

Guidelines for Reconciliation Participant Audits

Version 7.2

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Version control

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1.1	26 May 2008	Draft for Commission Board approval.
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3.0	30 June 2009	Updated to reflect the reconciliation rules as at 1 November 2008.
4.0	30 September 2010	Updated to reflect amendments to parts E and J of the rules.
5.0	1 November 2010	Updated for transition to Electricity Authority.
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6.1	26 March 2014	Updated following consultation on guidelines
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7.0	28 February 2017	Draft updated to reflect new audit regime effective from 1 June 2017.
7.1	16 May 2017	Finalise for publication for new audit regime effective from 1 June 2017.
7.2	5 October 2017	Updated for changes to the Code made under the Code Review Programme 2017

Glossary of abbreviations and terms

Authority	Electricity Authority
Code	Electricity Industry Participation Code 2010
GXP	Grid exit point
HHR	Half hour
ICP	Installation control point
MEP	Metering equipment provider
NHH	Non half hour
NSP	Network supply point
NZDT	New Zealand Daylight Time
NZST	New Zealand Standard Time

Executive summary

The Electricity Authority (Authority) provides this guideline to promote a better understanding of, and to encourage consistency in, the methodology and processes surrounding reconciliation participant audits. This guideline is intended to provide a structured approach to audits for auditors and participants that is fair and consistent. It outlines reconciliation participants' obligations under the Electricity Industry Participation Code 2010 (Code), and auditors' requirements when carrying out reconciliation participant audits.

This guideline describes what reconciliation participants and auditors should do when carrying out audits under the Code. However, the information in this guideline does not replace the requirement for participants to know and comply with their obligations under the Code.

The information in this guideline is not intended to be definitive and should not be used instead of legal advice. If there is any inconsistency between this information and the Code, the Code takes precedence.

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1 Introduction

- 1.1 Clause 15.38 of the Code requires reconciliation participants to be certified to carry out functions under Parts 11, 15, and 16A and relevant sections of Parts 1, 10, and 13¹ of the Code. This guideline excludes network owners and dispatchable load purchasers where a separate guideline is published for those participants.
- 1.2 “Reconciliation participant” is defined in Part 1 of the Code as a participant (excluding the Authority (even if the Authority acts as a market operation service provider) and the Rulings Panel) who is any of the following:
- (a) a retailer when purchasing electricity from, or selling electricity to, the clearing manager
 - (b) a generator (which includes embedded generators who sell directly to the clearing manager)
 - (c) a network owner (which includes a grid owner)
 - (d) a distributor
 - (e) a person who purchases electricity from, or sells electricity to, the clearing manager.
- 1.3 Clause 15.38 provides that the following functions require certification:
- (a) maintaining registry information and performing customer switching and embedded generator switching (except if the maintenance of registry information is carried out by a distributor in accordance with Part 11)
 - (b) gathering and storing raw meter data
 - (c) creating and managing (including validating, estimating, storing, correcting, and archiving):
 - (i) half hour volume information; or
 - (ii) non half hour volume information; or
 - (iii) half hour and non half hour volume information; or
 - (iv) dispatchable load information.
 - (d) delivery of:
 - (i) a report under clause 15.6 and the calculation of the number of ICP days detailed in the report:
 - (ii) electricity supplied information under clause 15.7:
 - (iii) information from retailer and direct purchaser half hourly metered ICPs under clause 15.8:
 - (e) provision of submission information for reconciliation:
 - (f) provision of metering information to the relevant grid owner in accordance with subpart 4 of Part 13.

¹ Part 13 obligations that apply are in relation to generation information that is required to be submitted to the relevant grid owner.

- 1.4 A reconciliation participant is required to obtain certification for:
- (a) Initial certification: When a participant applies for certification in accordance with clause 2A of Schedule 15.1 for the first time:
 - (i) Reconciliation participants, with fewer than 100 ICPs² that consist of one or more category 1 metering installations and no other kind of metering installation or unmetered load³, are required no later than 12 months after the reconciliation participant first performs a function specified in clause 15.38(1) to obtain certification. This means the initial audit must be submitted to the Authority no later than 10 months after the reconciliation participant first performs a function specified in clause 15.38(1).
 - (ii) In every other case, the later of 6 months after the reconciliation participant first performs a function in specified in clause 15.38(1) or the date on which the reconciliation participant is recorded as being responsible for 100 or more ICPs. This means the initial audit must be submitted to the Authority no later than 4 months after the reconciliation participant first performs a function specified in clause 15.38(1).
 - (iii) If a reconciliation participant intends to perform functions listed in clause 15.38(1) without certification due to meeting the requirements of clause 2A schedule 15.1, the reconciliation participant must obtain prior approval⁴ from the Authority that it meets the requirements to be capable of producing accurate submission information and switching an ICP in accordance with Schedule 11.3.
 - (b) Renewal certification: Certification will be required to be renewed depending on the period applied by the Authority. A reconciliation participant must apply to the Authority in the prescribed form at least two months before the intended date of certification.

2 Audit requirements

- 2.1 The Code requires each reconciliation participant to arrange for regular audits in accordance with Part 16A in respect of the reconciliation participant's obligations under the relative parts of the Code⁵ under the following circumstances:
- (a) Initial audit, which is to be completed no later than two months before the date on which the applicant is required to be certified in accordance with clause 2A of Schedule 15.1.
 - (b) When the Authority renews a reconciliation participant's certification in accordance with clause 7 of Schedule 15.1.
 - (c) If there is a material change to a reconciliation participant's systems or processes such that an audit is required under clause 16A.11. A material change is a change

² Clause 2A(1)(a)

³ Clause 2A(2) (a) and (b)

⁴ Clause 2B

⁵ Parts of the Code that contain obligations on reconciliation participants for the purposes of these guidelines are Part 1, 10, 11, 13, 15, and 16A. Reconciliation participants have obligations under other parts of the Code. This does not exonerate reconciliation participants from their obligations with other parts of the Code.

to a system or process that is likely to affect the ability of the participant to comply with any relevant obligation required under the Code.

- (d) Further audits as specified by the Authority under 16A.14. The Authority will determine the date of the next audit.
 - (e) If the Authority decides to carry out an audit because the Authority reasonably considers that the participant may not have complied with a clause in Part 15 or Part 11 of the Code. The Authority may also carry out such an audit at the request of another participant.
- 2.2 Clause 16A.3 requires each reconciliation participant to ensure its audit is conducted by an Authority approved auditor from the list of auditors published by the Authority.
- 2.3 Participants are required to give the Authority or an auditor full access to all information that may be required for the purposes of the audit, at no charge and no later than 15 business days after receiving a request for the information.⁶
- 2.4 An auditor must carry out the audit of a reconciliation participant's compliance with the relative parts of the Code within a period specified by the Authority. This period must be no earlier than 3 months, but no more than 36 months, after the completion date of the audit report for the reconciliation participant's previous audit.
- 2.5 The reconciliation participant's functions that must be covered by an audit include, but are not limited to:
- (a) **Function 1:** Administrative tasks - Obligations regarding arranging for and submitting applications for approval.
 - (b) **Function 2:** Operational infrastructure - Obligation regarding requirements, such as tools, transmission, and security.
 - (c) **Function 3:** Maintaining registry information - Obligations regarding requirement to have systems and processes in place to support maintenance of registry information.
 - (d) **Function 4:** Performing customer and embedded generator switching - Obligations regarding requirement to have systems and processes in place to support customer switching.
 - (e) **Function 5:** Maintenance of unmetered load - Obligations regarding requirement to have systems and processes in place to support maintenance of unmetered load.
 - (f) **Function 6:** Gathering and storing raw meter data - Obligations regarding requirements to have systems and processes in place for:
 - (i) gathering raw meter data and frequency of meter readings
 - (ii) interrogation, storing, and processing of data in a secure manner.
 - (g) **Function 7:** Creation and maintenance of volume information – Obligations to have robust systems and processes to support requirements including methodologies set out in the Code for:
 - (i) error handling

⁶ Clause 16A.4

- (ii) estimation and validation
 - (iii) storage, archiving, and audit trails.
- (h) **Function 8:** Provision of metering information to the relevant grid owner - Obligations to have reporting processes and systems in place to produce and supply required reports under subpart 4 of Part 13 for pricing information.⁷
- (i) **Function 9:** Submission format and timing – Obligations to report to the Authority regarding submission information and supporting information within the time parameters required in the Code.
- 2.6 The audit requirements for each of the above functions are described in detail in the appendices by reference to the relevant Code provisions.
- 2.7 The list of Authority appointed auditors can be found on the Authority’s website at <https://www.ea.govt.nz/operations/retail/audits-approvals-and-certification/approved-auditors/>
- 2.8 The participant audit regime uses a risk-based approach to planning audits. The following three documents are integral to this approach:
- (i) *Risk and materiality guideline*
This sets out how to assess risk, the process for applying risk to focus audit effort, and how to assess the materiality and likelihood of a risk.
 - (ii) *Auditor protocol*
This sets out audit standards and the Authority’s expectations of auditors when performing audits.
 - (iii) *Inherent risk register*
This sets out the risks inherent in a participant’s functions and processes that are audited. The auditor uses these inherent risks as a starting point for determining an audited participant’s residual risk. Residual risk is used by the auditors to determine audit priority and effort.
- 2.9 The *Risk and materiality guidelines*, *Auditor protocol* and *Inherent risk registers* are available on the Authority’s website at: <https://www.ea.govt.nz/operations/retail/audits-approvals-and-certification/>
- 2.10 If a reconciliation participant is required to carry out an audit for one or more of the roles that participant may be responsible for as an industry participant, that reconciliation participant must arrange for a separate audit report to be completed in respect of obligations for each of those roles.⁸ The requirement for a separate audit would be, for example, where the participant has a distributed unmetered load ICP, where the participant is also a distributor, or where that participant is responsible for metering as an MEP.
- 2.11 If a reconciliation participant uses an agent to perform any of the participant's obligations required under the Code, the reconciliation participant is still responsible for those obligations and must ensure that the agent has been audited with the requirements of

⁷ Clause 13.136 and 13.137

⁸ Clause 16A.8

the Code.⁹ An agent's audit must also fit within the required time frames stipulated for audits under Part 16A. Reconciliation participants are responsible for their agents' and contractors' compliance and obligations.¹⁰

⁹ Clause 16A.10

¹⁰ Clause 15.34

Appendix A Functions and processes

Function 1 – Administrative tasks

Pre-audit.

Code reference	Description	Notes
Clauses 15.37A and 15.37C, and Part 16A	<p>The reconciliation participant who is required to be audited must appoint an auditor. The reconciliation participant and the auditor enter into a contract for the provision of auditing services. The auditor should be clear on the scope and reporting of the audit with the reconciliation participant, including the:</p> <ul style="list-style-type: none"> • process and procedures to be audited • Code obligations to be audited • specific emphasis or scope that has been determined by the Authority • the reason(s) for the audit. <p>The auditor may request the following types of supporting information from the reconciliation participant:</p> <ul style="list-style-type: none"> • a copy of its last two audit reports • a copy of any agent's audit report where an agent is engaged, if there is a separate report, that is relative to the functions to be audited • correspondence supporting its last two audit reports • information regarding the reconciliation participant's company structure, and the names of contractors and service providers that assist with, or are used in, the functions to be audited • a list of manufacturers of hardware and software that assist or are used in the process that is being audited. <p>The auditor obtains a letter from the reconciliation participant authorising the collection of information from other parties agreed in the audit scope, and requests the necessary information for the audit from those parties.</p> <p>The auditor obtains from the Authority copies of any alleged, under investigation, or closed breaches that have occurred in the past twelve months that relate to the processes being audited.</p>	<p>Refer to audit obligations under:</p> <ul style="list-style-type: none"> • clause 11.11 • clause 15.38 • Schedule 15.1

Post-audit

Code reference	Description	Notes
Clause 16A.12(1)(b)	The auditor must send a draft audit report setting out the provisional findings of the audit to the reconciliation participant and give the reconciliation participant a reasonable opportunity to comment on the draft audit report.	More detailed processes and requirements for auditors are included in the document " <i>Auditor Protocol</i> ".
Clause 16A.12(1)(c) & (d)	The auditor must produce a final audit report and provide that report to the reconciliation participant after considering any comments from the reconciliation participant on the draft audit report.	
Clause 16A.12(1)(e)	The final audit report must specify any conditions that the auditor considers the reconciliation participant must satisfy in order to comply with the Code, recommendations, any action that the reconciliation participant has taken in respect of those conditions and a recommended date for the next audit.	
Clause 16A.13	<p>A participant must give the final audit report to the Authority no later than the date by which the audit is due.</p> <p>If a participant is found to be non-compliant for any obligation, the participant must provide a compliance plan to the Authority when it submits the final audit report. The compliance plan must specify the actions and time frames that the participant intends to complete those actions.</p>	
Clause 16A.14	An audit is complete when the participant that is subject to the audit gives the Authority the final audit report and a compliance plan (if any).	
Clause 16A.15	The Authority must publish the final audit, compliance plan, and the date by which the next audit must be completed no later than 20 business days after advising the participant the date of the next audit.	

Function 2 – Operational infrastructure

Process 2A: Operational infrastructure

A.1 The participant is responsible for ensuring the accuracy of information and the security of the metering information transmitted or transferred to other participants. This includes the maintenance of audit trails and communication logs.

Relevant provisions of the Code

Code ref	Description	Notes
Clauses 10.6, 11.2, and 15.2	<p>A participant must take all practicable steps to ensure that information that the participant is required to provide to any person is:</p> <ul style="list-style-type: none"> (a) complete and accurate (b) not misleading or deceptive (c) not likely to mislead or deceive. <p>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.</p>	
Clause 15.35	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.	
Clause 20 of Schedule 15.2	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.	
Clause 21(1) and (2) of Schedule 15.2	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:	
	<ul style="list-style-type: none"> • provided to and received from the registry • provided to and received from the reconciliation manager 	

Code ref	Description	Notes
	<ul style="list-style-type: none"> • provided and received from other reconciliation participants and their agents. <p>The audit trail must cover all archived data in accordance with clause 18.</p>	
Clause 21(3) and (4) of Schedule 15.2	<p>The logs of communications and processing activities must form part of the audit trail, including if automated processes are in operation.</p> <p>Logs must be printed and filed as hard copy or maintained as data files in a secure form, along with other archived information.</p> <p>The logs must include (at a minimum) the following:</p> <ul style="list-style-type: none"> • an activity identifier (clause 21(4)(a)) • the date and time of the activity (clause 21(4)(b)) • the operator identifier (clause 21(4)(c)). 	
Clause 10.4	<p>If a participant must obtain a consumer's consent, approval, or authorisation, the participant must ensure it:</p> <ul style="list-style-type: none"> • extends to the full term of the arrangement • covers any participants who may need to rely on that consent. 	<p>Ensure that:</p> <ol style="list-style-type: none"> 1. Any arrangement between the customer and the trader will allow other parties access. 2. Any arrangement between an MEP and a trader will allow the MEP access.

Code ref	Description	Notes
<p>Clause 10.7(2), (4), (5), and (6)</p>	<p>The responsible reconciliation participant must, if requested, arrange access for the metering installation to the following parties:</p> <ul style="list-style-type: none"> • the Authority • an ATH • an auditor • an MEP • a gaining metering equipment provider. <p>The trader must use its best endeavours to provide access:</p> <ul style="list-style-type: none"> • in accordance with any agreements in place • in a manner and timeframe which is appropriate in the circumstances. <p>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.</p> <p>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.</p>	<p>Access should only be arranged if the party making the request is doing so for the purposes of exercising their rights or obligations under the Code or any other regulation or Act or for safety purposes.</p>
<p>Clause 11.15B</p>	<p>A trader must at all times ensure that the terms of each contract between a customer and a trader permit:</p> <ul style="list-style-type: none"> • 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 	<p>Processes must be in place to ensure that in the event of a default situation the trader is aware of their obligations and have processes to meet these obligations.</p>

Code ref	Description	Notes
	<ul style="list-style-type: none"> • the terms of the assigned contract to be amended on such an assignment to— <ul style="list-style-type: none"> • 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 	
	<ul style="list-style-type: none"> • 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 	
	<ul style="list-style-type: none"> • 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 	
	<ul style="list-style-type: none"> • the trader to assign the rights and obligations of the trader to another trader (clause 11.15B(1)(e)). 	
	<p>The terms specified in subclause (1) must be expressed to be for the benefit of the Authority for the purposes of the Contracts (Privity) Act 1982, and not be able to be amended without the consent of the Authority (clause 11.15B(2)).</p>	
Clause 10.32	<p>A reconciliation participant must only request the connection of a point of connection if it:</p> <ul style="list-style-type: none"> • accepts responsibility for its obligations in Parts 10, 11 and 15 for the point of connection; and • has an arrangement with an MEP to provide metering for the point of connection. 	

Code ref	Description	Notes
Clause 10.33(1)	<p>A reconciliation participant may temporarily electrically connect, or authorise the temporary electrical connection, of a point of connection only if:</p> <ul style="list-style-type: none"> • the reconciliation participant is recorded in the registry as being responsible for the ICP; and • 1 or more certified metering installations are in place; and • if the ICP has not previously been electrically connected, the owner of the network to which the point of connection is connected has given written approval. 	
Clause 10.33A(1)	<p>A reconciliation participant may electrically connect, or authorise the electrical connection, of a point of connection only if:</p> <ul style="list-style-type: none"> • the reconciliation participant is recorded in the registry as being responsible for the ICP; and • 1 or more certified metering installations are in place; and • if the ICP has not previously been electrically connected, the owner of the network to which the point of connection is connected has given written approval. 	
Clause 11.16(a)	<p>Before notifying the registry manager of any information in accordance with clause 11.7(2) or clause 11.18(4), a trader must:</p> <ul style="list-style-type: none"> • ensure that it, or its customer, has made any necessary arrangements for the provision of line function services in relation to the relevant ICP 	
Clause 11.16(b)	<p>Before notifying the registry manager of any information in accordance with clause 11.7(2) or clause 11.18(4), a trader must:</p> <ul style="list-style-type: none"> • have entered into an arrangement with an MEP for each metering installation at the ICP. 	
Clause 10.36	<p>A reconciliation participant must ensure it has an arrangement with the relevant MEP prior to accepting responsibility for an installation.</p>	

Function 3: Maintaining registry information

Process 3 Maintaining registry information

- A.2 The reconciliation participant is responsible for maintaining ICP information for each point of connection it trades on in accordance with the Code. The participant must update ICP information maintained in the registry, including switching and status changes, in a timely manner, and within the timeframes specified in Schedule 11.1 of the Code. The participant must also ensure that appropriate line function services have been assigned to each ICP and perform discrepancy reporting on the reports submitted by the registry.

Relevant provisions of the Code

Code ref	Description	Notes
Clause 11.3	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:	
	<ul style="list-style-type: none"> a consumer purchases electricity from a trader 11.3(3)(a) 	
	<ul style="list-style-type: none"> a trader purchases electricity from an embedded generator 11.3(3)(b) 	
	<ul style="list-style-type: none"> a direct purchaser purchases electricity from the clearing manager 11.3(3)(c) 	
	<ul style="list-style-type: none"> an embedded generator sells electricity directly to the clearing manager 11.3(3)(d) 	

Code ref	Description	Notes
	<ul style="list-style-type: none"> 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) 	
Clause 11.7(2)	Each trader must provide information to the registry manager about each ICP at which it trades electricity in accordance with Schedule 11.1.	
Clause 10 of Schedule 11.1	If information provided by a trader to the registry manager about an ICP changes, the trader must give written notice to the registry manager of the change no later than 5 business days after the change.	
Clause 11.18	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:	
	<ul style="list-style-type: none"> 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)):	
	<ul style="list-style-type: none"> arrange for a final interrogation to take place prior to or upon meter removal (clause 11.18(3)(a)); and advise the MEP responsible for the metering installation of the decommissioning (clause 11.18(3)(b)). 	
	A trader who is responsible for an ICP (excluding UML) must ensure that an MEP is recorded in the registry for that ICP (clause 11.18(4)).	
	A trader must not trade at an ICP (excluding UML) unless an MEP is recorded in the registry for that ICP (clause 11.18(5)).	

Code ref	Description	Notes
Clause 9 of Schedule 11.1	Each trader must provide the following information to the registry for each ICP for which it is recorded in the registry as having responsibility:	
	<ul style="list-style-type: none"> the participant identifier of the trader (clause 9(1)(a)) 	
	<ul style="list-style-type: none"> the profile code for each profile at that ICP, as approved by the Authority (clause 9(1)(b)) 	
	<ul style="list-style-type: none"> the metering equipment provider for each category 1 metering or higher (clause 9(1)(c)) 	
	<ul style="list-style-type: none"> the type of submission information the trader will provide to the reconciliation manager for the ICP (clause 9(1)(ea)) 	
	<ul style="list-style-type: none"> if a settlement type of UNM is assigned to that ICP, either: 	
	<ul style="list-style-type: none"> <ul style="list-style-type: none"> 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 	
	<ul style="list-style-type: none"> <ul style="list-style-type: none"> in all other cases, the daily average kWh of unmetered load at the ICP (clause 9(1)(f)(ii)). 	The Authority encourages traders to validate UML information against the UML fields the distributor is responsible for.
	<ul style="list-style-type: none"> the type and capacity of any unmetered load at each ICP (clause 9(1)(g)) 	
	<ul style="list-style-type: none"> the status of the ICP, as defined in clauses 12 to 20 (clause 9(1)(j)) 	
	<ul style="list-style-type: none"> 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)). 	<p>The audit should determine if correct ANZIC codes have been applied. T994 “don’t know” should only be applied if all endeavours to determine the correct code have failed.</p> <p>Google street search can be a useful source to locate the</p>

Code ref	Description	Notes
		installation and help provide a classification.
	The trader must provide information specified in (a) to (j) to the registry manager no later than 5 business days after the trader commences trading at the ICP (clause 9(2)).	
	The trader must provide information specified in 9(1)(k) to the registry manager no later than 20 business days of trading (clause 9(3))	
Clause 17(1) of Schedule 11.1	The ICP status of “active” is be managed by the relevant trader and indicates that:	In applying the “active” date, the trader should verify the initial electrical connection date with the distributor field in the registry. If there is a variance make enquires as to why.
	<ul style="list-style-type: none"> the associated electrical installations are electrically connected (clause 17(1)(a)) 	
	<ul style="list-style-type: none"> 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)). 	
Clause 17(2) of Schedule 11.1	Before an ICP is given the “active” status, the trader must ensure that:	
	<ul style="list-style-type: none"> the ICP has only 1 customer, embedded generator, or direct purchaser (clause 17(2)(a)) 	
	<ul style="list-style-type: none"> the electricity consumed is quantified by a metering installation or a method of calculation approved by the Authority (clause 17(2)(b)). 	
Clause 19 of Schedule 11.1	The ICP status of “inactive” must be managed by the relevant trader and indicates that:	Status attributes and reasons provided in the registry functional specifications must be applied correctly. E.g. This is very helpful with regards to 1,7: “electrically disconnected remotely by AMI meter” –

Code ref	Description	Notes
	<ul style="list-style-type: none"> <li data-bbox="450 347 1144 379">• electricity cannot flow at that ICP (clause 19(a)); or <li data-bbox="450 635 1503 699">• submission information related to the ICP is not required by the reconciliation manager for the purpose of compiling reconciliation information (clause 19(b)). 	<p data-bbox="1599 228 1998 323">when it comes to reconnection to be able to understand the source of disconnection.</p> <p data-bbox="1599 347 1998 579">A meter must be electrically disconnected. The inactive status does not apply, for example, to meters at a vacant property that have not been electrically disconnected.</p>
Clause 15 of Schedule 11.1	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.	Confirm that processes are in place to monitor reports from distributors.
Clause 10.22(1)(a)(i)	If the MEP for an ICP that is not an NSP changes, the trader must record the name of the gaining MEP in the registry in accordance with Part 11.	

Function 4 – Performing customer and embedded generator switching

Process 4: Performing customer and embedded generator switching

- A.3 The reconciliation participant is responsible for maintaining switching information in the registry. This includes advising the registry manager of event date and switch type details, providing the appropriate validated readings or permanent estimates and facilitating switch withdrawals

Relevant provisions of the Code

Code ref	Description	Notes
Clause 2 of Schedule 11.3	<p>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.</p> <p>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.¹¹</p> <p>A gaining trader must advise the registry manager of a switch no later than 2 business days after the arrangement comes into effect and include in its advice to the registry manager that the switch type is TR and 1 or more profile codes associated with that ICP.</p>	<p>The “uninvited direct sale agreement” is those situations where a supplier comes to, or phones a consumer uninvited for the purposes of entering into negotiations for the sale of goods.</p> <p>The audit will verify that a process is in place that includes identifying when an arrangement comes into effect. For clarification, in order for an arrangement to be in effect, it must be an unconditional arrangement with the customer (ie, not a contract that is still subject to approvals being granted, credit-checks being satisfactory etc.). This means that the contract is in force and can only be reversed through the terms in the</p>

¹¹ Clause 1 of Schedule 11.3

Code ref	Description	Notes
		contract or if the customer switches.
Clauses 3 and 4 of Schedule 11.3	Within 3 business days after receipt of notification of a switch from the registry, 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 5 business days after the date of notification. The losing trader must then:	For clarification, the sending of the switch file by the losing trader is to be no more than 5 business days, the file may contain an event date that is no more than 10 business days after the receipt of the notification.
	<ul style="list-style-type: none"> • provide acknowledgement of the switch request by (clause 3(a) of Schedule 11.3): 	
	<ul style="list-style-type: none"> • providing the proposed event date to the registry and a valid switch response code (clause 3(a)(i) and (ii) of Schedule 11.3); or 	Valid switch response codes are prescribed in the registry functional specifications. The “Explanation of use” criteria description for the code, as noted in the table in those functional specifications, must be relevant to the circumstances of the switch. This will be verified in an audit.
	<ul style="list-style-type: none"> • 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 must disregard every event date established by the losing trader for a customer who has been with the losing trader for less than 2 calendar months (clause 4(2) of Schedule 11.3).	
Clause 5 of Schedule 11.3	If the losing trader provides information to the registry manager in accordance with clause 3(a)(i) of Schedule 11.3, then no later than 5 business days after the event date, the losing trader must complete the switch by providing final information to the registry manager, including:	Event date is defined in Part 1 of the Code. In this case the event date is “(a)” the date on which the gaining trader

Code ref	Description	Notes
	<ul style="list-style-type: none"> • the event date (clause 5(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 accumulator type of C and a settlement indicator of Y (clause 5(b)); and • if the switch event meter reading is not a validated reading, the date of the last meter reading (clause 5(c)). 	<p>commences trading at the ICP.</p> <p>A switch meter reading is defined under Part 1.</p>
Clause 6 of Schedule 11.3	<p>The losing trader and the gaining trader must both use the same switch event meter reading as determined by the following procedure:</p> <ul style="list-style-type: none"> • 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)) 	
Clause 6A of Schedule 11.3	<p>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 actual event date, provide to the losing trader a changed switch event meter reading supported by 2 validated meter readings.</p> <ul style="list-style-type: none"> • the losing trader can choose not to accept the reading, however must advise the gaining trader no later than 5 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)) 	
Clause 6(2)	If the losing trader trades electricity from a non-half hour meter, with a switch event meter	To clarify if the losing trader

Code ref	Description	Notes
and (3) of Schedule 11.3	reading that is for an AMI certified meter flagged Y in the registry, <ul style="list-style-type: none"> • 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 5 business days after receiving final information from the registry, 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 6(3)). 	provides an estimated switch read for an AMI installation and the gaining trader provide an actual AMI read within 5 business days, the gaining traders AMI read must be used.
Clause 7 of Schedule 11.3	A losing trader or gaining trader may give written notice to the other that it disputes a switch event meter reading, notified under clauses 1 to 6 of Schedule 11.3. Such a dispute must be resolved in accordance with clause 15.29 (with all necessary amendments).	
Clause 9 of Schedule 11.3	<p>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:</p> <p>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.¹²</p> <p>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 2 business days after the arrangement comes into effect.</p>	
	<p>In its advice to the registry manager the gaining trader must include:</p> <ul style="list-style-type: none"> • 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)). 	
Clause 10 of	10(1) Within 5 business days after receiving notice of the switch move from the registry, if the losing trader accepts the event date proposed by the gaining trader, the losing trader	

¹² Clause 8(2) of Schedule 11.3

Code ref	Description	Notes
Schedule 11.3	must complete the switch by providing to the registry manager:	
	<ul style="list-style-type: none"> • confirmation of the switch event date; and • a valid switch response code; and • final information as required under clause 1 of Schedule 11.3; 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. Determine an event date that is not earlier than the gaining traders proposed date and that date can be no later than 10 business days after the date of the notification. Alternatively, the losing trader may provide a request for a withdrawal of the switch in accordance with clause 17.	
Clause 10 of Schedule 11.3 (2)	<p>If the losing trader determines a different date, the losing trader must also complete the switch by providing to the registry manager as described in subclause (1)(a):</p> <ul style="list-style-type: none"> • the event date proposed by the losing trader; and • a valid switch response code; and • final information as required under clause 1 of Schedule 11.3. 	
Clause 11 of Schedule 11.3	<p>If the losing trader has provided information to the registry manager in accordance with clause 10(a), within 3 business days after the later of the actual event date or date of receipt of the switch request, the losing trader must:</p> <ul style="list-style-type: none"> • provide the event date (clause 11(a)); and • provide the switch event meter reading as at the event date for each meter or data storage device noted in the registry (clause 11(b)); and • if switch event meter reading is not a validated meter reading, provide the date of the last reading of the meter or storage device (clause (11(c)). 	In this case the event date is the date on which the gaining trader commences trading at the ICP.
Clause 12 of Schedule 11.3	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:	
	<ul style="list-style-type: none"> • 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 	
	<ul style="list-style-type: none"> • if the switch event meter reading provided by the losing trader differs by 200 kWh or 	

Code ref	Description	Notes
	<p>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 actual event date, 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 (3)):</p> <ul style="list-style-type: none"> • 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)). 	
Clause 12 of Schedule 11.3	<p>12(2A) If the losing trader trades electricity from a non-half hour meter, with a switch event meter reading that is for an AMI certified meter flagged Y in the registry,</p> <ul style="list-style-type: none"> • 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, 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)). 	To clarify if the losing trader provides an estimated switch read for an AMI installation and the gaining trader provide an actual AMI read within 5 business days, the gaining traders AMI read must be used.
Clause 14 of Schedule 11.3	<p>The gaining trader 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 to trade electricity through or assume responsibility for:</p> <ul style="list-style-type: none"> • a half hour metering installation that is not a category 1 or 2 metering installation, that has an ICP with a submission type half hour in the registry and an AMI flag of "N"; or • a half hour metering installation that has a submission flag of half hour and an AMI flag of "N" and is traded by the losing trader as non-half hour; or • a non half hour metering installation at an ICP with the losing trader trades through 	

Code ref	Description	Notes
	<p>a half hour metering installation with an AMI flag of "N".¹³</p> <p>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.¹⁴</p> <p>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.</p> <p>14(2) The gaining trader must include in its advice to the registry manager:</p> <ul style="list-style-type: none"> a) a proposed event date; and b) that the switch type is HH. <p>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</p> <p>14(4) The proposed event date is a date before the date on which the gaining trader advised the registry, if:</p> <ul style="list-style-type: none"> • 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. 	
Clause 15 of Schedule 11.3	<p>Within 3 business days after the losing trader is informed about the switch by the registry manager, the losing trader must:</p> <ul style="list-style-type: none"> • 15(a)- provide to the registry 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. 	

¹³ Clause 13(1) Schedule 11.3

¹⁴ Clause 13(2) Schedule 11.3

Code ref	Description	Notes
Clause 16 of Schedule 11.3	<p>The gaining trader must complete the switch no later than 3 business days, after receiving the valid switch response code, by advising the registry manager of the event date.</p> <p>If the ICP is being electrically disconnected or if metering equipment is being removed, the gaining trader must either-</p>	
	<ul style="list-style-type: none"> • 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 	
	<ul style="list-style-type: none"> • 16(b)- carry out an interrogation and, no later than 5 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. 	
Clauses 17 and 18 of Schedule 11.3	<p>A losing trader or gaining trader may request that a switch request be withdrawn at any time until the expiry of 2 calendar months after the event date of the switch.</p> <p>If a trader requests the withdrawal of a switch, the following provisions apply:</p>	Any withdrawal request that is expected to exceed 2 calendar months should be treated as new switch.
	<ul style="list-style-type: none"> • for each ICP, the trader withdrawing the switch request must provide the registry manager with (clause 18(c)): <ul style="list-style-type: none"> • the participant identifier of the trader making the withdrawal request (clause 18(c)(i)); and • the withdrawal advisory code published by the Authority (clause 18(c)(ii)). 	
	<ul style="list-style-type: none"> • within 5 business days after receiving a 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)). 	
	<ul style="list-style-type: none"> • on receipt of a rejection notification from the registry manager, in accordance with clause 18(d), a trader may re-submit the switch withdrawal request for an ICP in 	

Code ref	Description	Notes
	<p>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)).</p>	
	<ul style="list-style-type: none"> if the trader requests that a switch request be withdrawn, and the resolution of that switch withdrawal request results in the switch proceeding, within 2 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)). 	
<p>Clause 21 of Schedule 11.3</p>	<p>For an interrogation or validated meter reading or permanent estimate carried out in accordance with Schedule 11.3:</p> <ul style="list-style-type: none"> 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. 	
<p>Clause 11.15AA to 11.15AB</p>	<p>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.</p> <p>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:</p>	<p>A trader is not prohibited from contacting the customer to advise the customer of any termination fees that the customer is required to pay or for the purposes of:</p> <ul style="list-style-type: none"> obtaining fees the customer owes the trader obtaining a final meter reading communicating about how

Code ref	Description	Notes
		keys will be returned <ul style="list-style-type: none"> • advising on the effect of any other contracts that the trader may have with the customer. • responding to requests from the customer and offering enticement to a customer as part of a general marketing campaign • responding to a customer who has invited the trader to provide a counter offer
	<ul style="list-style-type: none"> • 11.15AB(4)(a)- making a counter offer to the customer; or 	
	<ul style="list-style-type: none"> • 11.15AB(4)(b)- offering an enticement to the customer. 	

Function 5: Maintenance of unmetered load

Process 5: Maintenance of unmetered load

- A.4 The participant is responsible for managing its unmetered load, including shared unmetered load. The Code records the obligations of the distributor and trader regarding changes to existing unmetered load or new unmetered load. These obligations include accepting responsibility for the unmetered load and communicating changes to the relevant participants and the registry.

Relevant provisions of the Code

Code ref	Description	Notes
Clause 11.14	The trader must adhere to the process for maintaining shared unmetered load as outlined in clause 11.14:	If a trader has no shared unmetered load, the trader should still have processes in place in the event that shared unmetered load may be found on an ICP that the trader is responsible for.
	<ul style="list-style-type: none"> 11.14(2)- The distributor must give written notice to the registry manager and the traders responsible for the ICPs across which the unmetered load is shared, of the ICP identifiers of the ICPs. 	
	<ul style="list-style-type: none"> 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. 	
	<ul style="list-style-type: none"> 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. 	
	<ul style="list-style-type: none"> 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. 	

Code ref	Description	Notes
	<ul style="list-style-type: none"> • 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. 	
Clause 10.14 (2)(b)	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.	Does not apply to distributed unmetered load.
Clause 10.14 (5)	<p>If the unmetered load limit is exceeded the retailer must:</p> <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • the date the limit was calculated or estimated to have been exceeded • the details of the corrective measures that the MEP proposes to take or is taking to reduce the unmetered load. 	

Code ref	Description	Notes
Clause 11 of Schedule 15.3 clause 15.37B	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. ¹⁵	Check that databases exists and has been audited. There is a separate guideline for audits related to distributed unmetered load.
	The database must satisfy the requirements of Schedule 15.5 with regard to the methodology for deriving submission information.	

¹⁵ Clause 15.37B

Function 6 – Gathering and storing raw meter data

Process 6A: Gathering raw meter data

A.5 The reconciliation participant is responsible for maintaining the frequency and accuracy of meter readings in accordance with the Code. Time parameters of each NHH and HHR meter read and the appropriate information contained are stipulated in the Code and must be complied with.

Relevant provisions of the Code

Code ref	Description	Notes
Clause 10.13	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.	This includes quantifying electricity where a metering installation has been bridged.
Clause 10.24	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: <ul style="list-style-type: none"> • there is 1 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. 	For points of connection to the grid it is the responsibility of the asset owner must ensure there is 1 or more metering installations for each grid injection point.
Clause 10.26(6) and (8)	For each proposed metering installation or change to a metering installation that is a connection to the grid, the participant, must: <ul style="list-style-type: none"> • provide to the grid owner a copy of the metering installation design, before ordering the equipment • provide the grid owner with at least 3 months to review and comment on the design • respond, within 3 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. 	This includes the grid owner and asset owner for each grid injection point.
Clause 10.26(7)	The participant responsible for the metering installation must: <ul style="list-style-type: none"> • 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 	This clause applies when a metering installation is certified.

Code ref	Description	Notes
	<ul style="list-style-type: none"> 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. 	
<p>Clause 10.35(1) and (2)</p>	<p>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.</p> <p>A reconciliation participant responsible for ensuring there is a category 3 or higher metering installation must:</p> <ul style="list-style-type: none"> if practical in the circumstances, ensure that the metering installation is located at a point of connection; or 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. 	
<p>Clause 33 Schedule 10.7 and clause 2(2) of Schedule 15.3</p>	<p>The reconciliation participant must advise the metering equipment provider if a control device is used to control load or switch meter registers.</p> <p>The reconciliation participant must ensure the control device is certified prior to using it for reconciliation purposes.</p>	<p>Select a sample from the registry of ICPs that use a controlled load profile and compare these to the certification status of the control device in the metering installation certification records.</p>
<p>Clause 10.43(2) and (3)</p>	<p>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:</p> <ul style="list-style-type: none"> advise the MEP include in the advice all relevant details. 	
<p>Clause 2 of Schedule 15.2</p>	<p>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:</p>	<p>If the MEP is the only party which can interrogate the meter, ensure that this has been covered in the MEP audit report. In all other circumstances it is</p>

Code ref	Description	Notes
	<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> (a) ensure the system is to within +/- 5 seconds of NZST or NZDT (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: <ul style="list-style-type: none"> (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: <ul style="list-style-type: none"> • the time • the date • the extent of any change made to the meter clock. 	<p>the participant's responsibility and should be included in this audit.</p> <p>This includes manual electronic interrogation (such as using a hand-held device to interrogate the meter).</p> <p>The trader should ensure that a process to check clock synchronisation is carried out by their agent.</p>
Clause 3(1) of Schedule 15.2	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.	
Clause 3(2) of	All validated meter readings must be derived from meter readings.	

Code ref	Description	Notes
Schedule 15.2	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.	
Clause 5 of Schedule 15.2	<p>During the manual interrogation of each NHH metering installation the reconciliation participant must:</p> <ul style="list-style-type: none"> (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. <p>If the relevant parts of the metering installation are visible and it is safe to do so.</p>	This check should include identifying which metering installations do not have the relevant parts visible or where it is unsafe to meet this clause.
Clause 6 of Schedule 15.2	<p>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.</p> <p>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.</p>	
Clause 7(1) of Schedule 15.2	<p>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.</p> <p>This may be a validated meter reading at the time the ICP is switched to, or from, the reconciliation participant.</p>	
Clause 7(2) of Schedule 15.2	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).	A record of exceptional circumstances should be maintained to show compliance with this clause.
Clause 8(1) of	At least once every 12 months, each reconciliation participant must obtain a validated meter	

Code ref	Description	Notes
Schedule 15.2	reading for every meter register for non half hour metered ICPs, at which the reconciliation participant trades continuously for each 12 month period.	
Clause 8(2) of Schedule 15.2	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).	A record of exceptional circumstances should be maintained to show compliance with this clause.
Clause 9(1) of Schedule 15.2	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 4 months for 90% of the non half hour metered ICPs.	
Clause 9(1)(a) of Schedule 15.2	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.	This report should match the meter read attainment records held by the participant.
Clause 9(2) of Schedule 15.2	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).	A record of exceptional circumstances will be required to verify compliance.
Clause 10 of Schedule 15.2	The following information must be logged as the result of each interrogation of the NHH metering:	
	<ul style="list-style-type: none"> • 10(a)- the means to establish the identity of the individual meter reader 	
	<ul style="list-style-type: none"> • 10(b)- the ICP identifier of the ICP, and the meter and register identification 	
	<ul style="list-style-type: none"> • 10(c)- the method being used for the interrogation and the device ID of equipment being used for interrogation of the meter. 	
	<ul style="list-style-type: none"> • 10(d)- the date and time of the meter interrogation. 	

Code ref	Description	Notes
Clause 11(1) of Schedule 15.2	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.	
Clause 11(2) of Schedule 15.2	The following information is collected during each interrogation:	
	<ul style="list-style-type: none"> • 11(2)(a)- the unique identifier of the data storage device 	
	<ul style="list-style-type: none"> • 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 	
	<ul style="list-style-type: none"> • 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 	
	<ul style="list-style-type: none"> • 11(2)(d)- the event log, which may be limited to the events information accumulated since the last interrogation 	
	<ul style="list-style-type: none"> • 11(2)(e)- an interrogation log generated by the interrogation software to record details of all interrogations. <p>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.</p>	Participants should demonstrate they receive the logs and understand the contents to be able to take appropriate action, even if logs processed through an agent.
Clause 11(3) of Schedule 15.2	The interrogation log forms part of the interrogation audit trail and, as a minimum, must contain the following information:	
	<ul style="list-style-type: none"> • 11(3)(a)- the date of interrogation 	
	<ul style="list-style-type: none"> • 11(3)(b)- the time of commencement of interrogation 	
	<ul style="list-style-type: none"> • 11(3)(c)- the operator identification (if available) 	
	<ul style="list-style-type: none"> • 11(3)(d)- the unique identifier of the meter or data storage device 	

Code ref	Description	Notes
	<ul style="list-style-type: none"> • 11(3)(e)- the clock errors outside the range specified in Table 1 of clause 2 	
	<ul style="list-style-type: none"> • 11(3)(f)- the method of interrogation 	
	<ul style="list-style-type: none"> • 11(3)(g)- the identifier of the reading device used for interrogation (if applicable). 	

Process 6B: Storing raw meter data

A.6 The reconciliation participant is responsible for maintaining interrogation and processing systems in accordance with the Code including internal clock calibration. Raw meter data must be downloaded, secured, and in accordance with the Code. This process also includes the methodology for altering raw meter data and the appropriate audit trail it must generate.

Relevant provisions of the Code

Code ref	Description	Notes
Clause 13 of Schedule 15.2	The trading period duration, normally 30 minutes, must be within $\pm 0.1\%$ (± 2 seconds).	
Clause 18(1) of Schedule 15.2	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.	
Clause 18(2) of Schedule 15.2	Procedures must be in place to ensure that raw meter data cannot be accessed by unauthorised personnel.	
Clause 18(3) of Schedule 15.2	Meter readings cannot be modified without an audit trail being created.	
Clause 21(5) of Schedule 15.2	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.	

Function 7 – Creating and managing (including validating, estimating, storing, correcting, and archiving) volume information

Process 7A: Error handling of volume information

A.7 The participant is responsible for validating volume information. If errors are discovered, the participant must correct the information using the methodologies set out in the Code.

Relevant provisions of the Code

Code ref	Description	Notes
Clause 19(1) of Schedule 15.2	If errors are detected during validation of non half hour meter readings, one of the following must be undertaken:	
	<ul style="list-style-type: none"> 19(1)(a)- confirmation of the original meter reading by carrying out another meter reading 	
	<ul style="list-style-type: none"> 19(1)(b)- replacement of the original meter reading by another meter reading (even if the replacement meter reading may be at a different date) 	
	<ul style="list-style-type: none"> 19(1)(c)- if the original meter reading cannot be confirmed or replaced by a meter reading from another interrogation, then an estimated reading is substituted and the estimated reading is marked as an estimate and it is subsequently replaced in accordance with clause 4(2). 	
Clause 19(2) of Schedule 15.2	If errors are detected during validation of half hour metering information the correction must be as follows:	
	<ul style="list-style-type: none"> 19(2)(a)- if a check meter or data storage device is installed at the metering installation, data from this source may be substituted 	
	<ul style="list-style-type: none"> 19(2)(b)- in the absence of any check meter or data storage device, data may be substituted from another period if the total of all substituted intervals matches the total consumption recorded on the meter, if available, and the pattern of consumption is considered materially similar to the period in error. 	

Code ref	Description	Notes
Clause 19(3) of Schedule 15.2	If error compensation and loss compensation are carried out as part of the process of determining accurate data, the compensation process must be documented and must comply with audit trail requirements.	
Clause 22(1) of Schedule 15.2	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.	
Clause 22(2) of Schedule 15.2	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:	
	22(2)(a)- the date of the correction or alteration	
	22(2)(b)- the time of the correction or alteration	
	22(2)(c)- the operator identifier of the reconciliation participant	
	22(2)(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	
	22(2)(e)- the technique used to arrive at the corrected data	
	22(2)(f)- the reason for the correction or alteration.	

Process 7B: Estimating and validating volume information

A.8 Volume data must be derived in accordance of the Code. If volume data is not available, the data must be estimated and clearly labelled. The participant must validate non half-hour (NHH) and half-hour (HHR) metering information in accordance with Code.

Relevant provisions of the Code

Code ref	Description	Notes
Clause 3(3) of Schedule 15.2	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.	
Clause 3(4) of Schedule 15.2	Volume information must be directly derived, in accordance with Schedule 15.2, from:	
	<ul style="list-style-type: none"> • 3(4)(a)- validated meter readings 	
	<ul style="list-style-type: none"> • 3(4)(b)- estimated readings 	
	<ul style="list-style-type: none"> • 3(4)(c)- permanent estimates. 	
Clause 3(5) of Schedule 15.2	All meter data that is used for derive volume information must not be rounded or truncated from the stored data from the metering installation.	
Clause 15 of Schedule 15.2	<p>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.</p> <p>The reconciliation participant must use reasonable endeavours to ensure that estimated submission information is within the percentage specified by the Authority.</p>	
Clause 16 of Schedule 15.2	Each validity check of non half hour meter readings and estimated readings must include the following:	
	<ul style="list-style-type: none"> • 16(2)(a)- confirmation that the meter reading or estimated reading relates to the correct ICP, meter, and register 	

Code ref	Description	Notes
	<ul style="list-style-type: none"> • 16(2)(b)- checks for invalid dates and times 	
	<ul style="list-style-type: none"> • 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 	
	<ul style="list-style-type: none"> • 16(2)(d)- confirmation that there is no obvious corruption of the data, including unexpected 0 values. 	
Clause 17 of Schedule 15.2	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:	
	<ul style="list-style-type: none"> • 17(4)(a)- checks for missing data 	
	<ul style="list-style-type: none"> • 17(4)(b)- checks for invalid dates and times 	
	<ul style="list-style-type: none"> • 17(4)(c)- checks of unexpected 0 values 	
	<ul style="list-style-type: none"> • 17(4)(d)- comparison with expected or previous flow patterns 	
	<ul style="list-style-type: none"> • 17(4)(e)- comparisons of meter readings with data on any data storage device registers that are available 	
<ul style="list-style-type: none"> • 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. 		

Function 8 – Provision of metering information in accordance with subpart 4 of Part 13 (clause 15.38(1)(f))

Process 8: Provision of metering information to the relevant grid owner

- A.9 The participant must provide half hour metering information to the grid owner connected to the relevant local network in accordance with the Code. The half hour metering information must be provided for unoffered generation and any electricity.

Relevant provisions of the Code

Code ref	Description	Notes
Clause 13.136	<p>The generator (and/or embedded generator) must provide to the relevant 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:</p> <ul style="list-style-type: none"> • 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. 	Unoffered generation and intermittent generation are excluded.
Clause 13.137	Each generator must provide the relevant grid owner half-hour metering information for:	
	<ul style="list-style-type: none"> • any unoffered generation from a generating station with a point of connection to the grid (clause 13.137(1)(a)) 	
	<ul style="list-style-type: none"> • any electricity supplied from an intermittent generating station with a point of connection to the grid (clause 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 relevant grid owner a reasonable estimate of such data (clause 13.137(3)).	
Clause 13.138	The generator must provide the information required by clauses 13.136 and 13.137:	
	<ul style="list-style-type: none"> • 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 	

Code ref	Description	Notes
	<ul style="list-style-type: none"> • 13.138(1)(b) – in the manner and form that the relevant grid owner stipulates 	
	<ul style="list-style-type: none"> • 13.138(1)(c)- by 0500 hours on a trading day for each trading period of the previous trading day. 	
	<p>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.</p>	
Clause 13.140	<p>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.</p>	

Function 9 – Provision of submission information for reconciliation

Process 9A: Calculation of supporting information

- A.10 The participant is responsible for providing the reconciliation manager reports detailing supporting information for each network supply point (NSP) it trades on. The reports are to be supplied for the prior billing month as well as revision months if changes have occurred to information affecting these reports.

Relevant provisions of the Code

Code ref	Description	Notes
Clause 15.3	<p>Unless an embedded generator has given a notification in respect of the point of connection under clause 15.3, a trader must give the reconciliation manager notice 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.</p> <p>The notice must comply with any procedures or requirements specified by the reconciliation manager.</p>	<p>The embedded generation under clause 15.13 is also referred to as gifted generation.</p> <p>For distributed generation the profile code PV1 or EG1 must be used.</p>
Clause 15.6	<p>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:</p> <ul style="list-style-type: none"> • 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. <p>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.</p>	

Code ref	Description	Notes
Clause 15.7	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:	
	<ul style="list-style-type: none"> • 15.7(a)- submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period 	
	<ul style="list-style-type: none"> • 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. 	
Clause 15.8	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:	
	<ul style="list-style-type: none"> • 15.8(a)- submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period 	
	<ul style="list-style-type: none"> • 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. 	

Process 9B: Submission computation

A.11 The participant is responsible for submitting reconciliation data using validation meter readings or permanent estimates in accordance with the Code. This includes the submission of HHR, NHH and unmetered load data. Estimation and profiling methodology of this data must also be in accordance with the Code.

Relevant provisions of the Code

Code ref	Description	Notes
Clause 15.36	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.	
Clause 15.4	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).	
Clause 15.5	<p>In preparing and submitting submission information, the reconciliation participant must allocate volume information for each ICP to the NSP indicated by the data held by the registry for the relevant consumption period at the time the reconciliation participant assembles the submission information. Volume information must be derived in accordance with Schedule 15.2.</p> <p>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.</p>	

Code ref	Description	Notes
Clause 15.9	The participant (if a grid owner) must deliver to the reconciliation manager for each point of connection for all of its GXPs, the following:	
	<ul style="list-style-type: none"> • submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period (clause 15.9(a)) 	
	<ul style="list-style-type: none"> • 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)) 	
Clause 15.10	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:	
	<ul style="list-style-type: none"> • submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period (clause 15.10(a)) 	
	<ul style="list-style-type: none"> • 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)) 	
Clause 15.11	The participant (if a grid connected generator) must deliver to the reconciliation manager for each of its points of connection, the following:	
	<ul style="list-style-type: none"> • submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period (clause 15.11(a)) 	
	<ul style="list-style-type: none"> • 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)) 	
Clause 15.12	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).	

Code ref	Description	Notes
Clause 15.13	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.	<p>If notification has been given, the generation volume will not be included in submission information.</p> <p>This is also referred to as gifted generation. A participant must be able to show the notifications to the reconciliation manager associated with this embedded generation.</p>
Clause 4(1) of Schedule 15.2	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).	
Clause 4(2) of Schedule 15.2	Volume information created using estimated readings must be subsequently replaced at the earliest opportunity by the reconciliation participant by volume information that has been created using validated meter readings or permanent estimates by, at the latest, the month 14 revision cycle.	
Clause 4(3) of Schedule 15.2	A permanent estimate may be used in place of a validated meter reading, but only if, despite having used reasonable endeavours; the reconciliation participant has been unable to obtain a validated meter reading.	

Code ref	Description	Notes
Clause 2 of Schedule 15.3	<p>If a reconciliation participant prepares submission information for each NSP for the relevant consumption periods in accordance with the Code, such submission information must comprise the following:</p>	<p>To verify the accuracy of submission information the audit should verify:</p> <ul style="list-style-type: none"> • the correct number of ICPs are present in a file • total amount of energy in a data set sums to the volumes in the AV-80 or Av-90 as appropriate • the amount of UML in a dataset tallies with the stated values in the registry PR-010 files • any detected anomalies are explained.
	<ul style="list-style-type: none"> • half hour volume information 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)) 	
	<ul style="list-style-type: none"> • 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)): <ul style="list-style-type: none"> • half hour volume information for the ICP; or • non half hour volumes information calculated under clauses 4 to 6 (as applicable). 	

Code ref	Description	Notes
	<ul style="list-style-type: none"> • 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)) 	<p>If the reconciliation participant is responsible for one or more distributed unmetered load databases, confirm that information sourced from the database is used for reconciliation submissions, including corrections via the wash-up process.</p>
	<ul style="list-style-type: none"> • 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)): <ul style="list-style-type: none"> • (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. 	
	<ul style="list-style-type: none"> • to create submission information for a point of connection the reconciliation participant must apply to the raw meter data (clause 2(3)): <ul style="list-style-type: none"> • for each ICP, the compensation factor that is recorded in the registry (clause 2(3)(a)) • for each NSP the compensation factor that is recorded in the metering installations most recent certification report. (clause 2(3)(b)) 	

Code ref	Description	Notes
Clause 3 of Schedule 15.3	<p>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))</p> <p>Each estimate that is a forward estimate or a historical estimate must clearly be identified as such. (clause 3(2))</p> <p>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))</p>	
Clause 4 of Schedule 15.3	<p>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.</p>	
Clause 5 of Schedule 15.3	<p>If a seasonal adjustment shape is not available, the methodology for preparing an historical estimate of volume information for each ICP must be the same as in clause 4, except that the relevant quantities kWh_{Px} must be prorated as determined by the reconciliation participant using its own methodology or on a flat shape basis using the relevant number of days that are within the consumption period and within the period covered by kWh_{Px}.</p>	
Clause 6 of Schedule 15.3	<p>Forward estimates may be used only in respect of any period for which an historical estimate cannot be calculated.</p> <p>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.</p>	<p>A forward estimate is an estimation of the total quantity of electricity that flowed through an ICP during all or part of the consumption period.</p> <p>A forward estimate should not be used if there is historical data to calculate a historical estimate.</p>

Code ref	Description	Notes
Clause 7 of Schedule 15.3	<p>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.</p> <p>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.</p>	

Process 9C: Submission format and timing

A.12 The participant is responsible for reporting to the Authority information regarding the submission information made available to the reconciliation manager.

Relevant provisions of the Code

Code ref	Description	Notes
Clause 8 of Schedule 15.3	Submission information provided to the reconciliation manager must be aggregated to the following level:	
	<ul style="list-style-type: none"> • NSP code (clause 8(a)) 	
	<ul style="list-style-type: none"> • reconciliation type (clause 8(b)) 	
	<ul style="list-style-type: none"> • profile (clause 8(c)) 	
	<ul style="list-style-type: none"> • loss category code (clause 8(d)) 	
	<ul style="list-style-type: none"> • flow direction (clause 8(e)) 	
	<ul style="list-style-type: none"> • dedicated NSP (clause 8(f)) 	
Clause 9 of Schedule 15.3	trading period for half hour metered ICPs and consumption period or day for all other ICPs. (clause 8(g))	
	<p>When reporting submission information, the number of decimal places must be rounded to not more than 2 decimal places.</p> <ul style="list-style-type: none"> • If the unrounded digit to the right of the second decimal place is greater than or equal to 5, the second digit is rounded up, and • If the digit to the right of the second decimal place is less than 5, the second digit is unchanged. 	
Clause 10 of Schedule 15.3	<p>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.</p> <p>The proportion of submission information per NSP that is comprised of historical estimates must (unless exceptional circumstances exist) be:</p>	

Code ref	Description	Notes
	<ul style="list-style-type: none"> • at least 80% for revised data provided at the month 3 revision (clause 10(3)(a)) 	
	<ul style="list-style-type: none"> • at least 90% for revised data provided at the month 7 revision (clause 10(3)(b)) 	
	<ul style="list-style-type: none"> • 100% for revised data provided at the month 14 revision. (clause 10(3)(c)) 	

Audit frequency guidance

- A.13 An auditor must recommend a date by which the reconciliation participant must have completed its next audit and audit report. This provides a range from 3 months to 36 months between audits. This is to allow for a higher level of surveillance of reconciliation participants that do not have fully functional processes and a consequent lower level of compliance.
- A.14 In accordance with the risk and materiality guidelines and auditor protocol, each non-compliance identified in the reconciliation participant's most relevant audit report will be assessed by the auditor and given a breach risk rating in accordance with the risk and materiality guidelines. The sum of the breach risk ratings determines the future risk rating. The future risk rating is used to determine the indicative audit frequency.
- A.15 This “indicative audit frequency” table below has been specifically calculated for reconciliation participants and is not intended to be applied to other participant types.
- A.16 Auditors should use Table 1 to calculate the indicative audit frequency.

Table 1: Indicative audit frequency

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

Source: Electricity Authority

- A.17 Auditors will use the indicative audit frequency as the basis for a recommended audit frequency. The recommended audit frequency is the auditor's opinion of when the next audit should occur, and takes into consideration:
- the indicative audit frequency
 - the participant's proposed resolution of breaches (including breaches that have been cleared during the audit)
 - breaches that are outside of the participant's control (either due to needing improvements in the wording of the Code, or are due to the actions of another participant)
 - any instances where there is a risk of future breaches, but was not a breach in the audit report.