Distributed Unmetered Load audit guidelines

Guidelines

25 October 2016

Market Services

Version control

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1	25 October 2016	Draft for consultation

Executive summary

This guideline has been produced by the Electricity Authority (Authority) to promote better understanding and to encourage consistency in the methodology and processes surrounding Distributed Unmetered Load (DUML) audits. This guideline is intended to provide a structured approach for audits that is consistent across all auditors and participants. It also outlines retailers Electricity Industry Participation Code 2010 (Code) obligations with respect to DUML, as well as the requirements that auditors must meet when carrying out audits of DUML.

The guideline describes what retailers 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. These guidelines reflect the Authority's view.

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

Retailers are responsible for DUML audits

1.1 Retailers are responsible for the quantification of DUML volumes using a DUML database.[1]

1.2 Clause15.37B states that a retailer that is responsible for DUML must arrange for an audit to be carried out in accordance with Part 16A in respect of the DUML that verifies that—

(a) the retailer's DUML database complies with clause 11 of Schedule 15.3; and

(b) the information recorded in the retailer's DUML database is complete and accurate; and

(c) volume information for the distributed unmetered load is being calculated accurately and profiles have been correctly applied.

1.3 The retailer trading at the DUML installation control point (ICP) is responsible for arranging an audit of the DUML database and submitting the audit report to the Authority within the timeframes specified by the Code.[2]

1.4 The audit timeframes are associated with the database, not the retailer. If an ICP switches away from the retailer shortly before an audit is due (or after an audit is due but has not been completed and submitted to the Authority) the gaining retailer is responsible for the providing the audit to the Authority.

1.5 For more information regarding audit processes, please refer to the *Participant audit guidelines*.

This guideline outlines the requirements of any DUML audit

1.6 This guideline is designed to support the auditing of DUML databases that meet the requirements of 15.37B.

1.7 A DUML database audit is separated into the following functions:

- Function 1: Administrative tasks
- Function 2: DUML database requirements
- Function 3: Accuracy of DUML database
- Function 4: Accuracy of volume information and application of profiles.

1.8 Function 1 covers the administrative requirements regarding the DUML database, such as arranging for audits to occur. Functions 2–4 cover the requirements of clause 15.37B.

1.9 Auditors should use this guideline when conducting a DUML database audit.

[1] Code ref

[2] Code ref

Appendix A Function and processes

Function 1: Administrative tasks

A.1 Retailers are responsible for arranging for DUML audits to be conducted and provided to the Authority.

Table 1: Function 1: Administrative tasks

Code reference	Description	Notes
Clauses 16.A26and 17.925F	Retailers must ensure that DUML database audits are completed: 1. by 1 June 2018 (for DUML that existed prior to 1 June 2017) 2. within 3 months of submission to RM (for new DUML) 3. within the timeframe specified by the Authority for DUML that has been audited since 1 June 2017.	
Clause 16A.8(4)	Retailers must ensure that DUML audits are reported in a separate audit report.	DUML audits cannot be combined with other audit reports, such as reconciliation participant audit reports.

Function 2: DUML database requirements

A.2 Clause 15.37B(a) requires the retailer's DUML database to comply with clause 11 of Schedule 15.3. This clause sets out the minimum functional requirements of all DUML databases.

A.3 Examples of DUML databases that do not fulfil the minimum functional requirements include DUML databases that:

(a) do not record the physical location of each item of load; or

(b) are not updated when changes are made in the field; or

(c) do not include the ballast wattage of the streetlight (where ballast is used); or

(d) do not record the ICP identifier(s) associated with the items of load.

Table 2: Function 2 - DUML database requirements

Code reference	Description	Notes
Schedule 15.3 clause 11(1)	The retailer must ensure that the: • DUML database is up to date • methodology for deriving submission information complies with Schedule 15.5.	Could include reviewing change history in database with paperwork to identify how frequently database is updated and latency between updates in the field and updates in the database. Schedule 15.5 refers to profile information. Any non-standard profile (eg, a specialised streetlight profile) needs to comply with the terms of the profile. Commonly this will include a requirement for any shape files to be produced from a certified data logger.
Schedule 15.3 clause 11(2)(a) and (aa)	The DUML database must contain: • each ICP identifier for which the retailer is responsible for the DUML • the items of load associated with the ICP identifier.	It is possible for one database to contain multiple ICPs traded by more than one retailer. The database needs to clearly identify each ICP and the times of load that are associated with each ICP.
Schedule 15.3 clause 11(2)(b)	The DUML database must contain the location of each DUML item.	Each item of load needs to have a clear location. This can include specialist information such as pole number and should be used when assessing the accuracy of the database compared to items of load in the field.

Code reference	Description	Notes
Schedule 15.3 clause 11(2)(c) and (d)	The DUML database must contain: • a description of load type for each item of load and any assumptions regarding the capacity • the capacity of each item in watts.	Audits should refer to the standardised table of wattages for the expected capacity of each item of load, based on lamp type. Any lamp types not in the table should be notified to the Authority for inclusion.
Schedule 15.3 clause 11(2A)	The retailer must ensure that each item of DUML for which it is responsible is recorded in this database.	
Schedule 15.3 clause 11(3)	The DUML database must track additions and removals in a manner that allows the total load (in kW) to be retrospectively derived for any given day.	Records of the addition and removal of load need to include the day that the load was added or removed. The database needs to be configured in a manner that allows the date of addition / removal to be used when determining the total load for any given month.
Schedule 15.3 clause 11(4)	The DUML database must incorporate an audit trail of all additions and changes that identify: • the before and after values for changes • the date and time of the change or addition • Identifies the person that made the addition or change to the database.	

Function 3: Accuracy of DUML database

A.4 Clause 15.37B(b) requires the audit to verify that information recorded in the retailer's distributed unmetered load database is complete and accurate.

A.5 This involves verifying that the load recorded in the DUML database is likely to match the load installed in the field.

A.6 Examples of inaccuracies within a DUML database include missing and extra items of load, such as right of way or footpath lighting, physical connection of DUML prior to creation in the DUML database, and load that has been removed from the DUML database but not allocated to another ICP.

Table 3: Function 3: Accuracy of DUML database

Code reference	Description	Notes
Clauses 15.2 and 15.37B(b)	Audit must verify that the information recorded in the retailer's DUML database is complete and accurate.	This requires the auditor to verify that the information in the database is complete and accurate. This verification needs to be based on fact, not just verification that the process will deliver an accurate database. Examples of actions the auditor could take to verify the DUML database is complete and accurate include (but are not limited to): • application of a statistically robust sampling methodology[3] • full field audit of all items of load.[4] The auditor should also look at any changes made to the DUML database over the audit period, including whether load has been removed because it is not part of the DUML database (such as private streetlights). The auditor should ensure the responsibility for the load has been transferred, and the consumption is still settled in the market. The auditor should report to the Authority any

[3] Such as the approach covered by the DUML statistical sampling guideline

[4] For clarity the field work can be performed by the auditor, or the auditor can rely on a third party to perform the field work such as the DUML database owner, who may review the accuracy of portions of the database during regular outage patrols.

Code reference	Description	Notes
		connections that have been ‘orphaned’ (ie, no longer have an ICP). If the database is found to be inaccurate, this is likely a breach of clause 15.2 for the provision of incorrect information to the reconciliation manager.

Function 4: Accuracy of volume information and application of profiles

A.7 Clause 15.37B(c) requires the audit to verify that volume information for the DUML is being calculated accurately and profiles have been correctly applied.

A.8 Commonly this will involve reviewing the retailer's systems and processes to verify the information is being handled correctly and profiles applied correctly.

A.9 Examples of retailers not appropriately handling of DUML data can include sourcing data from a location other than the DUML database, and not correcting submissions when historical changes are made to the DUML database.

Table 4: Function 4: Accuracy of volume information and application of profiles

Code reference	Description	Notes
Clauses 15.2 and 15.37B(c)	The audit must verify that: • volume information for the DUML is being calculated accurately • profiles for DUML have been correctly applied.	Auditors can verify the DUML information is being calculated correctly by tracing the records from the database through to submission to the reconciliation manager. Auditors should check that any retrospective changes to the DUML database (such as a backdated change to the database load due to late addition of lighting) flow through to reconciliation submissions.

Code reference	Description	Notes
		Auditors can verify whether profiles have been correctly applied by reviewing the conditions of the profile and tracing the profile through to submission. If volume information is not being calculated correctly, or if information that is not sourced from the DUML database is used for submission, this is likely a breach of clause 15.2 for not providing accurate information to the reconciliation manager. If profiles have not been correctly applied, this may breach the terms of profile approval and is likely to breach clause 15.2 for not providing accurate information to the reconciliation manager.

Appendix B Audit Frequency Calculation

B.1 An auditor must recommend a date by which the DUML database must have its next audit and audit report completed. This provides a range from 3 months to 36 months between audits. This is to allow for a higher level of surveillance of DUML databases that do not have fully functional processes and a consequential lower level of compliance.

B.2 In accordance with the *Risk and materiality guidelines* and *Auditor protocol*, each breach will be assessed a breach risk rating. The sum of the breach risk ratings determines the future risk rating.

B.3 Table 6 sets out how auditors should calculate the indicative audit frequency.[5]

Table 5: Indicative audit frequency

Future risk rating	0	1–4	5–8	9–15	16–18	19+
Indicative audit frequency	36 months	24 months[6]	18 months	12 months	6 months	3 months

B.4 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, taking 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 ambiguity of the Code, or the actions of another participant[7])
- any instances where there is a risk of future breaches, but was not a breach in the audit report.

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[5] See the *Risk and materiality guidelines* for more information.

[6] The maximum period of 36 months should be recommended only after a number of audits where there has been a high level of compliance with the Code demonstrated. In most situations, 24 months should be the maximum period between audits.

[7] For example, MEPs that cannot update the registry because they have not been nominated as the MEP by the trader.

Glossary of abbreviations and terms

Audit risk	The auditors assessment of the risk to the market as a result of a breach of the Code
Code	Electricity Industry Participation Code (2010)
Distributed Unmetered Load (DUML)	Unmetered load with a single profile that is applied to a single customer, across more than 1 point of connection
Future risk rating	A numerical value assigned to a participant determined by the number of breaches and the audit risks and level of controls of each breach
Level of control	The auditor's assessment of the level of controls in place to manage the participant's compliance with a given Code obligation.