 15.3	Incorrect calculation of historical estimates for some scenarios conducted by ORION.	Still existing
Historical estimates reporting to RM	13.3	10 of Schedule 15.3	Historical estimates target not met for revision 3, and 7 for some NSPs.	Still existing

Subject	Section	Description	Recommendation	Status
Changes to unmetered load	3.7	Incorrect information in the field "Unmetered Load Details – Trader" for 0000950091WP5EB and 0000950092WP92B	Replace wording in the field "Unmetered Load Details – Trader" for 0000950091WP5EB and 0000950092WP92B with "DUML" or similar.	Cleared

Subject	Section	Description	Issue	Status
Electricity conveyed	6.1	Subtraction is used to determine submission information for 1002050361LC60D	Incorrect design of the metering installation for 11 kV supply Auckland Hospital.	In the process of being resolved

## 2. OPERATIONAL INFRASTRUCTURE

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

#### Code reference

*Clause 10.6, 11.2, 15.2*

#### Code related audit information

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

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

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

#### Audit observation

The process to find and correct incorrect information was examined. The registry list file as at 29/11/19 and AC020 trader compliance report for 01/05/19 to 29/11/19 were examined to confirm that information was correct and not misleading. The registry validation process was examined in detail in relation to the achievement of this requirement.

#### Audit commentary

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.

Since September 2019, registry acknowledgement and notification files have been reviewed manually, and action is taken as necessary. Prior to September 2019 these files were only reviewed if an issue was identified.

Notification files are imported into Orion. Where a field maintained by the distributor which is recorded in Orion changes, such as the NSP, dedicated NSP, reconciliation type and 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 will only be 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.

There are no database wide reconciliations between Orion and the registry, and I recommend that these reconciliations are implemented.

Description	Recommendation	Audited party comment	Remedial action
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"> <li>• Status</li> <li>• Network</li> <li>• NSP code</li> <li>• Dedicated NSP</li> <li>• Reconciliation type</li> <li>• Profile</li> <li>• Loss category code</li> <li>• Flow direction (which can be cross checked against installation type at ICP level)</li> <li>• Unmetered daily kWh.</li> </ul> <p>In addition, the following data should be checked for consistency (preferably monthly):</p> <ul style="list-style-type: none"> <li>• Pioneer's earliest active date, the distributor's initial electrical connection date and the MEP's meter certification date for newly connected ICPs.</li> <li>• 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.</li> <li>• 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.</li> </ul>	New process will be implemented to reconcile Orion and the registry data.	Identified

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

Item No.	Issue	Nov 2019	Mar 2019	Comments
1	Status or status date mismatch between registry and Pioneer	9	-	<p>Two reconnected ICPs had incorrect "active" status dates applied. See <b>section 3.8</b>.</p> <p>Three newly connected ICPs had incorrect "active" status dates applied. See <b>sections 3.5 and 3.8</b>.</p> <p>One disconnected ICP had an incorrect "inactive" status date applied, and three ICPs had "inactive reconciled elsewhere" status incorrectly applied on the registry. See <b>section 3.9</b>.</p>

Item No.	Issue	Nov 2019	Mar 2019	Comments
2	Active ICPs with blank MEP and no MEP nominated and UML = N	-	1	Compliant.
3	Incorrect submission flag	-	-	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	-	These are all SB (residual load) ICPs and the trader unmetered load is correctly set to zero. See <b>section 3.7</b> .
10	ICPs with incorrect shared unmetered load	-	-	Compliant for shared unmetered load. Two ICPs had incorrect standard unmetered load recorded in Orion. See <b>section 3.7</b> .
11	ICPs with Distributed Generation indicated but no DG profile	3	2	All of the ICPs were confirmed to have distributed generation, and metered injection volumes were submitted against the PV1 profile for reconciliation. The profile is incorrectly recorded as RPS only on the registry. See <b>section 6.1</b> .
12	ICP at status "new connection in progress" (1,12) or "ready" (0,0) with an initial energisation date populated by the Distributor	1	-	Compliant, this was a timing difference.
13	Active date variance with initial electrical connection date	10	-	In eight cases the distributor had not populated an initial electrical connection date. The "active" date was correctly recorded for three ICPs, and was incorrect for three ICPs. See <b>section 3.8</b> .
15	Meter cat 3 or known commercial site with residential ANZSIC code	-	1	Compliant.

## Event dates

Event dates are applied manually on the registry. I identified eight ICPs with incorrect event dates recorded on the registry including:

- two reconnected ICPs which had incorrect active status event dates, discussed in **section 3.8**,
- three newly connected ICPs which had incorrect active status event dates, discussed in **sections 3.5 and 3.8**,
- one inactive ICP where incorrect status event dates were applied, discussed in **section 3.9**; and
- two trader updates which had incorrect event dates:

ICP Identifier	Update type	Correct event date	Applied event date
0000832320WPD6B	Trader	30/09/2019	17/09/2019
0000004278DE727	Trader	28/08/2019	27/08/2019

## Exceptions from the April 2019 audit

ICP data discrepancies identified during the April 2019 audit were re-checked and found to be 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: 01-May-19</p> <p>To: 10-Jan-20</p>	<p>The registry validation is not sufficient to identify all discrepancies between Orion and the registry, including discrepancies which could impact on the accuracy of reconciliation submissions.</p> <p>Nine ICPs had incorrect statuses or status event dates recorded on the registry.</p> <p>Three ICPs had incorrect profiles recorded on the registry, but correct profiles were applied for submission.</p> <p>Two ICPs had incorrect unmetered load recorded in Orion.</p> <p>Two trader updates had incorrect event dates applied.</p> <p>Potential impact: Low</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		
<b>Low</b>	<p>Controls are rated as moderate as they are sufficient to ensure that data is recorded correctly most of the time. The current validation processes are focussed on data which had changed.</p> <p>The impact on submission is minimal and will wash out when the records are corrected.</p> <ul style="list-style-type: none"> <li>For the event date discrepancies, a small number of exceptions were identified and the difference between the applied dates and correct dates was small.</li> <li>The unmetered load volumes differences are low.</li> <li>The correct profiles were applied for reconciliation for the ICPs with profile discrepancies.</li> <li>The impact of the trader event date updates is low.</li> </ul>		
Actions taken to resolve the issue		Completion date	Remedial action status
a) Event Dates – checked paperwork and corrected in Orion and the Registry		28.01.2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>a) New process to be implemented to validate information between Orion and the registry on a monthly basis for any discrepancies. This will cover the event date discrepancies and unmetered loads.</p> <p>b) Also on UML we will contact the customer directly with what the UML consists of and verify this matches what is in the registry</p> <p>c) Added to our existing google.doc, a section for managing new connections</p>		28.01.2020	

## 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

##### HHR

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

##### NHH

Pioneer receives meter readings from AMS (for Arc and AMS meters), Metrix, and FCLM as MEPs, and Wells as an agent.

I reviewed the method to receive meter reading data from each MEP and agent. I traced a diverse sample of readings for 16 ICPs from the source files to Orion, including at least two ICPs for each provider.

##### Generation

Pioneer has operated the Aniwhenua Hydro Power Station since ownership of the station changed from Nova Energy to Southern Generation Limited Partnership on 29/07/16. 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.

Wells readings are imported directly into Orion using the read import interface. AMI readings are imported into the data warehouse, and the readings on the scheduled read date are transferred to Orion.

I traced a sample of readings for 16 NHH ICPs from the source files to Orion, and confirmed that the readings, read dates and read types were recorded correctly.

At the time of the April 2019 audit, readings for 28 Torrens Terrace were provided by UTL loggers (Utility Technology). Readings have been provided by Wells since 18/04/19 and I viewed readings in the system to confirm this.

#### **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 for a small sample of events.

For HHR data, the EMS and AMS audit reports were reviewed.

#### **Audit commentary**

##### **NHH**

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

##### **HHR**

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 as at 29/11/19 was reviewed.

### Audit commentary

Pioneer supplies 121 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 process was examined in detail to evaluate the strength of controls. The registry list file as at 29/11/19 and AC020 trader compliance reports for 01/05/19 to 29/11/19 were examined to confirm process compliance.

#### **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 eight new connections confirmed that "new connection in progress" status was applied except where the distributor moved the ICP to "ready" status after the initial electrical connection date.

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

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, 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 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 reconciliation participant is recorded in the registry as the trader responsible for the ICP*
  - *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 temporary electrical connection.*

#### Audit observation

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

The AC020 trader compliance report for 01/05/19 to 29/11/19 was examined to confirm process compliance and that controls are functioning as expected.

Alleged breach information was reviewed.

#### Audit commentary

##### MEP information for active ICPs

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

##### Meter certification

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 two late certifications for new connections of metered ICPs, and one late certification for an ICP which moved from “inactive” to “active” status:

ICP	Commentary
0000509722CE153	Meter certification was provided 26 business days after the new connection event date, when the whole subdivision the ICP was part of was livened.
0007189945RN8D7	Meter certification was provided eight business days after the new connection event date.
000001118ED6FE	This was not a genuine reconnection; the ICP was moved from “inactive – reconciled elsewhere” status to “active” status effective from 01/07/18 along with the other 28 Torrens Terrace ICPs. The ICP was interim certified at the time of the “active” status update and was fully certified effective from 07/10/19.

No bridged meters and one meter with a bridged relay were identified during the audit period. The relay for ICP 0000502539CE0CD remained bridged at the time of the audit. The network needs to fix their infrastructure before load control can be applied, and the meter is intended to be recertified when the relay is unbridged.

##### Network approval for connection

The Electricity Authority recorded a breach for connection of an ICP prior to the network being notified.

Breach no	Breach of	Description	Outcome
1910PION3	Part 10 clause 10.33A (1) (a) (iii)	Pioneer allegedly connected a rest home village to WEL's network without notification.	Awaiting outcome

Pioneer provided information on their investigation into this alleged breach.

Pioneer Energy's customer entered into a commercial arrangement with WEL Networks and arranged for a 1MVA transformer to be built and installed, creating a potential point of connection. Pioneer Energy was not informed of this.

Following that, Pioneer Energy's customer approached Pioneer Energy and requested a new connection (ICP 000042446WE559 03/11/17). This was a builder's temporary supply and authorisation from WEL networks was obtained. The supply was connected to transformer T5772, not the new transformer.

The customer requested an upgrade from cat 1 to cat 4 in April 2018, and Pioneer asked WEL Network's contractor to complete this. Instead of upgrading the meter for ICP 000042446WE559 at the existing POC (transformer T5772), on 26/4/18 WEL Network's contractor installed the cat 4 meter at the new

transformer without Pioneer Energy's knowledge or approval. ICP 000042446WE559 was effectively moved to the new transformer, and switched to Meridian four days later on 1/5/18.

WEL then instructed Pioneer Energy to install a new cat 1 meter at transformer T5772, and request a new ICP. This ICP became 0000044984WE2FB, and the ICP start date back dated to 26/4/18 (the day that original ICP 000042446WE559 was moved to the new transformer). ICP 0000044984WE2FB was decommissioned on 14/1/19, once the builder's temporary supply was no longer required.

Pioneer Energy provided a response to the alleged breach to the Authority on 6/11/19 and is awaiting the outcome.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.11 With: Clause 10.33A  From: 26-Apr-18 To: 10-Jan-20	Three metered ICPs did not have meter certification provided within five business days of the change to active status.  One new ICP was allegedly livened by Pioneer without WEL Network’s approval. An alleged breach has been raised by WEL Networks (1910PION3) and is currently being investigated.  Potential impact: Medium  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, because: <ul style="list-style-type: none"><li>meter certification is an MEP responsibility and Pioneer sometimes cannot achieve compliance; and</li><li>Pioneer did not ask their contractor to complete a connection for an ICP without the network’s approval, the connection was completed to a different transformer without their authorisation or knowledge.</li></ul> The impact is assessed to be low because: <ul style="list-style-type: none"><li>A small number of meters were not certified within the timeframes and all were certified at a later date. Uncertified metering installations are likely to be less accurate than certified metering installations, so there could be a minor impact on settlement. The audit risk rating is recorded as low because the number and proportion of connections affected is low.</li><li>The impact of breach 1910PION3 is currently being assessed by the Authority. The issues associated with this connection have now been resolved.</li></ul>		
Actions taken to resolve the issue		Completion date	Remedial action status
The breach is still under investigation.		Ongoing	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
Continue to follow up with MEP's within the required timeframe to ensure compliance.	28.01.20	

## 2.12. Arrangements for line function services (Clause 11.16)

### Code reference

Clause 11.16

### Code related audit information

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

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

### Audit observation

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

### Audit commentary

Pioneer has use of system agreements or arrangements in place with all the networks they trade on, including the four new networks they began trading on 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.

### Audit commentary

Pioneer has arrangements in place with the MEPs for all their ICPs.

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



### 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.

##### 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 process was examined in detail. The registry list as at 29/11/19, event detail report for 01/05/19 to 29/11/19, and AC020 report for 01/05/19 to 29/11/19 were analysed to evaluate the updating of the registry in relation to new connections. This clause links directly to **section 3.5** below. The findings for the timeliness of updates is detailed there.

The process to update the registry was reviewed for a diverse sample of eight new connections.

### Audit commentary

The new connection process is detailed in **sections 2.9** and **3.5**. The process in place ensures that trader information is populated as required by this clause.

### 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 trader updates, including MEP nominations was reviewed.

The AC020 trader compliance report for 01/05/19 to 29/11/19 was reviewed. All late trader updates and all late disconnections and reconnections were checked. A sample of ten status changes from “inactive - reconciled elsewhere” to “active” were checked.

### 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.

### Status updates to “active”

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

Status	Review period end	ICPs notified greater than 5 days	Percentage on time	Average Business Days between Status Event and Status Input Dates
Active	07/03/19	23	65.7%	Up to 257 business days
	29/11/19	8	38.46%	75.54

I checked all late updates to active status.

- Four were backdated corrections relating to a former embedded network at 28 Torrens Terrace. The changes were processed following advice provided by the auditor during Pioneer's April 2019 audit, and the event date was correctly set as the date Pioneer's exclusive agreement for 28 Torrens Terrace expired so that the ICPs could switch to other retailers.
- One update was a backdated correction for an ICP that was to be decommissioned but the customer changed their mind.
- Three updates were delayed while Pioneer confirmed the correct active date, or there was a delay in processing the update once the correct date was confirmed.

Six of the late updates were accurately processed from the correct event date. ICPs 0000406213WPA35 and 0000007765TED75 had incorrect active dates applied, which is recorded as non-compliance in **section 3.8**.

Timeliness of new connection status updates is assessed in **section 3.5**. 49 of the late status updates identified as new connections in that section were changes from "inactive – reconciled elsewhere" status to "active" status for apartments at 28 Torrens Terrace, which should have been classified as reconnections. They were identified as new connections on the AC020 report because the change was the first time that the ICPs had an "active" status applied. All the late updates were corrections following the April 2019 audit, and are recorded as non-compliance below.

#### Status updates to "inactive"

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

Status	Review period end	ICPs notified greater than 5 days	Percentage on time	Average Business Days between Status Event and Status Input Dates
Inactive	07/03/19	54	85.4%	Up to 365 business days
	29/11/19	7	84.09%	7.27

I checked all late updates to inactive status, and found they were delayed while Pioneer obtained confirmation of the correct status and date, or there was a delay in processing the update once the required information was confirmed.

Six of the late updates were accurately processed from the correct event date. ICP 0000003526CE9CD had an incorrect inactive date applied, and is recorded as non-compliance in **section 3.9**.

#### **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

I checked all late trader updates, and found all related to corrections or delays in receiving paperwork to confirm the correct event attributes where metering changes occurred. Five of the late updates were accurately processed from the correct event date, and ICPs 0000832320WPD6B and 0000004278DE727 had incorrect event dates applied. The incorrect event dates are recorded as non-compliance in **section 2.1**.

In addition, the AC020 identified one late update to an ANZSIC code. The update was delayed because the ANZSIC code was for a new building and Pioneer was initially unsure of the correct industry code for the occupant. The late update was accurately processed from the correct event date.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.3 With: Clause 10 Schedule 11.1  From: 09-May-19 To: 30-Nov-19	57 late status updates to active. Seven late status updates to inactive Seven late trader updates. One late ANZSIC code update. Potential impact: Low Actual impact: Low Audit history: Twice Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are rated as moderate. I found late updates often related to data corrections, which improved overall data accuracy, with a smaller proportion caused by delays in receiving information to confirm the update attributes or delays in processing the updates. The risk is low as most updates were completed on time or soon after they were due, or related to corrections.		
Actions taken to resolve the issue		Completion date	Remedial action status
Continue to correct any inaccuracies to make sure data in the registry to correct		Ongoing	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
Our new report between Orion and the registry should capture the discrepancies going forward Carry out in house audit for all Torrens Tce ICPS still with PION	TBC	

### 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*
  - o *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

##### Retailers Responsibility to Nominate and Record MEP in the Registry

The AC020 trader compliance report for 01/05/19 to 29/11/19 was examined to confirm whether all active ICPs have an MEP recorded, and MEP nominations were accepted.

##### ICP decommissioning

The process for the decommissioning of ICPs was examined. The event detail report 01/05/19 to 29/11/19 was reviewed to identify all ICPs decommissioned during the period. A diverse sample of nine decommissioned ICPs were checked to prove the process and confirm controls are in place.

#### 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 25 active ICPs with a metering category of 9 or blank have unmetered load.

Review of the AC020 report did not identify any rejected MEP nominations.

### 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.

12 ICPs were decommissioned during the audit period, all were dismantled. I checked a diverse sample of nine 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 process was examined in detail. The AC020 trader compliance report for 01/05/19 to 29/11/19 was reviewed, and all late updates were examined.

The accuracy of all status event dates for new connections was checked by comparing the earliest active date, meter certification date (if available) and initial electrical connection date (if available) using the AC020 report. A sample of discrepancies were checked against supporting information to confirm the correct status date.

#### 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 new connection in progress (1,12) status as part of the service request process.

The AC020 report did not record any late updates to new connection in progress status. 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

49 of the late status updates identified as new connections were changes from “inactive – reconciled elsewhere” status to “active” status for apartments at 28 Torrens Terrace. They were identified as new connections on the AC020 report because the change was the first time that the ICPs had an “active” status applied. Non-compliance for these late updates is recorded in **section 3.3**.

I checked the other eight late status updates for new connections on the AC020. All were delayed by late receipt of connection paperwork, or late update to “ready” status by the distributor.

Seven of the late updates were accurately processed from the correct event date. An incorrect active date was applied to ICP 0000509722CE153, which is recorded as non-compliance in **section 3.8**.

##### New connection information accuracy

Active dates for new connections were compared to the distributor’s initial electrical connection date, and MEP’s certification date using the AC020 report. The AC020 report identified 59 ICPs with date discrepancies.

49 of the late status updates identified as new connections were changes from “inactive – reconciled elsewhere” status to “active” status for apartments at 28 Torrens Terrace and were not true new connections. The other ten discrepancies were checked, and I found three ICPs had incorrect status event dates applied:

ICP Identifier	Connection type	Status	Correct status event date	Applied status event date
0000508872CE7F4	New connection	2,0	29/04/2019	07/05/2019
0000509962CE5FD	New connection	2,0	28/11/2019	25/11/2019
0000509722CE153	New connection	2,0	12/09/2019	13/09/2019

The AC020 report identified one ICP with an initial electrical connection date populated which had not been made active. The difference related to timing, and the status was updated on the registry by 02/12/19.

I checked the accuracy of a further six initial electrical connection date updates, and found they were accurately processed from the correct event date.

## Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.5  With: Clause 9 Schedule 11.1   From: 29-Apr-19  To: 25-Nov-19	Eight late status updates to active for new connections.  ICPs 0000508872CE7F4, 0000509962CE5FD and 0000509722CE153 have incorrect new connection active status event dates applied.  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, because they are sufficient to ensure that the registry is updated on time most of the time, and that active dates are accurately recorded.  The risk rating is low. The late updates were all made within 22 business days of the active date, and the date discrepancies were small. The impact on submission is minimal and will wash out when the records are corrected.		
Actions taken to resolve the issue		Completion date	Remedial action status
Corrected in Registry and checked in Orion		28.01.2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
New google.com connections s/sheet in place		28.01.2020	

### 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 file as at 29/11/19 and AC020 trader compliance report for 01/05/19 to 29/11/19 were examined to check ANZSIC codes, including active ICPs with T99 series or blank ANZSIC codes.

I rechecked all ICPs on E30 codes which were found to be incorrectly assigned during the last audit.

To confirm the validity of the ANZSIC codes selected, I checked a diverse sample of 40 active ICPs across 19 different ANZSIC codes which were assigned to ten ICPs or more.



### 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, and I found:

- no ICPs with blank or T99 series ANZSIC codes were recorded on the AC020,
- no ICPs with meter category three or higher and residential ANZSIC codes; and
- three ICPs with meter category two and a residential ANZSIC code (one ICP was confirmed to be residential and the other two ICPs had incorrect codes applied, which were corrected during the audit).

I checked a diverse sample of 40 active ICPs across 19 different ANZSIC codes which were assigned to ten ICPs or more. 36 were correct, and four were incorrect. The incorrect codes were corrected during the audit.

The previous audit found four ICPs where codes E301100, E301, and E302 were incorrectly assigned. I checked all six ICPs currently assigned to "E30" codes and found that they were correct.

### Audit outcome

Non-compliant

Non-compliance	Description	
Audit Ref: 3.6 With: Clause 9 (1(k)) of Schedule 11.1  From: 29-Nov-19 To: 10-Jan-20	Incorrect ANZSIC codes were applied for six ICPs, and were corrected during the audit.  Potential impact: Low  Actual impact: Low  Audit history: Twice  Controls: Moderate  Breach risk rating: 2	
Audit risk rating	Rationale for audit risk rating	
<b>Low</b>	There are preventative controls in place to ensure that ANZSIC codes are initially recorded accurately, and monitoring controls are periodically used to check and correct ANZSIC codes. Because six (12%) of the sample of 49 ICPs individually checked were found to be incorrect, I have rated the controls as moderate.  The audit risk rating is low, because this has no direct impact on submission accuracy and the incorrect codes have been corrected.	
Actions taken to resolve the issue		Completion date
Corrected		17.01.2020
Preventative actions taken to ensure no further issues will occur		Completion date
Added to Promapp process for switching in, if unsure of ANZSIC code we will contact the customer to confirm type of business at the site		28.01.2020
		Cleared

### 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 file as at 29/11/19 and AC020 trader compliance report for 01/05/19 to 29/11/19 were examined to identify any ICPs where:

- unmetered load is identified by the Distributor and none is recorded by Pioneer; 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**

Pioneer supplies 27 ICPs with unmetered load indicated. 21 ICPs have standard unmetered load and six ICPs have distributed unmetered load. No ICPs have shared unmetered load.

Review of the AC020 report found:

- All unmetered ICPs have daily unmetered kWh recorded apart from SB ICPs (which correctly have daily unmetered kWh of zero recorded), and DUML ICPs.
- No ICPs where the distributor had unmetered load recorded, but Pioneer did not.
- One ICP (0000794436NV646) where the trader's daily kWh differed from the distributors daily kWh by more than  $\pm 0.1$  kWh. Pioneer had misinterpreted the distributor's unmetered load information (assuming that the unmetered load should be halved because it was only connected 12 hours per day), and then made an error in conversion from W to kWh which resulted in a decimal place error. The value was then rounded to one decimal place when recorded on the registry. Pioneer intends to confirm the correct wattage and will update the registry and Orion.

Unmetered Load Details - Trader	Unmetered Load Details - Distributor	Orion daily unmetered kWh	Trader daily unmetered kWh	Daily unmetered kWh based on the distributor value (wattsxhours)/1000
Under Verandah lighting 12 hours per day	0088;12.0;1 x 80W Mercury Under Veranda Light	0.05	0.1	1.056

Unmetered load submissions are calculated using the daily unmetered kWh recorded on the meters tab in Orion. During submission information checks, I found some daily unmetered kWh recorded in Orion differed from the values recorded in the registry. I have recommended that daily unmetered kWh values are reconciled between Orion and the registry at least monthly in **section 2.1**.

ICP	Registry daily unmetered kWh	Orion daily unmetered kWh used for submission	Correct value	Comment
0000075272CE0B4	12.56	1.0	12.56	Orion to be updated and revision submissions provided
0000479017CEA33	0.83	1.0	0.83	Orion to be updated and revision submissions provided
0018081024HB16E	0.59	3.54	Unknown	.59 kW x 6 lamps, to confirm on hours so that correct value can be calculated

Description	Recommendation	Audited party comment	Remedial action
Confirm unmetered load details	Confirm unmetered load and on hours for 0018081024HB16E and 0000794436NV646, so the correct daily unmetered kWh can be calculated. Update the Orion and registry daily unmetered kWh as necessary.	Checking Registry and Orion match and will be part of the new validation process between Registry and Orion	Identified

#### Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 3.7</p> <p>With: Clause 9(1)(f) of Schedule 11.1</p> <p>From: 29-Nov-19</p> <p>To: 10-Jan-20</p>	<p>Incorrect unmetered load is recorded in Orion for 0000794436NV646, 0000075272CE0B4, and 0000479017CEA33.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Once</p> <p>Controls: Weak</p> <p>Breach risk rating: 3</p>
Audit risk rating	Rationale for audit risk rating
<b>Low</b>	<p>The controls are assessed to be weak, because the Orion daily unmetered kWh is not regularly validated against the registry.</p> <p>The impact is assessed to be low based on the kWh differences.</p>

Actions taken to resolve the issue	Completion date	Remedial action status
Checking and updating	28.01.2020	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
New process to be implemented to validate information between Orion and the registry on a monthly basis for any discrepancies.	28.01.2020	

### 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 1 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 process was examined in detail as discussed in **sections 2.9** and **3.5**.

The process to manage unmetered load was examined. The registry list file as at 29/11/19 and AC020 trader compliance report for 01/05/19 to 29/11/19 were reviewed to determine compliance.

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

Active dates for new connections were compared to the distributor’s initial electrical connection date, and MEP’s certification date using the AC020 report. The AC020 report identified 59 ICPs with date discrepancies.

49 of the late status updates identified as new connections were changes from “inactive – reconciled elsewhere” status to “active” status for apartments at 28 Torrens Terrace and were not true new connections. The changes were processed following advice provided by the auditor during Pioneer’s April 2019 audit, and the event date was correctly set as the date Pioneer’s exclusive agreement for 28 Torrens Terrace expired to enable the ICPs to switch to other retailers.

The other ten discrepancies were checked, and I found three ICPs had incorrect status event dates applied:

ICP Identifier	Connection type	Status	Correct status event date	Applied status event date
0000508872CE7F4	New connection	2,0	29/04/2019	07/05/2019
0000509962CE5FD	New connection	2,0	28/11/2019	25/11/2019
0000509722CE153	New connection	2,0	12/09/2019	13/09/2019

The AC020 report identified one ICP with an initial electrical connection date populated which had not been made active. The difference related to timing, and the status was updated on the registry by 02/12/19.

A sample of eight reconnections were checked to confirm that the correct status and date had been applied. The following ICPs had incorrect “active” status event dates applied:

ICP Identifier	Connection type	Status	Correct status event date	Applied status event date
0000406213WPA35	Reconnection	2,0	25/10/2019	23/10/2019
0000007765TED75	Reconnection	2,0	5/09/2019	06/09/2019

Some late status changes to active are recorded as non-compliance in **sections 3.3** and **3.5**.

#### Audit outcome

##### Non-compliant

Non-compliance	Description
<p>Audit Ref: 3.8</p> <p>With: Clause 17 Schedule 11.1</p> <p>From: 29-Apr-19</p> <p>To: 25-Nov-19</p>	<p>ICPs 0000406213WPA35 and 0000007765TED75 have incorrect reconnection status event dates applied.</p> <p>ICPs 0000508872CE7F4, 0000509962CE5FD and 0000509722CE153 have incorrect new connection active status event dates applied.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Once</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, because the process to update the registry is manual, increasing the likelihood of data processing errors. There are some monitoring controls in place to check that details are recorded correctly at the time the update is processed.</p> <p>The impact is low, because a small number of exceptions were identified and the difference between the applied dates and correct dates was small. The impact on submission is minimal and will wash out when the records are corrected.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Checked and corrected in Registry and Orion		28.01.2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>A new process will be created to validate information between Orion and the registry on a monthly basis for any discrepancies.</p> <p>Checking with Agility to see if any of our reports from Orion can assist in this validation.</p>		TBC	

### 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 registry list file as at 29/11/19 and AC020 trader compliance report for 01/05/19 to 29/11/19 were reviewed to determine compliance.

The inactive status of “new connections in progress” is usually used for all new connections. The list file was examined to identify any ICPs that had been at the “inactive - new connection in progress” with an initial energisation date populated, and for any of these ICPs that had been at this status for greater than 24 months.

The process to manage ICPs at the other inactive statuses was examined. A diverse sample of 12 status updates to inactive, including at least five (or all) for each status reason code, were checked for accuracy.

The findings in relation to the timeliness of updates to registry is recorded in **section 3.3**.

#### Audit commentary

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.

54 ICPs were updated to inactive statuses during the audit period. I reviewed a sample of all late updates to inactive status, and a total of at least five (or all) status updates for each status reason code used during the audit period. A total of 11 updates were checked. I confirmed that the status reason codes and event dates were correctly applied based on the paperwork provided at the time of the update, except:

ICP Identifier	Status	Correct status event date	Applied status event date
0000003526CE9CD	1,4	04/07/2019	04/05/2019

The AC020 report identified one ICP with an initial electrical connection date populated which had not been made active. The difference related to timing, and the status was updated on the registry by 02/12/19. No ICPs currently at “inactive new connection in progress” status have an initial electrical connection date populated, or have been at the status for over two years.

Review of ICP days discrepancies in **section 11.2** found incorrect statuses recorded on the registry for three ICPs with “reconciled elsewhere” status, which were updated to “active” status during the audit.

No inactive ICPs with consumption were identified during the audit period.

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

#### Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 3.9</p> <p>With: Clause 19 Schedule 11.1</p> <p>From: 04-May-19</p> <p>To: 07-May-19</p>	<p>ICP 0000003526CE9CD has an incorrect disconnection date applied.</p> <p>Three ICPs incorrectly had “inactive reconciled elsewhere” status recorded on the registry and were corrected during the audit.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Once</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>
Audit risk rating	Rationale for audit risk rating
<b>Low</b>	<p>Controls are rated as moderate, because the process to update the registry is manual, increasing the likelihood of data processing errors. There are some monitoring controls in place to check that details are recorded correctly at the time the update is processed.</p> <p>The impact is low. Three exceptions have been corrected, and the incorrect date difference was three days. The correct status event date is after the applied event date, so no active consumption or ICP days will be omitted from reconciliation submissions.</p>

Actions taken to resolve the issue	Completion date	Remedial action status
Noted	28.01.2020	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
Staff trained	28.01.2020	

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

#### Code reference

Clause 15 Schedule 11.1

#### Code related audit information

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

#### Audit observation

Whilst this is a Distributor's code obligation, I investigated whether any queries had been received from Distributors in relation to ICPs at the "new" or "ready" status for more than 24 months and what process is in place to manage and respond to such requests. I analysed the registry list of ICPs with "new" or "ready" status.

#### Audit commentary

Pioneer monitors new connection progress using paper based files, which are checked for updates regularly. A relatively small number of new connections are completed annually.

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 four ICPs had "new" or "ready" status for more than two years:

ICP	ICP created	Findings
0000505068CE5E5	4/11/2016	No application for a new connection has been received.
0000506120CEEBO	8/06/2017	These are Pioneer Energy retail customers managed by Pulse Energy, and the expected trader should be PUNZ not PION.
0000506122CEE35	8/06/2017	
0000506123CE270	8/06/2017	

I recommend that Pioneer advise Aurora Energy Limited (DUNE) of the correct proposed trader for ICPs 0000506120CEEBO, 0000506122CEE35 and 0000506123CE270.



Description	Recommendation	Audited party comment	Remedial action
ICPs with incorrect proposed trader recorded	Advise Aurora Energy Limited (DUNE) of the correct proposed trader for ICPs 0000506120CEEBO, 0000506122CEE35 and 0000506123CE270.	Aurora will be advised before end of Jan2020	Identified

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 17 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. Transfer switches were incorrectly requested for ICPs 0000021975CEB84, 0000508488CE97E, and 0004557770TC6E7 because the customer had confirmed that they were moving into the address. The other NT file checked contained the correct switch type.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.1 With: Clause 2 Schedule 11.3  From: 4-Jul-19 To: 20-Nov-19	Transfer switches were requested for ICPs 0000021975CEB84, 0000508488CE97E, and 0004557770TC6E7 when the customer had confirmed that they were moving into the address.  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, because detailed information on the switch type to be applied is not consistently provided to the Customer Service and Billing Analyst, who requests the switch.  The impact is assessed to be low, because there was a minimal impact for the customer, other trader and the Authority who use the switch type in their statistics.		
Actions taken to resolve the issue		Completion date	Remedial action status
Noted		28.01.2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Better communication with the customer and account managers		28.01.2020	

#### 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 for 01/05/19 to 29/11/19 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 sample of two (or all) ANs per response code were reviewed to determine whether the codes had been correctly applied.

The switch breach 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 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.

A sample of five ANs were checked for accuracy. Two ANs had the correct response code applied and three did not:

- ICPs 0000001636DED38 and 0000492001CE38C had the “CO” contracted code applied although they were not contracted on the requested date, in both cases, the ICP appeared to be contracted on the date that the NT request was received by Orion; and
- ICP 0000030576DEC12 had the “OC” (occupied premises) code applied, but the customer had indicated that they were moving out on the requested date, the ICP appeared to be occupied on the date that the NT request was received by Orion.

Event dates set by losing trader must be no more than 10 business days after receipt of an NT file. Over a 12-month period 50% of event dates must be within five business days.

The event detail report was reviewed for all 88 transfer ANs to assess compliance with the setting of event dates requirements. All ANs had proposed event dates within five business days of the NT receipt date.

The switch breach report is monitored daily to identify ICPs which require AN files. The switch breach report confirmed all transfer AN files were sent within the allowable timeframes.

### Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.2 With: Clauses 3 and 4 Schedule 11.3  From: 19-Jul-19 To: 10-Oct-19	The “CO” AN response code was incorrectly applied for 0000001636DED38 and 0000492001CE38C.  The “OC” AN response code was incorrectly applied for 0000030576DEC12.  Potential impact: Low  Actual impact: Low  Audit history: Once  Controls: Moderate  Breach risk rating: 2

Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are rated as strong, because both preventative and detective controls are in place for AN codes. It appears that Orion's logic bases the AN code on current values at the time the NT is received, rather than the values that apply on the requested event date. This can result in incorrect AN response codes being applied where a customer is about to move out, or a contract is about to expire.</p> <p>The manual monitoring controls did not operate as intended because new staff were undergoing training. Now that training is complete controls are expected to be strong.</p> <p>The impact is assessed to be low, because the switches were completed as expected.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Staff learning and aware and will need to double check this		28.01.2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Checked at time of sending file		28.01.2020	

#### 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 for 01/05/19 to 29/11/19 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 five 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. All 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 one late CS file for a transfer switch, which was not a genuine breach.

##### CS content

CS files are produced directly from Orion after being manually triggered, using reading and meter information stored in Orion. CS 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 a reading or last actual read date, it is manually edited before being transferred to the registry SFTP.

The Registry Functional Specification v22.21 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:

Estimated daily kWh	Count of transfer CS files	Findings
Negative	-	Compliant.
Zero	3	All three CS files were checked. Two were consistent with the last read to read period daily average consumption, but one was not. The difference was +8 kWh.
More than 200 kWh	6	All six CS files were checked, and found not to be consistent with the last read to read period daily average consumption. The differences ranged from -1100 kWh to +89 kWh.

The content of a sample of five transfer CS files were checked, focussing on CS files where there were inconsistencies between the event read type recorded and last actual read date.

I found the following files contained errors, which were caused by the average daily consumption not being based on the consumption for the last read to read period, and files being manually edited by new staff who were undergoing training and had misunderstood how switch event dates, last actual read dates and read types were applied. In particular it was thought that the CS reading should be on the event date, instead of on Pioneer's last day of responsibility. Further training has been provided, and these issues are not expected to recur.

ICP	Event date	Correct read	Correct read type	Correct last actual read date	Correct average daily kWh
0000001152ED6CA	14/06/19	Yes	No Estimate was applied, but the read was an actual	Yes	No
0000509672CE05F	4/11/19	No Relates to 4/11/19 not 3/11/19, should have been estimated	No The event reading is not at actual read on the last day of supply	No Should be 31/10/19	No
0000952022LNE7C	1/11/19	No Relates to 1/11/19 not 31/10/19, the difference is +7 kWh	No The event reading is not at actual read on the last day of supply	No Should be 31/10/19	No
0000483126CE356	1/11/19	No Relates to 1/11/19 not 31/10/19, the difference is +39 kWh	No The event reading is not at actual read on the last day of supply	No Should be 31/10/19	No
0000501597CE9A9	1/11/19	No Relates to 1/11/19 not 31/10/19, the difference is +3 kWh	No The event reading is not at actual read on the last day of supply	No Should be 31/10/19	Yes

When reviewing transfer AC files in **section 4.4**, I found a further two CS files with incorrect read information:

ICP and event date	Agreed CS event read	Orion closing read and type	kWh difference	Comment
0000483126CE356 01/11/19	88825 (A)	88786 (A)	39	An incorrect read had been provided in the CS file. The read recorded in Orion was applied for reconciliation.
0000500468CEEC4 01/11/19	21314 (A)	21298 (E)	16	An incorrect read had been provided in the CS file (21314 A) which related to 1/11/19 not 31/10/19. The read recorded in Orion was applied for reconciliation.

#### Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 4.3</p> <p>With: Clause 5 Schedule 11.3</p> <p>From: 09-May-19</p> <p>To: 04-Nov-19</p>	<p>At least 12 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.</p> <p>Eight transfer CS files contained some incorrect read, read type and/or last actual read information.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Three times</p> <p>Controls: Weak</p> <p>Breach risk rating: 3</p>		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	<p>Controls are rated as weak, because the process does not ensure that estimated daily kWh relates to previous read to read period, and that CS content was consistently correct.</p> <p>The audit risk rating is low because the average daily kWh information provided reflects the EDC on the meters tab at the time the switch was completed. Further training has been provided and the incorrect data caused by manual edits of the CS files is unlikely to recur. The event read differences are small.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
File checked at time of submitting		28.01.2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Ongoing staff training		28.01.2020	

#### 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 for 01/05/19 to 29/11/19 was analysed to identify all read change requests and acknowledgements during the audit period. No RRs were issued by Pioneer for transfer switches. A sample of ten AC files issued for transfer switches were checked to confirm 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 report for the audit period was reviewed.

#### Audit commentary

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  $\pm 200$  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.

Pioneer issued 12 AC files for transfer switches. Six files were rejected and six files were accepted. Two of the rejected files were accepted on reissue; one with the same readings and one with different readings. A sample of ten AC files were checked, to confirm that Orion reflected the outcome of the RR process, and that any rejected files were validly rejected.

I found the following exceptions:

ICP and event date	AC outcome	Agreed switch event read and type	Orion switch event read and type	kWh difference	Comment
0000001074ED314 19/07/19	A	40276 (A)	40276 (E)	-	An incorrect read type was applied.
0000483126CE356 01/11/19	R	88825 (A)	88786 (A)	39	The file was rejected because Orion matched the AMI readings. The CS file had been manually amended and did not match Orion. This is recorded as non-compliance in <b>section 4.3</b> .

ICP and event date	AC outcome	Agreed switch event read and type	Orion switch event read and type	kWh difference	Comment
0000500468CEEC4 01/11/19	R	21314 (A)	21298 (E)	16	The file was rejected because Orion matched the AMI readings. The CS file had been manually amended and did not match Orion. This is recorded as non-compliance in <b>section 4.3</b> .
0000508237CE214 04/11/19	R	789 (A) 366 (A)	714 (A) 342 (A)	99	The file was rejected, but the CS reading was not applied in Orion.
0000509672CE05F 04/11/19	R	714 (A) 342 (A)	789 (A) 340 (A)	-73	The file was rejected, but the CS reading was not applied in Orion.

No transfer CS files with estimated reads where no RR was issued were identified.

Pioneer uses the switch breach report to identify files when AC files are due, and aims to process all files as soon as possible. The switch breach report did not record any late RR or AC files for transfer switches.

#### Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 4.4</p> <p>With: Clause 6(1) and 6A Schedule 11.3</p> <p>From: 19-Jul-19</p> <p>To: 04-Nov-19</p>	<p>For ICP 0000001074ED314 an incorrect read type was applied in Orion. Estimate was used instead of actual.</p> <p>For ICPs 0000483126CE356 and 0000500468CEEC4. RR files issued by other traders were invalidly rejected. This occurred because the read in the original CS file had been amended and did not match Orion.</p> <p>For ICPs 0000508237CE214 and 0000509672CE05F Orion did not reflect the outcome of the RR process.</p> <p>Potential impact: Low</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
<b>Low</b>	<p>Controls are rated as moderate, because they are adequate but temporarily did not operate as intended while new staff were in training.</p> <p>The audit risk rating is low because further training has been provided and the incorrect data caused by manual edits of the CS files or incorrectly processed RR files are unlikely to recur. The event read differences are small.</p>

Actions taken to resolve the issue	Completion date	Remedial action status
Now corrected as we are now aware of the read validation process	28.01.2020	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
Training given on definition of an 'actual' read	28.01.2020	

#### 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 for the period from 01/05/19 to 29/11/19 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 any read change requests where clause 6(2) and (3) of schedule 11.3 applied.

Review of the event detail report found four RR files were issued to Pioneer within five business days of switch completion, by traders using a half hour profile. Of those, one was accepted and three were validly rejected because the ICPs switched out on actual readings.

##### 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 72 switch move 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, and the correct switch type was selected.

### Audit outcome

Compliant

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

##### Code reference

*Clause 10(1) Schedule 11.3*

##### Code related audit information

*10(1) Within 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:*
  - o *confirmation of the switch event date; and*
  - o *a valid switch response code; and*
  - o *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—*
  - o *is not earlier than the gaining trader's proposed event date, and*
  - o *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 for 01/05/19 to 29/11/19 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 sample of two (or all) ANs per response code were reviewed to determine whether the codes had been correctly applied.

The switch breach 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 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.

A sample of four ANs were checked for accuracy, and contained the correct AN response codes.

The event detail report was reviewed for all 172 switch move ANs to assess compliance with the setting of event dates requirements:

- all had proposed event dates within ten business days of NT receipt; and
- no AN proposed event dates were before the gaining trader's proposed event date.

The switch breach report was reviewed to determine whether switch move AN and CS files were issued on time. Two late AN files and eight late CS files were recorded for switch moves, but only one late CS was a genuine breach. The delay was caused by a change of staff, and a new staff member in training.

##### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.8 With: Clauses 10(1) Schedule 11.3  From: 12-Sep-19 To: 20-Sep-19	One late MI CS file. Potential impact: Low Actual impact: Low Audit history: Twice Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are rated as strong. The manual controls did not operate as intended because new staff were undergoing training. Now that training is complete controls are expected to be strong. The impact is assessed to be low, because the file was one business day late.		
Actions taken to resolve the issue		Completion date	Remedial action status
Training up to date		28.01.2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
More experience now in process		28.01.2020	

#### 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

An event detail report for 01/05/19 to 29/11/19 was reviewed to identify AN files issued by Pioneer during the audit period, and assess compliance with the setting of event dates requirements.

##### Audit commentary

Analysis found all 172 switch move ANs had a valid switch response code and compliant proposed event dates. No ANs had proposed event dates earlier than the gaining trader's proposed 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 for 01/05/19 to 29/11/19 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 five records. The content checked included:

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

CS files with average daily kWh that was negative, zero, or over 200 kWh were identified. All 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 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 a reading or last actual read date, it is manually edited before being transferred to the registry SFTP.

The Registry Functional Specification v22.21 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:

Estimated daily kWh	Count of switch move CS files	Findings
Negative	-	
Zero	2	Both CS files were checked, and found to be consistent with the last read to read period daily average consumption.

Estimated daily kWh	Count of switch move CS files	Findings
More than 200 kWh	6	All six CS files were checked, and found not to be consistent with the last read to read period daily average consumption. The differences ranged from -177 kWh to +50kWh.

The content of a sample of five switch move CS files were checked, focussing on CS files where there were inconsistencies between the event read type recorded and last actual read date.

I found the following files contained errors, which were caused by the average daily consumption not being based on the consumption for the last read to read period, and files being manually edited by new staff who were undergoing training and had misunderstood how switch event dates, last actual read dates and read types were applied. Further training has been provided, and these issues are not expected to recur.

ICP	Event date	Correct read	Correct read type	Correct last actual read date	Correct average daily kWh
0000001078ED00A	13/06/19	Yes	Yes	No Should be 31/5/19	No
0006313825ALF99	03/05/19	Yes	Yes	No Should be 02/05/19	No
0000502658CE07B	21/06/19	Yes	Yes	Yes	No
0007118060RN7A0	14/10/19	No Relates to 15/10/19 not 14/10/19, should have been estimated	No The event reading is not at actual read on the last day of supply	No Should be 30/09/19	No

31 switch move CS files only had a CSPREMISES line provided to the registry, when CSMETERCHANNEL, CSMETERCOMP and CSMETERINSTALL were also expected. All of the affected ICPs had the HHR flag set to "Y", and I note that HH switches are normally completed with a CSPREMISES line only if the HH switch type is applied. A full list of the 31 switches was provided to Pioneer, and I recommend these are investigated to determine why only a CSPREMISES line was provided.

Description	Recommendation	Audited party comment	Remedial action
Switch move CS files with missing lines	Investigate to determine why CSMETERCHANNEL, CSMETERCOMP and CSMETERINSTALL lines were missing for 31 switch moves.	Technically a HH switch (C&I TOU site) but unable to switch as HH because the meter category is lower than 3.  Registry allowed for the switch. Grey area.	Investigating



## Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 4.10</p> <p>With: Clause 11 Schedule 11.3</p> <p>From: 09-May-19</p> <p>To: 01-Nov-19</p>	<p>At least ten 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.</p> <p>Three CS files contained some incorrect read, read type and/or last actual read information.</p> <p>31 switch move CS files did not have CSMETERCHANNEL, CSMETERCOMP and CSMETERINSTALL lines supplied.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: None</p> <p>Controls: Weak</p> <p>Breach risk rating: 3</p>		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	<p>Controls are rated as weak, because the process does not ensure that estimated daily kWh relates to previous read to read period, and that CS content was consistently correct.</p> <p>The audit risk rating is low because the average daily kWh information provided reflects the EDC on the meters tab at the time the switch was completed. Further training has been provided and the incorrect data caused by manual edits of the CS files is unlikely to recur. The missing CS lines will be investigated.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Noted		28.01.2020	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
N/a as we believe it is correct. The Registry should have rejected the files if they were not the correct format		28.01.2020	

## 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 disputes 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 event detail report for 01/05/19 to 29/11/19 was analysed to identify all read change requests and acknowledgements during the audit period. All RR files issued by Pioneer, a sample of five accepted and all rejected AC files issued by Pioneer were checked.

I also checked all 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 report for the audit period was reviewed.

#### Audit commentary

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  $\pm 200$  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. Two were accepted and one was rejected, and in all cases there was a genuine reason for the RR to be issued, and Orion reflected the correct outcome of the RR process. The RRs for ICPs 0110135020AP9D1 and 0000504770CE3FE used unvalidated customer reads as supporting readings, and a RR read type of "A" was incorrectly applied because a customer reading was received on the switch event date. Unless a customer reading has been validated by two actual readings from another source, it should not be treated as an actual read in the RR process.

A sample of five accepted and all rejected AC files issued by Pioneer were checked. Orion is manually updated to reflect the outcome of the RR process. I found the following exception:

ICP and event date	AC outcome	Agreed switch event read and type	Orion switch event read and type	kWh difference	Comment
0000043162DE3ED 11/07/19	A	455465 (A) 694 (A)	455465 (E) 694 (E)	-	An incorrect read type was applied, but there is no impact on reconciliation because switch reads are treated as permanent estimates.

Five switch move CS files with estimated reads where no RR was issued were reviewed to determine whether the correct readings were applied in Orion.

- Four switch moves had the agreed switch reading applied.
- ICP 0000491652CE3A2 did not have the agreed switch readings applied. 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. Non-compliance is recorded because the losing trader was not informed so that they could apply the same reading.

The switch breach report did not record any late RR or AC files for switch moves.

#### Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 4.11</p> <p>With: Clause 12 Schedule 11.3</p> <p>From: 05-Jun-19</p> <p>To: 14-Nov-19</p>	<p>The RRs for ICPs 0110135020AP9D1 and 0000504770CE3FE used unvalidated customer reads as supporting readings, and a RR read type of "A" was incorrectly applied because a customer reading was received on the switch event date.</p> <p>ICP 0000491652CE3A2 did not have the agreed switch reading applied in Orion, because the difference was less than 50 kWh and Pioneer elected to use their own AMI read without informing the losing trader.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: None</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>
Audit risk rating	Rationale for audit risk rating
<b>Low</b>	<p>Controls are rated as moderate, because they are adequate but temporarily did not operate as intended while new staff were in training.</p> <p>The audit risk rating is low:</p> <ul style="list-style-type: none"> <li>• for ICPs 0110135020AP9D1 and 0000504770CE3FE Orion reflected the correct outcome of the RR process and it is likely that the customer provided reads will be accurate; and</li> <li>• for ICP 0000491652CE3A2 the difference between the agreed and applied readings is less than 50 kWh.</li> </ul>

Actions taken to resolve the issue	Completion date	Remedial action status
Process updated and staff trained	28.01.2020	Identified
<b>Preventative actions taken to ensure no further issues will occur</b>	<b>Completion date</b>	
Process rolled out to all staff	28.01.2020	

#### 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. A typical sample of five HH NTs were checked to confirm whether they were notified to the registry within three business days.

HH NTs on the event detail report were matched to the metering information on the meter event details report to confirm whether the correct switch type was selected.

#### 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 one HH NT, which had metering category 3. The correct switch type was selected and the NT was issued on time.

Review of all switch move and transfer NTs confirmed that none 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 3 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 for 01/05/19 to 29/11/19 was analysed to:

- identify AN files issued by Pioneer during the audit period;
- all AN response codes were reviewed to determine whether they had been correctly applied; and
- assess compliance with the timeliness requirements.

The switch breach report was examined.

#### 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 event detail report was reviewed for all 30 HH ANs to determine the accuracy of AN codes applied. I found that ICPs 0000031509NTBB6, 0007033591RNCB6, and 0007125325RN045 invalidly had the "CO" (contracted) AN response code applied. These ICPs were contracted on the day that the NT was received, but were not contracted on the NT requested event date. Orion had applied the "CO" code in error, and the issue was not detected during the manual review because new staff had recently taken responsibility. There was no impact, the switch was completed as requested.

The switch breach report is monitored daily to identify ICPs which require AN files. The switch breach report recorded one HH AN file which was issued three business days late. The delay was caused by a change of staff, and a new staff member in training.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.13  With: Clause 15 Schedule 11.3  From: 9-Sep-19  To: 25-Sep-19	One late HH AN file.  Three HH AN files had an incorrect AN response code applied.  Potential impact: Low  Actual impact: Low  Audit history: None  Controls: Strong  Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are rated as strong because both preventative and detective controls are in place for AN codes. In both instances the manual controls did not operate as intended because new staff were undergoing training. Now that training is complete controls are expected to be strong.  The impact is assessed to be low: <ul style="list-style-type: none"><li>the incorrect AN codes had no impact, because the switches were completed as requested; and</li><li>the late AN file delayed the CS file by three business days, but because the switch was completed by 10/09/19 there was no impact on reconciliation submissions, and minimal impact on the other retailer and customer.</li></ul>		
Actions taken to resolve the issue		Completion date	Remedial action status
Aware of the issue and noted		28.01.2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Noted and aware		28.01.2020	

#### 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 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, it is manually edited before being transferred to the registry SFTP.

One CS file was issued during the audit period, and the content was confirmed to be accurate.

The switch breach report recorded a late CS file for ICP 0007138881RN89F. The switch was triggered in Orion and Orion's switching interface indicated that the file had been sent, but the file was rejected by the registry. The issue was found when staff noticed that the registry appeared to be awaiting a switch file although the switch appeared complete in Orion. Monitoring controls have been implemented to prevent recurrence, with registry acknowledgement and switch breach reports reviewed daily.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.14 With: Clause 16 Schedule 11.3  From: 9-Sep-19 To: 25-Sep-19	One late HH CS file. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are rated as strong because both preventative and detective controls are in place for AN codes. The late file occurred because registry acknowledgement files were not reviewed at the time.  The impact is assessed to be low; the switch was completed within 35 business days. Submission information was corrected through the revision process once the switch was complete.		
Actions taken to resolve the issue		Completion date	Remedial action status
Aware of the issue and noted		28.01.2020	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
Noted	28.01.2020	

#### 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 for 01/05/19 to 29/11/19 was reviewed to:

- identify all switch withdrawal requests issued by Pioneer, the content of a sample of at least two ICPs from the event detail report for each withdrawal code (or all if less than two were available) were checked using the typical sampling methodology, including four withdrawal requests rejected by other traders;
- identify all switch withdrawal acknowledgements issued by Pioneer, all rejections were checked; and
- confirm timeliness of switch withdrawal requests, as this is not currently being identified in the switch breach report.

The switch breach reports were checked for any late switch withdrawal requests or acknowledgements.

##### Audit commentary

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 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 the NW advisory code, it is manually edited before being transferred to the registry SFTP.

None of the 20 NWs were issued more than 60 business days after the event date. A diverse sample of 11 NWs were checked, including all response codes applied. The NW content was confirmed to be correct.

Five (25%) of the 20 AWs issued by Pioneer were rejections, relating to three ICPs. I reviewed all rejections by Pioneer, four files were validly rejected based on the information available at the time the response was issued. The NW for ICP 0000650410WPE9F was rejected in error, and the withdrawal was not re-issued by the other trader and the switch completed.

The switch breach report recorded three late NWs, which were not genuine breaches.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.15 With: Clause 17 and 18 Schedule 11.3  From: 11-Nov-19 To: 11-Nov-19	The NW for ICP 0000650410WPE9F was rejected in error. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are rated as strong; this appears to be an isolated exception which occurred due to a data processing error. There is no impact, the switch was completed and the NW was not reissued.		
Actions taken to resolve the issue		Completion date	Remedial action status
Followed up with gaining retailer and corrected		28.01.2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Following the process and checking with the customer		28.01.2020	

#### 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 standard 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.

In some cases, the switch event reading applied in the CS file was not the actual reading on the switch event date:

ICP	Event date	Commentary	File type
0000509672CE05F	4/11/19	Read relates to 4/11/19 not 3/11/19, should be estimated.	TR CS
0000952022LNE7C	1/11/19	Read relates to 1/11/19 not 31/10/19, the difference is +7 kWh.	TR CS
0000483126CE356	1/11/19	Read relates to 1/11/19 not 31/10/19, the difference is +39 kWh.	TR CS
0000501597CE9A9	1/11/19	Read relates to 1/11/19 not 31/10/19, the difference is +3 kWh.	TR CS
0000483126CE356	01/11/19	Read relates to 1/11/19 not 31/10/19, the difference is +39 kWh.	TR CS
0000500468CEEC4	01/11/19	Read relates to 1/11/19 not 31/10/19, the difference is +16 kWh.	TR CS
0007118060RN7A0	14/10/19	Read relates to 15/10/19 not 14/10/19, should be estimated.	MI CS

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

#### Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 4.16</p> <p>With: Clause 21 Schedule 11.3</p> <p>From: 14-Oct-19</p> <p>To: 14-Nov-19</p>	<p>For seven CS files issued by Pioneer, switch event reads did not reflect the actual reading or best estimate of an actual reading on the event date.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: None</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, because this was a temporary issue over a short period where monitoring controls were not operating as intended. Further training has been provided and this issue is not expected to recur.</p> <p>The audit risk rating is low. Further training has been provided and the incorrect data caused by manual edits of the CS files is unlikely to recur.</p>	
Actions taken to resolve the issue		Completion date
Now aware		28.01.2020
Preventative actions taken to ensure no further issues will occur		Completion date
Manual checking between Orion and CS file and also the database (Billing Dashboard)		28.01.2020
		Remedial action status
		Identified

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

##### Code reference

Clause 11.15AA to 11.15AB

##### Code related audit information

*A trader that buys electricity from the clearing manager may elect to have a switch saving protection by giving notice to the Authority in writing.*

*If a protected trader enters into an arrangement with a customer of another trader (the losing trader), or a trader enters into an arrangement with a customer of a protected trader, to commence trading electricity with the customer, the losing trader must not, by any means, initiate contact with the customer to attempt to persuade the customer to terminate the arrangement during the period from the receipt of the NT to the event date of the switch including by:*

*11.15AB(4)(a)- making a counter offer to the customer; or*

*11.15AB(4)(b)- offering an enticement to the customer.*

##### Audit observation

The Electricity Registry switch save protected retailer list was examined.

Win-back processes were discussed. The event detail report for 01/05/19 to 29/11/19 was analysed to identify all withdrawn switches with a CX code applied prior to the switch completion date for any switch save protected retailer.

##### Audit commentary

Pioneer is not a switch save protected retailer and does not complete win-backs.

The event detail report identified five NWs with the CX (customer cancellation) withdrawal reason code; all were requested after the switch was completed.

##### 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 process to identify and monitor unmetered load was discussed. The registry list file as at 29/11/19 and AC020 trader compliance report for 01/05/19 to 29/11/19 were examined to identify any ICPs with shared unmetered load.

#### 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 trader compliance report for 01/05/19 to 29/11/19 was examined to identify all unmetered load over 3,000 kWh per annum.

### Audit commentary

Pioneer supplies 27 ICPs with unmetered load indicated.

- 20 ICPs have unmetered load under 3,000 kWh per annum.
- ICP 0000075272CE0B4 (Pioneer Generation Marslin Dam) has unmetered load of 4,584.4 kWh per annum. The distributor has listed the load description as valves, and Pioneer believes the load is a light and radio which use electricity at all times. I recommend that Pioneer confirms the load, load type, and whether it is predictable and of a type approved by the Authority. If the load is not of an approved type, the ICP should be metered.

Description	Recommendation	Audited party comment	Remedial action
Unmetered load over 3,000 kWh per annum	Determine the wattage and type of unmetered load connected to ICP 0000075272CE0B4 and whether it is predictable and of a type approved by the Authority.  If the load is not an approved type, it is required to be metered.	Still under investigation. Will meter if required.	Investigating

- six ICPs have distributed unmetered load and are discussed in **section 5.4**.

### 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:*
  - *the date the limit was calculated or estimated to have been exceeded*

- *the details of the corrective measures that the retailer proposes to take or is taking to reduce the unmetered load.*

#### **Audit observation**

The AC020 trader compliance report for 01/05/19 to 29/11/19 was examined to identify all unmetered load over 6,000 kWh per annum.

#### **Audit commentary**

All ICPs with unmetered kWh over 6000 kWh per annum have DUML databases and are discussed in **section 5.4**.

#### **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 six ICPs with distributed unmetered load, recorded in two databases including 0000950092WP92B which does not appear on the DUML register. Both databases were audited by Veritek.

#### **Audit commentary**

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.

Currently Pioneer use a snapshot of a DUML database taken at the end of each month to derive submission. The use of a database snapshot to derive submission is recorded as non-compliance below.

Under the new audit DUML audit regime it is no longer possible to calculate an overall submission impact for the database inaccuracies found as the factors are not cumulative.

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

The DUML audit results are set out in the table below.

			Compliance Achieved (Yes/No)								
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	Under review	Yes	No	No	No	No	No	Yes	Yes	No	No
Gore DC	08/03/20	Yes	No	Yes	No	Yes	No	Yes	Yes	No	No

## Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 5.4</p> <p>With: Clause 11 Schedule 15.3, Clause 15.37B &amp; 16A.26</p> <p>From: 01-May-19</p> <p>To: 10-Jan-20</p>	<p>The Grey and Gore DC DUMML databases are not accurate.</p> <p>Potential impact: Medium</p> <p>Actual impact: Unknown</p> <p>Audit history: Once</p> <p>Controls: Moderate</p> <p>Breach risk rating: 4</p>		
Audit risk rating	Rationale for audit risk rating		
<b>Medium</b>	<p>The effectiveness of the controls is recorded as moderate as Pioneer are working to resolve the issues found.</p> <p>The impact on settlement is medium because submission information is based on databases which contain some inaccurate information.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Audit date to be confirmed and will be in Feb.		TBC	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
From audit we will look at non-compliance issues and remedy.		28.01.2020	



## 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

The registry list file as at 29/11/19, AC020 trader compliance report for 01/05/19 to 29/11/19, and meter event details reports were reviewed to determine compliance.

Processes for distributed generation were reviewed.

#### 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.

Load for ICP 1002050361LC60D connected on 30/09/18 is still determined by subtraction. EMS has continued to follow a documented process to ensure that consumption is correctly reported until the ICP can be decommissioned and a new ICP is created.

##### **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 23 active ICPs with distributed generation recorded by the distributor. Review of the AC020 report confirmed that there were four ICPs with generation recorded by the distributor where Pioneer did not record a generation profile.

- ICP 0000654465WP00D's generation is not connected to the network, and is not required to have generation consumption submitted.

- ICPs 0000033279CE035, 0000101696DE14B, and 0000500005CE26E were confirmed to have distributed generation, and metered injection volumes were submitted against the PV1 profile for reconciliation. The profile is incorrectly recorded as RPS only on the registry.

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

### Bridged meters

No bridged meters were identified during the audit period.

### Audit outcome

Compliant

Non-compliance	Description		
Audit Ref: 6.1 With: Clause 10.13 and Clause 15.13  From: 30-Sep-18 To: 10-Jan-20	Load for ICP 1002050361LC60D is determined by subtraction. ICPs 0000033279CE035, 0000101696DE14B, and 0000500005CE26E have submission against the RPS and PV1 profiles, but only RPS profile is recorded on the registry. Potential impact: Low Actual impact: Low Audit history: Once Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Incorrect design of the metering installation for ICP 1002050361LC60D would result in double submission of volumes, and Pioneer has implemented corrective controls to adjust the data prior to submission so that there is no impact on settlement. Until the MEP resolves the issue, Pioneer's process remains non-compliant but submitted volumes are correct.  The incorrect profiles on the registry have no impact on settlement.		
Actions taken to resolve the issue		Completion date	Remedial action status
Working with ADHB to remedy metering onsite		Ongoing	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
As above		Ongoing	

## 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 file as at 29/11/19 and AC020 trader compliance report for 01/05/19 to 29/11/19 were reviewed to determine compliance.

#### **Audit commentary**

Pioneer has only used the DFP, 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.

Pioneer provided one example of a defective NHH meter. It was reviewed to determine whether the MEP was advised and if appropriate action was taken.

Reporting of defective metering installations was reviewed as part of the EMS and AMS audits. Information on inaccurate or defective meters since May 2019 was requested from EMS.

### 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 to investigate.

One example of a defective NHH meter was provided, and the process was walked through. The MEP was notified of the fault by Pioneer.

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 to investigate and resolve the defect. No defective HHR meters have been identified since May 2019.

### 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. Examples of clock synchronisation events outside acceptable thresholds were requested.

##### **NHH and AMI**

Pioneer receives meter readings from AMS (for Arc and AMS meters), Metrix, and FCLM as MEPs, and Wells as an agent.

I reviewed the method to receive meter reading data from each MEP and agent. I traced a diverse sample of readings for 16 ICPs from the source files to Orion.

Clock synchronisation processes for agents and MEPs were reviewed as part of their agent and MEP audits. Agents are 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 since May 2019.

##### **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.

I traced a sample of readings for 16 NHH ICPs from the source files to Orion, and confirmed that the readings, read dates and read types were recorded correctly.

Wells' data collection processes were reviewed as part of their agent audit in June 2019 and found to be compliant. I confirmed with Wells that there were no changes to their processes or systems since their June 2019 audit that could have a negative impact on Pioneer's compliance.

MEPs advise Pioneer of clock synchronisation events, 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 (Clause 3(1), 3(2) and 5 Schedule 15.2)

### Code reference

*Clause 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' June 2019 audit report. I confirmed with Wells that there were no changes to their processes or systems since their June 2019 audit that could have a negative impact on Pioneer's compliance.

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 and provides information on meter condition along with the daily reads, and monthly summary report containing missing seal and broken seal events.

Any emails or phone calls from Wells regarding meter condition issues are actioned. Meter condition and no read information supplied by Wells is imported into Orion, this information is only reviewed where a read attainment issue has occurred.

Compliance is recorded because Wells is completing the required checks, and I confirmed that the only "meter condition issue" (a meter number difference where a meter change had occurred) was resolved. I recommend that Pioneer reviews the meter condition information provided by Wells and resolves any issues that are identified.

Description	Recommendation	Audited party comment	Remedial action
Review of meter condition information provided by Wells	Review all meter condition information provided by Wells, and investigate and resolve any issues identified.	Process in place to read the notes	Identified

I checked a sample of ten readings provided by Wells and confirmed that they are loaded into Orion as actual readings, and are validated.

### Customer readings

Customer provided readings are recorded as customer readings in Orion. Customer readings are not treated as actual by the reconciliation process, but are sometimes used to support RR files, and this is recorded as non-compliance in **section 4.10**.

I checked two examples of customer readings and found that they were correctly recorded with read type "customer". The historic estimate checks in **section 12.11** confirmed that customer reads are ignored by the historic estimate calculation process.

### Photo readings

Photo readings are consistently entered as actual readings, including where they are not validated against a set of actual readings from another source. Review of historic estimate calculations in **section 12.11** found that an unvalidated customer photo read for 0000489139CE865 on 30/10/19 was entered as actual. This is recorded as non-compliance below, and in **sections 9.1** and **12.7**.

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. No examples of this were available during the audit period.

Description	Recommendation	Audited party comment	Remedial action
Treatment of customer and photo readings	<p>Treat customer and photo readings as actual readings only if they have been validated against a set of readings from another source.</p> <p>Unvalidated customer and customer photo readings should be entered with the "customer" read type.</p>	All reads when entered, if they are not acceptable tolerance go into exemption reporting where they are manually checked with previous reads to see if they 'make sense'. Even though we have been entering photo reads as actuals we believe they are been correctly validated as per the process mentioned. We are now aware of the extra validation process needed.	Identified

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 6.6 With: Clause 3(1), 3(2) and 5 Schedule 15.2  From: 01-May-19 To: 30-Oct-19	Photo readings are consistently entered as actual readings, including where they are not validated against a set of actual readings from another source. An unvalidated customer reading was entered with an actual read type for ICP 0000489139CE865 on 30/10/19.  Potential impact: Low Actual impact: Low Audit history: None Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as weak, because customer photo readings have consistently been treated as actual readings regardless of whether they were validated. The audit risk rating is low. The incorrectly classified photo reading could have a minor impact on submission if it was found to be incorrect.		
Actions taken to resolve the issue		Completion date	Remedial action status
Now aware		28.01.2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
All staff trained		28.01.2020	

## 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**. In some cases CS files have been modified to include the event reading which applied at 11.59pm on the switch event date, instead of 11.59pm on Pioneer's last day of responsibility. The affected ICPs are: 0000509672CE05F (04/11/19 TR CS), 0000952022LNE7C (01/11/19 TR CS), 0000483126CE356 (01/11/19 TR CS), 0000501597CE9A9 (01/11/19 TR CS), 0000483126CE356 (01/11/19 TR CS), 0000500468CEEC4 (01/11/19 TR CS), and 0007118060RN7A0 (14/10/19 SM CS). The incorrect editing of the event readings was a temporary issue, and is not expected to recur.

I walked through the process for NHH to HHR and HHR to NHH meter changes, including viewing examples. The industry has adopted a process that achieves accuracy in relation to submission information and ICP days, but compliance with this clause is not achieved.

- For upgrades, the process is to "remove" the NHH meter from the registry and Orion on the day before the meter change, and then the ICP becomes HHR all day on the day of the meter change, with the trading periods up until the meter change being populated with zeros.
- The reverse applies for a downgrades, with the ICP treated as HHR all day on the date of the removal, with zeros populated until the end of the day and the NHH meter installed the following day.

Both a NHH and HHR meter cannot be "present" on the same day in the registry. This is raised as non-compliance because the NHH read is not applied to 24.00 on the day of the read.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 6.7 With: Clause 6 Schedule 15.2  From: 09-May-19 To: 01-Nov-19	Some switch event readings did not relate to 11.59pm on Pioneer's last day of responsibility. NHH meter readings applied to the end of the day before the meter change for NHH to HHR changes. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement. The impact on settlement and participants is minor, therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Working with Agility to see if we can change Orion to reflect this		TBC	Investigating

Preventative actions taken to ensure no further issues will occur	Completion date	
Nil at present	28.01.2020	

#### 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 reviewed, including viewing reports used in the process and Promapp documentation.

Reporting on ICPs not read during the period of supply was examined.

##### Audit commentary

A validated meter reading must be obtained in respect of every meter register for every NHH metered ICP for which the participant is responsible, at least once during the period of supply to the ICP by the reconciliation participant, unless exceptional circumstances prevent this from occurring. This may be a validated meter reading at the time the ICP is switched to, or from, the reconciliation participant.

The NHH meter reading frequency guidelines published by the Electricity Authority define “Exceptional circumstances” as meaning “circumstances in which access to the relevant meter is not achieved despite the reconciliation participant’s best endeavours”. “Best endeavours” is defined as:

“Where a reconciliation participant failed to interrogate an ICP as a result of access issues, the reconciliation participant had made a minimum of three attempts to contact the customer, by using at least two methods of communication”.

The process for missed reads was examined. The Billing Dashboard shows “overdue meters” which are unread for four months or more, and “due meters” which are unread for three months or more. The dashboard results are exported to a spreadsheet monthly. The spreadsheet is reviewed by looking up to the previous month’s spreadsheet notes, then working through the exceptions and updating the notes with any action taken and follow up required. Each issue is considered on a case by case basis, and customer call notes and Wells notes are taken into account if present. Typically the Customer Service and Billing Analyst will attempt to contact the customer to resolve any issues preventing readings from being obtained.

Because Pioneer had believed it was acceptable to treat customer photo readings as actual readings, customer photos would sometimes be requested from customers to resolve read attainment issues. Photo readings are consistently entered as actual readings, including where they are not validated against a set of actual readings from another source. Review of historic estimate calculations in **section**

**12.11** found that an unvalidated customer photo read for 0000489139CE865 on 30/10/19 was entered as actual. This is recorded as non-compliance in **sections 6.6, 9.1 and 12.7**.

Pioneer provided reporting on ICPs not read during the period of supply, where the period of supply ended between 01/01/19 and 31/10/19. Review of the report confirmed that all meters were read at least once during the period of supply where the period of supply ended during the audit period.

#### Audit outcome

Compliant

### 6.9. NHH meters interrogated annually (Clause 8(1) and (2) Schedule 15.2)

#### Code reference

*Clause 8(1) and (2) Schedule 15.2*

#### Code related audit information

*At least once every 12 months, each reconciliation participant must obtain a validated meter reading for every meter register for non half hour metered ICPs, at which the reconciliation participant trades continuously for each 12 month period.*

*If exceptional circumstances prevent a reconciliation participant from obtaining the validated meter reading, the reconciliation participant is not required to comply with clause 8(1).*

#### Audit observation

The meter reading process was examined. Monthly reports June 2019, August 2019, September 2019 and October 2019 were provided, and reviewed to determine whether they met the requirements of clauses 8 and 9 of schedule 15.2.

Unread ICPs on the NSPs where less than 100% read attainment was achieved for October 2019 were reviewed to determine whether exceptional circumstances existed.

#### Audit commentary

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
Jun-19	59	4	5	99.10%
Aug-19	62	5	6	98.95%
Sep-19	61	4	5	99.13%
Oct-19	61	6	9	99.12%

As discussed in **section 6.8**, there are processes in place to monitor read attainment, and attempt to resolve issues preventing read attainment.

I reviewed meter reading reports for June 2019, August 2019, September 2019 and October 2019, and confirmed they were submitted on time. Some of the report content was found to be incorrect:

- the 4-month values include ICPs which have been unread for three months or more as unread; and

- 12-month values include ICPs which have been unread for four months or more, there were only two genuine ICPs which were unread for 12 months or more, and I confirmed that the best endeavours requirements were met.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 6.9  With: Clause 8(1) and (2) Schedule 15.2    From: 01-Jun-19  To: 31-Oct-19	The meter reading frequency report contains some incorrect information. <ul style="list-style-type: none"><li>• The 4-month values include ICPs which have been unread for three months or more as unread.</li><li>• 12-month values include ICPs which have been unread for four months or more. There was only one genuine ICP which was unread for 12 months or more.</li></ul> Potential impact: Low  Actual impact: Low  Audit history: Twice  Controls: Weak  Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Low	Controls over the meter reading frequency report are rated as weak, because they do not ensure that the report information is accurate.  The audit risk rating is low, because the report includes additional ICPs, but no ICPs appear to be invalidly excluded.		
Actions taken to resolve the issue		Completion date	Remedial action status
Report out of Dashboard is just for chasing unread meters and is for our staff to assist them to timely meter reads. It does not correlate with the MR Frequency report sent to EA.		28.01.2020	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
Dispute breach rating score. The MR Frequency report is checked and any unread meters followed up on as per process above, EA is advised of any issues. (1 over 12 months – meter ripped out)		28.01.2020	

#### 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 June 2019, August 2019, September 2019 and October 2019 were reviewed.

Unread ICPs on the NSPs where less than 90% read attainment was achieved for June 2019, August 2019, September 2019 and October 2019 were reviewed to determine whether exceptional circumstances existed.

#### **Audit commentary**

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
Jun-19	71	2	20	98.41%
Aug-19	74	3	25	98.13%
Sep-19	75	2	22	98.37%
Oct-19	74	3	21	98.40%

As discussed in **section 6.8**, there are processes in place to monitor read attainment, and attempt to resolve issues preventing read attainment.

As described in **section 6.9**, I found some of the report content to be incorrect, and the 4-month values include ICPs which have been unread for three months or more.

I reviewed ten ICPs connected to NSPs where less than 90% of ICPs were read in the previous four months. I confirmed that for all ICPs except for 0000044886WEB7A the best endeavours requirements had been met or exceptional circumstances applied. The issue was resolved after four months without any action being taken.

#### **Audit outcome**

Compliant

Non-compliance	Description		
Audit Ref: 6.10 With: Clause 9(1) and (2) Schedule 15.2  From: 01-Jun-19 To: 31-Oct-19	ICP 0000044886WEB7A was unread for more than four months and was connected to an NSP where compliance with Clause 9(1) Schedule 15.2 was not achieved, and the best endeavours requirement was not met.  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 over read attainment are strong, because the ICP was being monitored and the requirements were met for all other ICPs checked.  The audit risk rating is low, because a read was obtained for the ICP.		
Actions taken to resolve the issue		Completion date	Remedial action status
Noted and billed as temp supply		28.01.2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Aware of process		28.01.2020	

#### 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.

I confirmed with Wells that there were no changes to their processes or systems since their June 2019 audit that could have a negative impact on Pioneer's compliance.

## 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  $\pm 0.1\%$  ( $\pm 2$  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 is recorded in Wells' June 2019 audit report. I confirmed with Wells that there were no changes to their processes or systems since their June 2019 audit that could have a negative impact on Pioneer's compliance.

Data is retained for more than 48 months. I viewed raw meter reading information from when Pioneer began processing its own reading information in November 2016.

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

Processes to record non-metering information were discussed, and non-metering information was viewed to determine whether the archiving requirements were met.

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. I viewed DUMML information from April 2017, when Pioneer began supplying DUMML ICPs and confirmed this information is appropriately archived.

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

Where errors are detected during read validation a check reading will be performed for manually read meters, or AMI readings for surrounding days will be checked in the data warehouse. If an original meter reading cannot be validated it will be made a misread, and an appropriately labelled estimated reading will be added. Misreads are excluded from billing and historic estimate processes in Orion.

#### Defective meters

One defective meter example was provided, and the process was walked through.

ICP 0000033279CE035 had a faulty meter, and the meter reader was unable to view readings on register 216603628/2. The fault was raised with the MEP who replaced the meter and provided a closing reading. The closing reading from the paperwork has been recorded in Orion, and Pioneer is working with the customer to determine whether the closing reading (which was lower than the invoice estimates) was accurate. If the readings is found to be inaccurate a correction will be 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.

#### Multiplier corrections

No incorrect multipliers were identified during the audit period, and there have been no multiplier corrections.

Multipliers are stored on the meters tab in Orion, and any corrections to this field will flow through to all reconciliation submissions for the affected meter.

### Bridged meter corrections

No bridged meters and one meter with a bridged relay were identified during the audit period. The relay for ICP 0000502539CE0CD remained bridged at the time of the audit. The network needs to fix their infrastructure before load control can be applied. No correction is required.

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. There is currently no process to apply corrections where the meter is not replaced.

Description	Recommendation	Audited party comment	Remedial action
Bridged meter corrections	Develop a correction process to add unmetered bridged consumption to reconciliation submissions where the bridged meter is not replaced.	Process to be completed. For this ICP we are getting reads off the meter.	Investigating

### Inactive ICPs with consumption

Inactive ICPs with consumption are identified through the NHH read validation process discussed in **section 9.5**.

No inactive ICPs with consumption were identified during the audit period. This appears reasonable because Pioneer currently only has 26 inactive ICPs excluding ICPs at “inactive new connection in progress status.”

### Transposed meters

Some examples of transposed meters were identified during the audit period. If a transposed meter is identified, the meter reader is informed and a correction is processed to move the readings to the correct meter register.

### Unmetered load corrections

No unmetered load corrections were identified during the audit period. The audit did find some incorrect unmetered load submission information, which is recorded as non-compliance in **sections 3.7** and **12.7**.

The daily unmetered kWh for unmetered load is recorded on the meters tab in Orion. This value is multiplied by the number of active days in the reconciliation period and included in reconciliation submissions. Any changes to the daily unmetered kWh apply to all submissions for the meter including revisions, similarly to multiplier corrections. If unmetered load is to change from a certain date, a meter change is processed in Orion.

### 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. Information on HHR corrections since May 2019 was requested from EMS.

### 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.

### 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 as at 29/11/19 was reviewed.

### Audit commentary

Pioneer supplies 121 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 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

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

#### NHH

Raw meter data is held by the MEPs and agents. Compliance was confirmed as part of their agent and MEP audits.

Pioneer only corrects working data and keeps an appropriate audit trail within Orion.

### 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.

##### Readings provided by MEPs and agents

I traced a sample of readings for 16 NHH ICPs from the source files to Orion, and confirmed that the readings, read dates, and read types were recorded correctly.

##### Customer readings

Customer provided readings are recorded as customer readings in Orion. Customer readings are not treated as actual readings by the reconciliation process, but are sometimes used to support RR files, and this is recorded as non-compliance in **section 4.10**.

##### Photo readings

Photo readings are consistently entered as actual readings, including where they are not validated against a set of actual readings from another source. Review of historic estimate calculations in **section 12.11** found that an unvalidated customer photo read for 0000489139CE865 on 30/10/19 was entered as actual. This resulted in the unvalidated customer reading being treated as an actual reading by the reconciliation process, and is recorded as non-compliance below and in **sections 6.6 and 12.7**.

##### Switch event readings

Orion creates the switch files using readings recorded on Orion's readings tab. For eight RR and CS files issued by Pioneer, switch event reads were recorded with an incorrect read type because the files were manually amended prior to being sent:

ICP	Event date	Comment	File type
0000001152ED6CA	14/06/19	Estimate was applied, but the read was an actual.	TR CS
0000509672CE05F	4/11/19	The event reading is not an actual read on the last day of supply.	TR CS
0000952022LNE7C	1/11/19	The event reading is not an actual read on the last day of supply.	TR CS
0000483126CE356	1/11/19	The event reading is not an actual read on the last day of supply.	TR CS
0000501597CE9A9	1/11/19	The event reading is not an actual read on the last day of supply.	TR CS
0007118060RN7A0	14/10/19	The event reading is not an actual read on the last day of supply.	MI CS
0110135020AP9D1	14/11/19	A RR read type of "A" was incorrectly applied because a customer reading was received on the switch event date.	MI RR
0000504770CE3FE	31/5/19	A RR read type of "A" was incorrectly applied because a customer reading was received on the switch event date.	MI RR

The files were manually edited by new staff who were undergoing training and had misunderstood how switch event dates, last actual read dates and read types were applied. Further training has been provided, and these issues are not expected to recur.

#### Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 9.1</p> <p>With: Clause 3(3)</p> <p>Schedule 15.2</p> <p>From: 14-Jun-19</p> <p>To: 14-Nov-19</p>	<p>For eight RR and CS files issued by Pioneer, switch event reads were recorded with an incorrect read type.</p> <p>Photo readings are consistently entered as actual readings, including where they are not validated against a set of actual readings from another source. An unvalidated customer reading was entered with an actual read type for ICP 0000489139CE865 on 30/10/19.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: None</p> <p>Controls: Weak</p> <p>Breach risk rating: 3</p>



Audit risk rating	Rationale for audit risk rating		
Low	<p>Controls are rated as weak, because customer photo readings have consistently been treated as actual readings regardless of whether they were validated. All the incorrect read types were the result of data processing errors when new staff were undergoing training, or a misunderstanding about how customer reads were to be treated.</p> <p>The audit risk rating is low. All the switch event reads are treated as actual or permanent estimate readings in Orion, so there is no impact on submission. The incorrectly classified photo reading could have a minor impact on submission if it was found to be incorrect.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Process updated		28.01.2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Training provided. Dispute the rating as Orion has validation process in place.		28.01.2020	

## 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 **section 12**, to confirm that volume was based on readings as required.

#### HHR

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

#### NHH

I traced a sample of meter data from the source files to Pioneer's systems as discussed in **section 2.3**, to confirm whether readings were rounded or truncated on import.

### Audit commentary

#### HHR

EMS' processes were reviewed as part of their agent audit and found to be compliant.

#### NHH

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

A sample of readings for 16 NHH ICPs were traced from the source files to Orion in **section 2.3**. The source files contained the raw unrounded data. If decimal places are recorded in the raw file the readings are rounded to zero decimal places on import into Orion.

### 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 May 2019 was requested from EMS.

### Audit commentary

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

HHR estimates are regularly created by EMS where data is missing for Pioneer ICPs. The estimates are created in accordance with their audited estimation procedures.

#### 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 a meter read to Orion”, “Process Smart Reads into Orion” and “Add NHH (Wells Meter Reads) to Orion” process documents.

#### Audit commentary

NHH data is validated by several processes.

#### Meter reader validation

Compliance is recorded in Wells’ June 2019 audit report. I confirmed with Wells that there were no changes to their processes or systems since their June 2019 audit that could have a negative impact on Pioneer’s compliance.

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, 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.
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, and consumption is submitted for reconciliation.

#### **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 zero values*

*17(4)(d) - comparison with expected or previous flow patterns*

*17(4)(e) - comparisons of meter readings with data on any data storage device registers that are available*

*17(4)(f) - a review of meter and data storage device event list. Any event that could have affected the integrity of metering data must be investigated.*

#### **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. No meter events which could affect meter accuracy have occurred since May 2019.

##### **NHH**

Pioneer receives AMI data from AMS (for Arc and AMS meters), Metrix, and FCLM as MEPs, and all other meters are read manually.

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. I saw examples of events provided by Arc and AMS during the audit, and action was taken as necessary.

#### **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 29/07/16. 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 confirmed that they have been obtaining daily metering data and providing it to the grid owner continuously since generation began at Aniwhenua. 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 confirmed that they have been obtaining daily metering data and providing it to the grid owner continuously since generation began at Aniwhenua. 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 confirmed that they have been obtaining daily metering data and providing it to the grid owner continuously since generation began at Aniwhenua. 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 confirmed that they have been obtaining daily metering data and providing it to the grid owner continuously since generation began at Aniwhenua. 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

The registry list file 01/05/19 to 29/11/19 was reviewed to identify the profiles used during the audit period.

#### Audit commentary

No trading notifications were required during the audit period.

Pioneer used the DFP and DST profiles, but did not begin or cease trading at any NSPs using these profiles during the audit period.

Pioneer also used standard profiles RPS, PV1, HHR, and UML, and trading notifications are not required.

#### Audit outcome

Compliant

### 11.2. Calculation of ICP days (Clause 15.6)

#### Code reference

Clause 15.6

#### Code related audit information

*Each retailer and direct purchaser (excluding direct consumers) must deliver a report to the reconciliation manager detailing the number of ICP days for each NSP for each submission file of submission information in respect of:*

*15.6(1)(a) - submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period*

*15.6(1)(b) - revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period.*

*The ICP days information must be calculated using the data contained in the retailer or direct purchaser's reconciliation system when it aggregates volume information for ICPs into submission information.*

#### Audit observation

The process for the calculation of ICP days was examined by checking 20 NSPs with a small number of ICPs to confirm the NHH AV110 ICP days calculation was correct. HHR ICP days submission is completed by EMS, and was examined during their agent audit.

I reviewed GR100 reports from August 2018 to October 2019 and investigated a diverse sample of ten NSP level ICP days differences, to determine why the difference had occurred.

#### Audit commentary

The process for the calculation of ICP days was examined by checking 20 NSPs with a small number of NHH ICPs each. 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 15 months.

Month	Ri	R1	R3	R4	R5	R7	R8	R14
Aug 2018	0.6%	0.4%	-1.4%	-	-	-2.7%	-	-2.9%
Sep 2018	0.1%	0.0%	-0.2%	-	-	-1.3%	-	-
Oct 2018	0.2%	0.1%	-0.3%	-	-	0.2%	-	-
Nov 2018	0.3%	0.6%	0.2%	-	-	-1.1%	-	-
Dec 2018	0.3%	0.6%	-0.1%	-	-	-0.7%	-0.7%	-
Jan 2019	0.4%	0.1%	-0.1%	-	-	-0.1%	-	-
Feb 2019	0.4%	0.1%	0.1%	-	-	0.4%	-	-
Mar 2019	0.4%	0.0%	-0.2%	-	-	0.7%	-	-
Apr 2019	0.3%	0.2%	-0.1%	-	-	-	-	-
May 2019	0.4%	0.1%	0.5%	-	0.5%	-	-	-
Jun 2019	0.3%	0.2%	0.6%	0.6%	-	-	-	-
Jul 2019	0.5%	0.2%	0.8%	-	-	-	-	-
Aug 2019	0.2%	0.6%	-	-	-	-	-	-
Sep 2019	0.6%	1.0%	-	-	-	-	-	-
Oct 2019	0.9%	-	-	-	-	-	-	-

I reviewed a diverse sample of ten NHH NSP level ICP days differences which remained for R7 or later. Two of the differences related to timing, the other differences were caused by:

1. The AV110 report's treatment of currently decommissioned ICPs. After an ICP's status becomes decommissioned it is excluded from the ICP days calculation for revision submissions for period when it was active. Pioneer has referred this issue to Agility for investigation and resolution.
2. Different treatment of residual load (SB) ICPs on the GR100 and AV110 reports.
3. Incorrect statuses recorded on the registry for three ICPs with "reconciled elsewhere" status, which were updated to "active" status during the audit. The incorrect statuses are recorded as non-compliance in **section 3.9**.

I reviewed all HHR NSP level ICP days differences which remained for R7 or later, and found they related to timing differences, the GR100 report recording an incorrect number of registry days, or backdated changes to submission type.

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

Pioneer's processes for upgrades and downgrades achieve accuracy for consumption information, but non-compliance is recorded in **section 6.7** for the incorrect application of meter readings. The ICP days calculations are correct because they align with the consumption information.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 11.2 With: Clause 15.6  From: Jan-19 to Mar-19 R7	The AV110 report excludes ICPs from revision submissions for periods where they were active if the ICP's current status is decommissioned.  Potential impact: Low Actual impact: Low Audit history: None Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are rated as weak, because they do not ensure that ICP days are reported for all active periods where an ICP is later decommissioned.  The impact is assessed to be low; Pioneer has 52 decommissioned ICPs which is an increase from five ICPs at the time of the last audit.		
Actions taken to resolve the issue		Completion date	Remedial action status
Aware of the 'Decommissioned' issue, with Agility to fix in Orion. Manually updated on report in the meantime.		28.01.2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Reporting will be corrected to pick up these sites. Job with Agility Job NO 881.		28.01.2020	

### 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

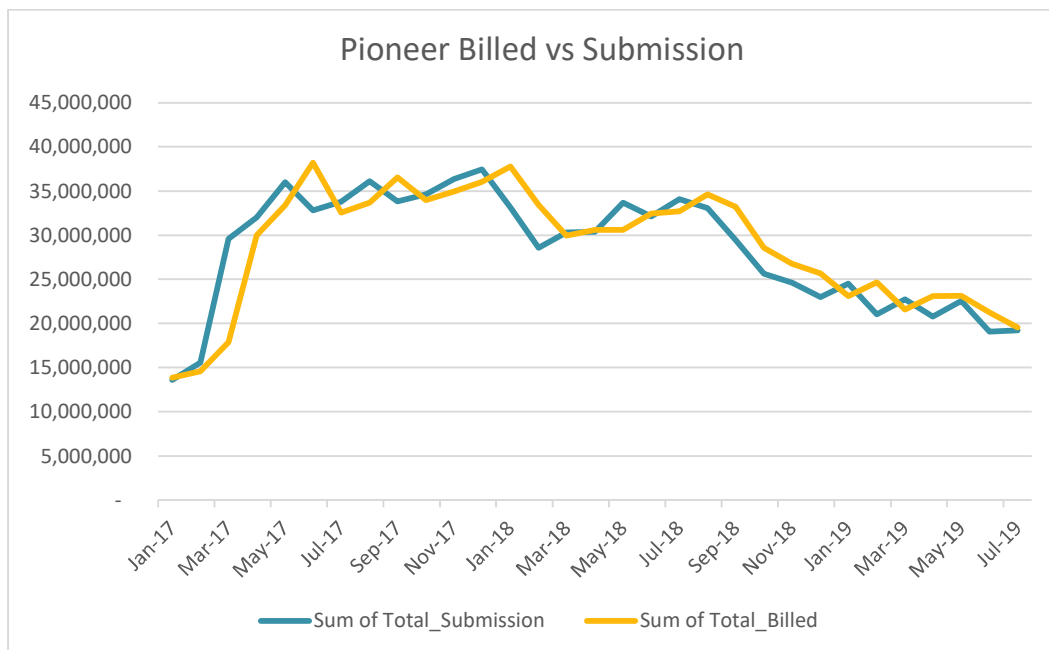
The process for the calculation of as billed volumes was examined by checking five NSPs with a small number of ICPs to confirm the AV120 calculation was correct.

GR130 reports for January 2017 to July 2019 were reviewed to confirm whether the relationship between billed and submitted data appears reasonable.

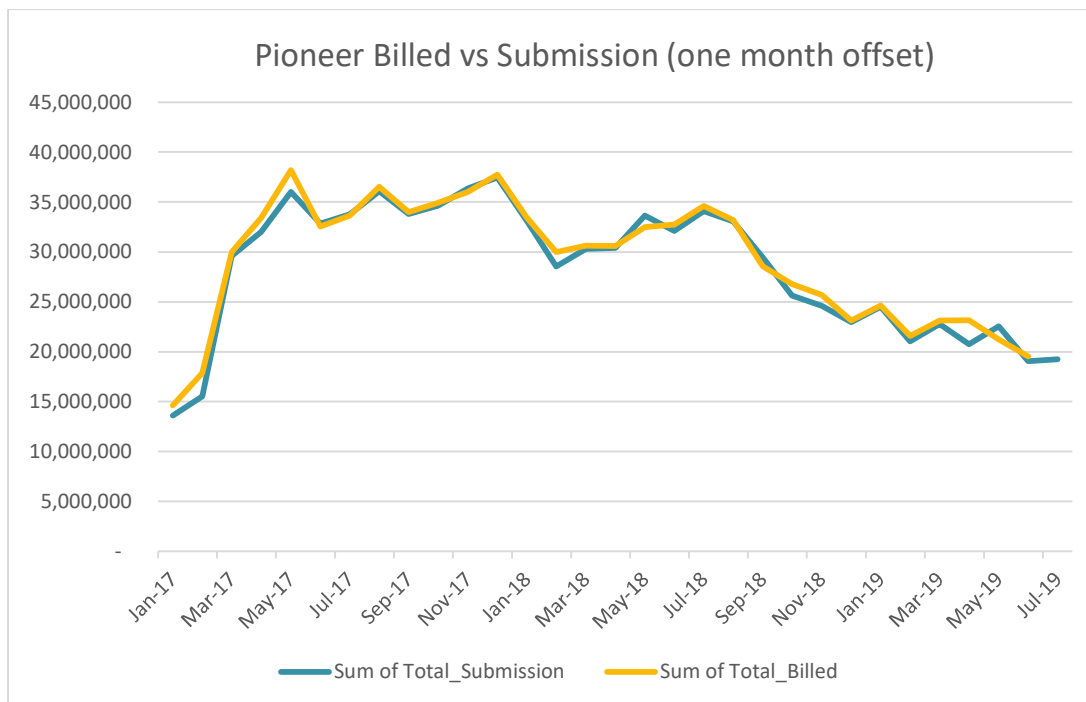
#### Audit commentary

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 October 2019.

I also checked the difference between submission and electricity supplied information for a 31 month period, and the results are shown in the chart below. The total difference is 6.4% for the year ended July 2019 (billed higher than submission), and 3.1% for the two years ended July 2019 (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. Once aligned the total difference is 1.0% for the year ended June 2019 (billed higher than submission), and 1.0% for the two years ended June 2019 (billed higher than submission). The difference appears reasonable.



#### 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 eight submissions.

The GR090 ICP Missing files were examined for August 2018 to October 2019. An extreme case sample of all 29 ICPs missing from two or more revisions 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 seven of the eight submissions the volumes and aggregates matched within  $\pm 5$  kWh. For the September 2019 initial submission there was a difference of 46,730.93 kWh, and six NSPs had differences of more than  $\pm 1.5$  kWh. The error occurred because an old version of the volumes file and current version of the aggregates files were zipped and sent to Pioneer for approval. Pioneer approved the files and the same versions were sent on to the reconciliation manager. Correct data was submitted for revision 1, and the difference between the volumes and aggregates was 1.44 kWh for that submission.

Prior to approval, Pioneer checks graphs and tables of total aggregated submissions volumes to the previous month, previous revision and previous year submissions using the BI desktop. This check is performed on the aggregates file, and I recommend an additional check is added to confirm the volumes and aggregates information is consistent.

Description	Recommendation	Audited party comment	Remedial action
HHR submission review	Reconcile the HHR aggregates and volumes information, prior to completing the rest of the HHR submission review. Only very small rounding differences are expected. Refer any discrepancies to EMS.	Training given and now aware. Promapp updated.	Identified

The GR090 ICP Missing files were examined for all revisions for August 2018 to October 2019. I checked an extreme case sample of all 29 ICPs missing from two or more revisions and found they related to:

- generation only ICPs, which are excluded from the aggregates files; the Code does not specifically state whether this information is required or not, but the file format has a field for flow direction, however the Electricity Authority has confirmed that generation quantities are not required in the file,
- backdated switches and switch withdrawals,
- backdated status updates to inactive,
- ICPs invalidly reported as missing from the registry by the GR090; and
- switching of load between a backup and primary ICP, and all load was accounted for.

Late switching files and updates to the registry are discussed in **sections 3 and 4**.

I also reviewed HHR volumes submissions for August to October 2018 for reasonableness and did not find any evidence of under submission of volumes for these months.

#### Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 11.4</p> <p>With: Clause 15.8</p> <p>From: 01-Aug-18</p> <p>To: 31-Oct-19</p>	<p>HHR aggregates file does not contain electricity supplied information.</p> <p>An incorrect version of the volumes file was submitted for the September 2019 initial submission. Corrected data was washed up for revision 1.</p> <p>Potential impact: None</p> <p>Actual impact: None</p> <p>Audit history: Once</p> <p>Controls: Strong</p> <p>Breach risk rating: 1</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>The issue relating to content of the aggregates file is an error in the code, Pioneer is providing submission information as expected.</p> <p>Controls are in place to detect submission data errors, but failed in one instance. Correct submission data was provided for the next revision.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Training given		28.01.2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Promapp updated and aware of reports to check		28.01.2020	

## 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 1 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 prepares NHH submissions using Orion. Processes to ensure that submissions are accurate were reviewed.

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.



## 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**.

The EA confirmed that one minor alleged breach occurred during the audit period for late provision of submission information:

Breach no	Breach of	Description	Outcome
1910PION1	Part 15 clause 15.4 (2)	Pioneer Energy Limited (PION) has failed to submit data to the reconciliation manager by 16:00 on April 17th BD 13 in breach of Part 15.4 (2) of the Code. PION submitted the data at 16:05 on the 17th April.	Closed with no further action taken, there was no impact because the submission was five minutes late.

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.

One example of an ICP with unrecorded vacant consumption was identified. ICP 0004557746TC090 was vacant from 09/11/19 and an AMI reading taken on 30/11/19 recorded 316 kWh of usage after the closing read on the customer account. A staff member had initially thought the ICP was to switch out, so an occupier account was not set up and the 30/11/19 reading was made a misread because it occurred after the closing read date.

Compliance is recorded in this section because the process to create submission information for vacant ICPs is correct. The missing “occupier” account was an incorrect input into the process which resulted in incorrect submission data, and is recorded as non-compliance in **section 12.7**.

### 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. Corrections to “active” status are carried out as necessary. No inactive ICPs with consumption were identified during the audit period.

### Unmetered consumption

Submission information for five ICPs with unmetered volumes were reviewed, and I confirmed that the calculation process was correct and used the daily unmetered kWh on the meters tab multiplied by the number of active days in the submission period. For two ICPs the daily unmetered kWh was recorded incorrectly in Orion, resulting in incorrect submission data.

Compliance is recorded in this section because the process to create submission information for unmetered ICPs is correct. The incorrect inputs into the process which resulted in incorrect submission data are recorded as non-compliance in **section 12.7**.

### Distributed generation

Submission information for the only NHH ICP with distributed generation was reviewed, and correct consumption was submitted.

I checked generation consumption was submitted for all HHR ICPs with generation indicated by the distributor.

## Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.2 With: Clause 15.4  From: 17-Apr-19 To: 17-Apr-19	Breach 1910PION1 recorded that some reconciliation submission information was provided five minutes late.  Potential impact: None  Actual impact: None  Audit history: None  Controls: Strong  Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are rated as strong because reconciliation submissions are almost always provided on time, and the submission was five minutes late.  The impact is assessed to be low, because there was no impact.		
Actions taken to resolve the issue		Completion date	Remedial action status
Aware of lateness		28.01.2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Closed off by EA with no action taken		28.01.2020	

### 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, Promapp procedures were reviewed, and reports used in the process were viewed.

The process for aggregating the AV080 was examined by checking the total submitted against detailed ICP level information for the same period for five NSPs with a small number of ICPs.

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

#### Audit commentary

The process for the calculation of NHH volumes was examined by checking the total submitted against detailed ICP level information for the same period for five NSPs with a small number of ICPs. NHH volume calculation was confirmed to be correct.

Pioneer confirmed that there is currently no zeroing process in place where an aggregation line is present in the AV080 for the initial or an earlier revision, and not required for later revision. Typically this occurs where all ICPs with that combination of aggregation factors have had a backdated switch out, withdrawal, status change, or submission type change.

Description	Recommendation	Audited party comment	Remedial action
Zeroing process for AV080 submissions	<p>Develop a process to identify instances where an AV080 aggregation line is present in a submission and not included in a later revision.</p> <p>Where this occurs insert an extra line into the AV080 report with the missing aggregation line values and zero total and historic estimate, to replace the previous record in the reconciliation manager's database.</p>	Working with an IT consultant to provide a report to bring up these differences in volumes submitted.	Identified

AV080 submissions are reviewed by Pioneer prior to being submitted, including:

- an ICP level check between the detailed submission data and a registry list with history for the reconciliation period to confirm that all active ICPs are included in the submission information, and inactive ICPs are excluded - any discrepancies are checked and corrected,
- graphs and tables of total aggregated submissions volumes are checked to the previous month, previous revision and previous year submissions using the BI desktop,
- the AV080 submission data is checked for reasonableness, including review of any highs and lows; and
- ICP level submission data is filtered to check that high and low (including negative) volumes are valid, and any ICPs reporting less ICP days than the total days for the month are checked - corrections are processed if necessary.

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

#### Audit outcome

Compliant

### 12.4. Grid owner volumes information (Clause 15.9)

#### Code reference

Clause 15.9

#### Code related audit information

*The participant (if a grid owner) must deliver to the reconciliation manager for each point of connection for all of its GXPs, the following:*

- *submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period (clause 15.9(a))*
- *revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period. (clause 15.9(b))*

#### Audit observation

Review of the NSP table confirmed that 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

Review of alleged breaches confirmed that one minor alleged breach occurred during the audit period for late provision of submission information:

Breach no	Breach of	Description	Outcome
1910PION1	Part 15 clause 15.4 (2)	Pioneer Energy Limited (PION) has failed to submit data to the reconciliation manager by 16:00 on April 17th BD 13 in breach of Part 15.4 (2) of the Code. PION submitted the data at 16:05 on the 17th April.	Closed with no further action taken, there was no impact because the submission was five minutes late.

##### Accuracy of submission data

Corrections were processed as required and are discussed in **sections 8.1** and **8.2**, and were found to be compliant.

Overall, I found processes to produce submission data were operating as intended. In some cases incorrect inputs into these processes resulted in inaccurate submission data as discussed below.

##### Seasonal adjusted shape value files produced by the RM after r1 are not used

There were some issues with inputs to the historic estimate process which resulting in inaccurate submission information being provided, although the Orion historic estimate calculations were correct.

PR030 (seasonal adjusted daily shape values) are only loaded into Orion when the initial allocation results are received. PR030 reports received with the interim allocation results (following revisions 1, 3, 7 and any additional allocations before revision 14) should also be loaded. Failure to load these interim files results in different profile values being applied and could impact on the way volumes are apportioned between submission months for revision submissions.

#### ICPs with incorrect unmetered load submissions

The unmetered loads recorded for two ICPs were incorrect in Orion, resulting in inaccurate submission information:

ICP	Registry daily unmetered kWh	Orion daily unmetered kWh for submission	Correct value	Comment
0000075272CE0B4	12.56	1.0	12.56	Orion will be updated and revisions provided
0000479017CEA33	0.83	1.0	0.83	Orion will be updated and revisions provided

ICPs 0000794436NV646 and 0018081024HB16E had unmetered load discrepancies, and the correct load was unknown. Pioneer will confirm the correct values, update the registry and provide revision submissions as necessary. This is discussed further in **section 3.7**.

#### ICPs where agreed switch readings were not applied for reconciliation

As discussed in **sections 4.3** and **4.11**, the following ICPs did not have the agreed switch readings applied for reconciliation purposes.

- ICP 0000491652CE3A2 (31/08/19) – the difference was less than 50 kWh
- ICP 0000483126CE356 (01/11/19) – 39 kWh; and
- ICP 0000500468CEEC4 (01/11/19) – 16 kWh.

#### ICP with unreported vacant consumption

One example of an ICP with unrecorded vacant consumption was identified in **section 12.2**. ICP 0004557746TC090 was vacant from 09/11/19 and an AMI reading taken on 30/11/19 recorded 316 kWh of usage after the closing read on the customer account. A staff member had initially thought the ICP was to switch out, so an occupier account was not set up and the 30/11/19 reading was made a misread because it occurred after the closing read date.

#### Photo readings

Photo readings are consistently entered as actual readings, including where they are not validated against a set of actual readings from another source. Review of historic estimate calculations in **section 12.11** found that an unvalidated customer photo read for 0000489139CE865 on 30/10/19 was entered as actual reading and used to calculate historic estimate. This is recorded as non-compliance below, and in **sections 6.6** and **12.7**.

#### **Audit outcome**

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 12.7</p> <p>With: Clause 15.12</p> <p>From: 17-Apr-19</p> <p>To: 10-Jan-20</p>	<p>Breach 1910PION1 recorded that some reconciliation submission information was provided five minutes late.</p> <p>Seasonal adjusted shape value files produced by the RM after r1 are not used.</p> <p>Incorrect unmetered load submissions were provided for two ICPs.</p> <p>The agreed switch readings were not used to produce submission data for three ICPs.</p> <p>One ICP did not have vacant consumption reported.</p> <p>One unvalidated photo reading was recorded as an actual reading in Orion and used to calculate historic estimate.</p> <p>Potential impact: None</p> <p>Actual impact: None</p> <p>Audit history: Once</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	<p>The controls are rated as moderate, because the submission process itself is operating as intended, the incorrect submissions were caused by inputs manually entered into those processes.</p> <p>The impact is assessed to be low, based on the kWh differences identified.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
As per individual sections above on report		28.01.2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
As per above		28.01.2020	

## 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 July to September 2018 to identify any forward estimate still existing.

#### Audit commentary

Review of the 14-month revisions for July to September 2018 showed that not all estimated meter readings had been replaced with validated meter readings. This is recorded as non-compliance below.

Month	Forward estimate
Jul-18	7724.93
Aug-18	5260.36
Sep-18	5520.38
<b>Total</b>	<b>18505.67</b>

To determine the reasons that forward estimate remained, I checked seven NSPs with forward estimate remaining, and reviewed historic and total estimate calculations. For the sample of ICPs reviewed, I found that forward estimate was caused by:

- **Not entering permanent estimate reads for revision 14, where reads had not been attained.** Pioneer does not have a process to enter permanent estimate reads, where actual reads have not been attained by revision 14.
- **Manual amendments to reclassify unmetered load as historic estimate are not being processed consistently.** Orion records unmetered load submissions as forward estimate, but these should be classified as historic estimate because the load is known. There is a manual process to detect unmetered load ICPs and correct the historic estimate values, but this has not consistently occurred.
- **Forward estimate for switched ICPs.** During the historic estimate calculation checks I found that Orion was invalidly calculating a small amount of forward estimate for the scenario where an ICP had switched out (0000507354CE140), although the historic estimate for this scenario was calculated correctly. Further checks found that 13 of the 16 ICPs which switched out in November 2019 which were reported on the AV080 submission had some unexpected forward estimate. A list of the affected ICPs has been provided to Pioneer, and the total over submission for November 2019 is 184.1 kWh. The issue affects ICPs which switched out on actual reads, as well as ICPs which switched out on estimates.

#### Audit outcome

Non-compliant



Non-compliance	Description		
<p>Audit Ref: 12.8</p> <p>With: Clause 4 of Schedule 15.2</p> <p>From: Jul-18, Aug-18 and Sep-18 r14</p>	<p>Some estimates were not replaced by revision 14.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Once</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	<p>Controls are rated as moderate as they were sufficient to ensure that most NSPs had 100% historic estimate by revision 14, but there was room for improvement.</p> <p>The impact is low. Total forward estimate for the three months reviewed was 18,505.67 kWh. Some of this relates to unmetered load which is true historic estimate, but is incorrectly classified, and some relates to invalid forward estimate.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Aware of issue and looking at IT support to help identify FE incorrect data		28.01.2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Manually updated on report at present		28.01.2020	

## 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 the process was operating correctly, but submission information was incorrect for two ICPs because the unmetered daily kWh applied was incorrect (this is recorded as non-compliance in **section 12.7**),
- 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.

Exceptions identified in the previous audit were followed up and confirmed to be cleared:

- 0000606334WPB76 and 0000950800WP644 are correctly submitted as standard unmetered load using the RPS profile; and
- the registry profile has been corrected to RPS PV1 for 0000001945CE5B1.

#### 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

Review nine AV080 submissions for revisions 3 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 nine AV080 submissions for a diverse sample of months and revisions and confirm that forward and historic estimates are included and identified as such.

Some inaccurate forward estimate was identified and is recorded as non-compliance in **section 12.12**.

### Audit outcome

Compliant

## 12.11. Historical estimate process (Clause 4 and 5 Schedule 15.3)

### Code reference

*Clause 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<sub>px</sub> 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<sub>px</sub>.*

### Audit observation

To assist with determining compliance of the Historical Estimate (HE) processes, Pioneer were supplied with a list of scenarios, and for some individual ICPs a manual HE calculation was conducted and compared to the result from Orion.

### Audit commentary

I found that in most cases, historic estimate was calculated as expected:

Test	Scenario	Test Expectation	Result
a	ICP becomes Active part way through a month	Consumption is only calculated for the Active portion of the month.	Compliant
b	ICP becomes Inactive part way through a month.	Consumption is only calculated for the Active portion of the month.	Compliant
c	ICP become Inactive then Active again within a month.	Consumption is only calculated for the Active portion of the month.	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.	Has not occurred
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

Test	Scenario	Test Expectation	Result
g	Continuous ICP with a read during the month	Consumption is calculated assuming the readings are valid until the end of the day	Compliant
h	Continuous ICP without a read during the month	Consumption is calculated assuming the readings are valid until the end of the day	Compliant
i	Rollover Reads	Consumption is calculated correctly in the instance of meter rollovers.	Compliant
j	Unmetered load for a full month	Consumption is calculating based on daily unmetered kWh for full month.	Calculation is correct, but an incorrect input of estimated daily kWh for ICP 0000794436NV646 caused an incorrect result.
k	Unmetered load for a part month	Consumption is calculating based on daily unmetered kWh for active days of the month.	Has not occurred
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.	Non-compliant Orion's results for the NSP change scenario do not match the manual recalculation. Details of calculations for the ICPs tested have been provided to Pioneer for investigation.
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.	An unvalidated customer photo read for 0000489139CE865 on 30/10/19 was entered as actual. The calculation was correct, but the read type input into the calculation was incorrect.
o	ICP has a meter with a multiplier greater than 1	The multiplier is applied correctly	Compliant

Issues identified in the previous audit were followed up:

- The previous audit found that historic estimate for ICPs which had switched out on estimated reads were incorrect, and historic estimate was calculated based on the last actual reading instead of the agreed switch event reading. I found that the historic estimate is now correctly calculated, and compliance is recorded in this section, but Orion is invalidly calculating a small amount of forward estimate. Further checks found that 13 of the 16 ICPs which switched out in November 2019 which were reported on the AV080 submission had some unexpected forward estimate. Non-compliance is recorded in **sections 12.8 and 12.12**.
- The previous audit found that no zero value is inserted where a row previously reported is not included in the current revision. This issue has not been resolved and is recorded as non-compliance in **section 12.3**.

There were some issues with inputs to the historic estimate process which resulting in inaccurate submission information being provided, although the Orion historic estimate calculations were correct. These issues are recorded as non-compliance in **section 12.7**.

#### Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 12.11</p> <p>With: Clause 4 and 5 Schedule 15.3</p> <p>From: Jun-19 and Sep-19</p>	<p>Historic estimate is not calculated as expected for submission months where a change of NSP has occurred.</p> <p>Potential impact: None</p> <p>Actual impact: None</p> <p>Audit history: Once</p> <p>Controls: Weak</p> <p>Breach risk rating: 3</p>

Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are rated as weak, because the calculation is not operating as expected for ICPs with NSP changes.</p> <p>The impact is assessed to be low, because all consumption is captured and where NSP changes occurred both NSPs were within the same balancing area.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Aware of issue and checking manually and correcting		28.01.2020	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
Agility is aware of the issue and in place to fix		28.01.2020	

## 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

Forward estimate is applied where readings are not received based on invoice estimates. The invoice estimates are in turn calculated based on the estimated daily kWh for each meter stored in Orion and the number of days to be estimated. If no estimated daily consumption is available, zero is estimated.

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
Jun 2018	-	1	1	1	44
Jul 2018	-	-	-	-	44

Month	Revision 1	Revision 3	Revision 7	Revision 14	Total Balancing Areas
Aug 2018	1	-	-	-	45
Sep 2018	-	-	-		45
Oct 2018	1	1	1		46
Nov 2018	3	1	1		46
Dec 2018	2	-	-		46
Jan 2019	1	2	2		46
Feb 2019	-	-	-		48
Mar 2019	-	1	1		47
April 2019	-	-			47
May 2019	-	-			47
June 2019	-	-			47
July 2019	1	-			47

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

Month	Revision 1	Revision 3	Revision 7	Revision 14
Jun 2018	-0.53%	9.10%	8.87%	6.55%
Jul 2018	-0.22%	0.44%	1.04%	-1.64%
Aug 2018	-12.45%	-2.95%	-2.47%	-4.63%
Sep 2018	-8.94%	-5.89%	-7.15%	
Oct 2018	-11.46%	-11.30%	-13.47%	
Nov 2018	-17.62%	-10.12%	-10.92%	
Dec 2018	-21.36%	-7.57%	-7.14%	

Month	Revision 1	Revision 3	Revision 7	Revision 14
Jan 2019	-9.52%	-13.02%	-13.28%	
Feb 2019	-7.90%	-6.65%	-6.20%	
Mar 2019	-6.27%	2.50%	3.67%	
April 2019	0.00%	-0.59%		
May 2019	-7.67%	-2.14%		
June 2019	-9.14%	-7.84%		
July 2019	-12.86%	-7.95%		

I investigated the balancing area differences over the threshold, to confirm the reasons for the differences. They differences appear to be caused by forward estimates being too high or low. I found that many larger NHH customers including irrigators have their meters read mid-month, resulting in a relatively high proportion of forward estimate. The forward estimates used for submission do not consistently adjust for the seasonality of this load.

During the historic estimate calculation checks I found that Orion was invalidly calculating a small amount of forward estimate for the scenario where an ICP had switched out (0000507354CE140), although the historic estimate for this scenario was calculated correctly. Further checks found that 13 of the 16 ICPs which switched out in November 2019 which were reported on the AV080 submission had some unexpected forward estimate. A list of the affected ICPs has been provided to Pioneer, and the total over submission for November 2019 is 184.1 kWh. The issue affects ICPs which switched out on actual reads, as well as ICPs which switched out on estimates.

#### Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 12.12</p> <p>With: Clause 6 Schedule 15.3</p> <p>From: 01-Nov-19</p> <p>To: 30-Nov-19</p>	<p>For at least 13 ICPs on the November 2019 AV080 submission, forward estimate was provided for a period where historic estimate could be calculated.</p> <p>Potential impact: Medium</p> <p>Actual impact: Low</p> <p>Audit history: None</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>



Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are rated as moderate. For some (but not all) switches out, Orion is calculating invalid forward estimate. Pioneer was not aware of this issue, and there were not controls in place to detect and correct the invalid forward estimate.</p> <p>The audit risk rating is low, based on the estimated number of switches out per month and estimated forward estimate volumes. The historic estimate is correct for the affected ICPs, and the invalid forward estimate is in addition to this historic estimate volume.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Aware of issue and manually correcting		28.01.2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Checked and FE manually updated if required		28.01.2020	

### 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 registry list as at 29/11/19 and event detail report for 01/05/19 to 29/11/19 were reviewed to identify any ICPs which have had profile changes. Each profile change was checked to determine whether there was an actual or permanent estimate read on the profile change date.

#### Audit commentary

One profile change was identified relating to a meter downgrade. An actual reading was recorded for the profile change.

#### 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:

- Network;
- NSP code;
- reconciliation type;
- profile;
- loss category code;
- flow direction;
- dedicated NSP; and
- consumption period.

NHH volumes and HHR volumes aggregation was confirmed to be compliant.

### 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

Review of nine AV080 and nine AV090 reports confirmed that submission information is appropriately rounded to two decimal places.

Review of nine AV140 reports confirmed that submission information is appropriately rounded to zero 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.

I checked ten NSPs with forward estimate remaining and found it was caused by:

#### Quantity of NSPs where revision targets were met

Month	Revision 3 80% Met	Revision 7 90% Met	Revision 14 100% Met	Total
Jul 2018			59	69
Aug 2018			63	69
Sep 2018			62	70
Feb 2019		73		74
Mar 2019		73		74
Apr 2019		75		75
Jun 2019	73			74
Jul 2019	74			74

Month	Revision 3 80% Met	Revision 7 90% Met	Revision 14 100% Met	Total
Aug 2019	72			72

The table below shows that the percentage HE at a summary level for all NSPs is at or above the required targets for revisions 3 and 7, and below the targets for revision 14.

Month	Revision 3 80% Target	Revision 7 90% Target	Revision 14 100% Target
Jul 2018	-	-	99.72%
Aug 2018	-	-	99.81%
Sep 2018	-	-	99.78%
Feb 2019	-	99.35%	-
Mar 2019	-	98.94%	-
Apr 2019	-	99.84%	-
Jun 2019	98.42%	-	-
Jul 2019	99.22%	-	-
Aug 2019	99.15%	-	-

#### Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 13.3</p> <p>With: Clause 10 of Schedule 15.3</p> <p>From: Jul-Sep 18 (r14), Feb-Mar 19 (r7) and Jun 19 (r3)</p>	<p>Historic estimate thresholds were not met for some revisions.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Three times</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>

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
Aware of issue		28.01.2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Aware of issue and manually updated if required		28.01.2020	

## CONCLUSION

Pioneer supplies 1,589 active HHR and NHH ICPs.

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.

NHH submission, registry information management and switching is completed by Pioneer.

Auditors are required to record non-compliance in every relevant report section, and apply the audit risk ratings, control ratings and breach risk ratings as specified in the risk and materiality guideline.

Adherence to the guidelines has resulted in a very high audit risk rating for Pioneer, because:

1. A minor non-compliance affecting a short period, or small number of ICPs with little to no impact may be recorded as non-compliance in many report sections inflating the overall risk rating. For example, treatment of photo readings as actual readings resulted in non-compliance in **sections 6.6, 9.1 and 12.7** although I only found one photo reading which was incorrectly classified. Similarly, a small number of incorrect CS readings which occurred over a short time period caused non-compliance in sections **4.10, 4.16, 6.7, 9.1, and 12.7**.
2. Auditors have been instructed to apply a control rating only for the portion of the process which is non-compliant. This means that where controls over the whole process are strong but one small part is non-compliant, the control rating only relates to the non-compliant part. This has generally led to lower control ratings and higher scores.

The audit risk rating indicates that the next audit should be due in three months. I believe that the total audit risk rating for Pioneer is not indicative of the true audit risk, because:

1. Many of the switching and registry relating issues were caused by switching events temporarily being edited incorrectly, because two new staff members started in this team around the same time in late 2019. The errors occurred while they were undergoing training. Because the incorrect files appeared as data anomalies, they were included in the audit samples so the cause could be determined, but in reality, a very small proportion of files were affected, and the issues were promptly resolved with further training and experience.
2. Many of the registry and submission data accuracy issues were minor and affected very small numbers of ICPs. Because the issues were of different types (e.g. two ICPs with unmetered load discrepancies, one ICP with an incorrect active date), non-compliance is recorded in a large number of sections although the impact is very low. Combined with the rules around control ratings being applied for the non-compliant portion of the process only, this has resulted in high future risk ratings.
3. Pioneer has promptly resolved discrepancies during the audit where possible, and is working to resolve the other discrepancies. They have been proactive, and treated the audit as a positive learning experience. I worked directly with all staff involved in the processes.

To support my findings I have included a summary of my findings in each area, confirming that most were minor and/or temporary issues. In many cases the action required to resolve the issues is straightforward and/or complete.

Registry information management	
Summary of findings	<p><b>Registry validation:</b> Validation focusses on data which has recently been modified (including review of acknowledgement and notification files), and that all ICPs are included in Pioneer's submission information. Validation processes have improved during the audit period.</p> <p>There is currently no regular full validation between Orion and the registry, and a small number of discrepancies between the systems were identified during the audit.</p>

	<p><b>Registry updates:</b> Some late updates to registry status and trader information were identified, these were largely caused by backdated corrections, with a small number delayed by late receipt of paperwork or workloads with new staff being trained. There was no evidence of systemic issues causing delays in processing updates.</p> <p>A small number of inaccurate information updates were identified, largely due to changes needing to be manually processed in both Orion and registry. Implementation of reconciliations between Orion and the registry should improve Pioneer's ability to find and correct these discrepancies.</p>
Improvements required	<ol style="list-style-type: none"> <li>1. A regular full reconciliation between Orion and the registry, including all fields which impact on reconciliation submissions as a minimum.</li> <li>2. Implementation of consistency checks between Pioneer's active date, distributor's initial electrical connection date and the MEP's meter certification date for newly connected ICPs.</li> <li>3. Implementation of consistency checks between Pioneer and the distributor's distributed generation information.</li> </ol>

Switching	
Summary of findings	<p><b>NT:</b> some NHH switch types were set incorrectly because information provided by staff liaising with the customer did not specify the switch type.</p> <p><b>AN:</b> the Orion AN code hierarchy does not consistently select the correct AN code. The selection appears to be based on field values that applied when the NT was received, rather than the values that would apply on the requested event date. This can result in incorrect AN response codes being applied where a customer is about to move out, or a contract is about to expire. The files are manually checked and edited if necessary prior to sending, but occasionally incorrect codes are missed. There were no issues with AN event dates.</p> <p><b>CS:</b> Orion generates CS files, and applies the readings and read types recorded in the readings tab, and the estimated daily consumption recorded on the meters tab. Estimated daily consumption is calculated using a different methodology to the registry functional specification. The files are manually checked and edited if incorrect data is found prior to sending.</p> <p>The sample of CS files checked focussed on files where potential data anomalies had been identified, such as inconsistencies between last actual read dates, event dates and CS read types. Some of the files checked contained incorrect data which had been manually edited in error by a staff member undergoing training, who at the time had thought that the CS reading should be <u>on the event date</u>, instead of on Pioneer's last day of responsibility. The exceptions occurred over a short period, and the staff involved in switching all participated in the audit and understand the CS content requirements. This issue is not expected to recur.</p> <p>31 switch move CS files were produced from Orion without CSMETERCHANNEL, CSMETERCOMP and CSMETERINSTALL lines, and will be investigated by Agility.</p> <p><b>RR/AC:</b> I found that other participants sometimes issued RRs where Pioneer had provided an incorrect CS reading as described above. When staff assessed the RR, they compared it to the closing reading recorded in Orion, not the reading recorded in the edited CS file and invalidly rejected it in error. In a few other cases, Pioneer had rejected the RR but the agreed switch reading was not applied. As for the CS issues, these issues occurred over a very short period and further training has been provided. The issue is not expected to recur.</p>



	<p>Unvalidated customer reads are sometimes used as supporting readings for RRs.</p> <p><b>NW/AW:</b> There were no issues with the processes for NWs or AWs.</p>
Improvements required	<ol style="list-style-type: none"> <li>1. Ensure clear information on whether the switch is a transfer or switch move is provided to the Customer Services &amp; Billing Analyst.</li> <li>2. Investigate the 31 switch move CS files which were missing CSMETERCHANNEL, CSMETERCOMP and CSMETERINSTALL lines.</li> <li>3. Cease using unvalidated customer reads as supporting readings for RRs. RRs must be supported by at least two validated actual readings.</li> </ol>

Unmetered load	
Summary of findings	A small number of inaccuracies were identified, including for DUML databases.
Improvements required	<ol style="list-style-type: none"> <li>1. Correct the identified discrepancies, and confirm unknown unmetered load values as recommended.</li> <li>2. Investigate ICP 0000075272CE0B4 to confirm the correct load and load type, and whether it can remain as standard unmetered load or requires a meter.</li> </ol>

Reading and read validation	
Summary of findings	<p><b>Meter condition information:</b> meter condition information provided by Wells is not consistently reviewed. I requested meter condition event information directly from Wells, and found that there were no unresolved meter condition events during the audit period.</p> <p><b>Photo readings:</b> photo readings have consistently been recorded as actual readings in Orion, regardless of whether they have been validated against two validated readings from another source.</p> <p><b>Customer readings:</b> Customer readings are correctly treated for reconciliation, but have been used as supporting readings in the RR process.</p> <p><b>Read attainment:</b> controls over read attainment itself are strong. The meter reading frequency report contained some incorrect parameters, which makes read attainment appear lower than it actually is.</p> <p><b>Corrections:</b> no bridged meter corrections were required during the audit period, and a process needs to be developed to process bridged meter corrections where the meter is not replaced. The other correction processes are compliant.</p> <p><b>Validation and estimation:</b> processes are compliant.</p>
Improvements required	<ol style="list-style-type: none"> <li>1. Treat photo readings as validated readings only where they have been validated against two validated readings from another source.</li> <li>2. Resolve the meter reading frequency report content issues.</li> <li>3. Develop a correction process to add unmetered bridged consumption to reconciliation submissions where the bridged meter is not replaced.</li> </ol>

Reconciliation	
Summary of findings	<p><b>ICP days:</b> the AV110 report excludes ICPs from revision submissions for periods where they were active if the ICP's current status is decommissioned. Corrected data will be washed up where a small amount of incorrect registry information has resulted in incorrect ICP days submissions.</p> <p><b>Billed submission:</b> no issues were identified.</p> <p><b>HHR submission:</b> for one submission the volumes and aggregates did not match, and recurrence of the issue will be prevented by addition of a simple validation check as described below. A minor technical non-compliance was recorded for a code wording discrepancy (the submission contains volume not billed data).</p> <p><b>NHH submission:</b> Overall, I found processes to produce submission data were operating as intended. In some cases incorrect inputs into these processes resulted in inaccurate submission data, including not importing seasonal adjusted shape value files beyond revision 1 and a small number of ICPs where data inputs into the reconciliation process were incorrect.</p> <p>Two issues with Orion NHH (AV080) submissions were identified:</p> <ol style="list-style-type: none"> <li>1. A small amount of forward estimate is invalidly being calculated for some switched ICPs.</li> <li>2. Orion's results for the NSP change historic estimate scenario do not match the manual recalculation. Details of calculations for the ICPs tested have been provided to Pioneer for investigation.</li> </ol>
Improvements required	<ol style="list-style-type: none"> <li>1. Investigate and resolve the Orion AV110 and AV080 report issues.</li> <li>2. Reconcile the HHR aggregates and volumes information, prior to completing the rest of the HHR submission review. Only very small rounding differences are expected. Refer any discrepancies to EMS.</li> <li>3. Develop a zeroing process for the AV080.</li> <li>4. Import all PR030 files provided by the RM once submission data is available.</li> <li>5. Process corrections as indicated in the report to resolve the submission data inaccuracies.</li> <li>6. Establish a permanent estimate process for where reads are not obtained by revision 14.</li> </ol>

Submission of information to the grid owner	
Summary of findings	<p>Pioneer has operated the Aniwhenua Hydro Power Station since ownership of the station changed from Nova Energy to Southern Generation Limited Partnership on 29/07/16. 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.</p> <p>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 have been obtaining daily metering data and providing it to the grid owner continuously since generation began at Aniwhenua. 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.</p>

Improvements required	Nil.
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Based on my analysis and Pioneer's comments, I recommend that the next audit is due in 10 months. During the audit I saw evidence that where non-compliances had occurred because of training or process issues further training was completed, and that staff now understood the code requirements. These issues are not expected to recur. Where issues have not already been resolved, Pioneer has indicated that investigation and corrective action will be undertaken and recommendations for improvement will be implemented. Almost all of the non-compliances had a low impact, and Pioneer has a small customer base with a relatively small volume of switching and registry activity.

## PARTICIPANT RESPONSE

Pioneer has reviewed this report and their comments are contained within its body.