

SERVICE LEVEL PROCEDURE:

Metering Data Provider Services Category D for Metering Installation Types 5, 6 and 7

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1. GENERAL

This *service level procedure* details the requirements that the *Metering Data Provider*, must comply with for the provision of *metering data services* for *metering installation* types 5, 6 and 7.

1.1 Purpose

1.1.1 This *service level procedure* is established under clause 7.14.1A of the *Rules* and details the obligations, technical requirements, measurement processes and performance requirements that are to be performed, administered and maintained by the *Metering Data Provider*.

1.1.2 This *service level procedure* details the:

- a) Obligations of the *Metering Data Provider* in the provision of *metering data services*;
- b) Obligations of the *Metering Data Provider* to establish and maintain a *metering data services database*;
- c) Processes that must be undertaken in the *substitution, estimation and validation of metering data* by the *Metering Data Provider*;
- d) Data collection, processing and transfer requirements for *metering installation* types 5, 6 and 7;
- e) Obligations assigned to the *Metering Data Provider* within any procedures under the *Rules*; and
- f) Obligations assigned to the *Metering Data Provider* in support of the *responsible person*.

1.2 Interpretation

1.2.1 In this *service level procedure* words that are shown in italics have the meaning specified in the *Rules* or, if they are not specified in the *Rules*, they have the meaning specified in clause 1.5.

1.2.2 A reference in this *service level procedure* to a provision in the *Rules* is taken to be a reference to that provision as renumbered from time to time.

1.2.3 In this *service level procedure* words in the singular include the plural and words in the plural include the singular.

1.2.4 In this *service level procedure* diagrams are provided as an overview. If there are ambiguities between a diagram and the text, the text shall take precedence.

1.3 Regulatory Framework

1.3.1 In accordance with clause 7.4.1A of the *Rules*, the provision of *metering data services* must only be carried out by a *Metering Data Provider*.

1.3.2 In accordance with clause 7.4.2A (e) of the *Rules*, a *Metering Data Provider* must comply with the provisions of the *Rules* and procedures authorised under the *Rules*.

1.3.3 In accordance with clause 7.4.2A (a) (2) of the *Rules*, *Metering Data Providers* providing *metering data services* in the *National Electricity Market* must be accredited by and registered with AEMO. The accreditation requirements are set out in the accreditation procedures and checklists for each category of registration which include requirements as set out in:

- a) Chapter 7 of the *Rules*; and

- b) Authorised procedures under the *Rules*.

1.4 References

1.4.1 In this *service level procedure*, a reference to:

- a) '*Metrology procedure: Part B*' is a reference to the "*Metrology Procedure: Part B. Metering Data Validation, Substitution and Estimation Procedure for Metering Types 1-7*". For the avoidance of any doubt, any reference within this procedure to:
 - i. *Validate* or *validation* refers to the process as expressed within the *metrology procedure: Part B*;
 - ii. *Substitute* or *substitution* refers to the process as expressed within the *metrology procedure: Part B*; and
 - iii. *Estimate* or *estimation* refers to the process as expressed within the *metrology procedure: Part B*.
- b) '*Metrology procedure: Part A*' is a reference to the "*Metrology Procedure: Part A*". Any reference within this *service level procedure* is in accordance with the context of the provision and in relation to:
 - i. The responsibility for *metering data services*; and
 - ii. The requirement to be registered with *AEMO* for the provision of *metering data services*,
- c) '*MSATS Procedures*' is a reference to any one or all of the following documents in accordance with the context of the provision:
 - i. '*CATS Procedure*' is a reference to the *CATS Procedures Principles and Obligations*;
 - ii. '*Standing Data*' is a reference to the static *metering data* held within *MSATS* as detailed in '*Standing Data for MSATS*'; and
 - iii. '*MDM Procedures*' is a reference to *MSATS Procedures: MDM Procedures*.
- d) '*B2B Procedures*' is a reference to any one or all of the following documents in accordance with the context of the provision:
 - i. '*Customer and Site Details Notification Process*';
 - ii. '*Service Order Process*'; and
 - iii. '*Meter Data Process*'.
- e) '*NMI Procedure*' is a reference to the latest version of the "*National Metering Identifier Procedure*".
- f) '*Data Delivery Calendar*' is a reference to the applicable version of the '*AEMO Data Delivery Calendar*'.
- g) '*Metering Data Churn Procedure*' is a reference to the '*Meter Churn Data Management Procedure*' that *Metering Data Providers* must comply with.
- h) '*FRMP Churn Procedures*' is a reference to the '*Meter Churn Procedures*' for *financially responsible Market Participants*'.
- i) '*MDFF*' is a reference to;

- i. The 'Meter Data File Format Specification' for provision of *metering data* to *Local Retailers, Market Customers, Network Service Providers* and other *Metering Data Providers*. This document is currently the "Meter Data File Format Specification NEM12 & NEM13".
 - ii. An alternative version of the Meter Data File Format Specification which may be used for the provision of *metering data* to a *Generator* participant. This is currently the NEM01 format as specified in the "Meter Data File Format – NEM01 specification".
- j) 'MDM data file' is a reference to the aseXML *metering data* file to be used for sending *metering data* to AEMO's MSATS system. The latest version of the 'MDM File Format and Load Process' procedure details the process and file format to be complied with by *Metering Data Providers*.
- k) 'Market Management Systems Access Procedure' is a reference to the latest version of AEMO's Market Management Systems Access Procedure, Policy 02113.
- l) 'Service level procedure' is a reference to this document.

1.5 Definitions and Acronyms

data stream

A *data stream* means a stream of *energy data* or *metering data* associated with a *metering point*, as represented by a *NMI*. For example, a *NMI* will have multiple *data streams* where one or more *meters* or one or more channels or registers comprise a single *meter*. Each *data stream* is identified by a suffix, which is associated with the *NMI* to which it belongs.

substitution, substitute, substituted

A process undertaken by a *Metering Data Provider* or AEMO for the *substitution* of missing (null) or erroneous *metering data* or where the *metering data* has failed the *validation* process.

validation, validate, validated

A process undertaken by the *Metering Data Provider* to test the veracity and integrity of *metering data* prior to transfer to AEMO and other *Registered Participants*.

estimation, estimate, estimated

The processing of data undertaken by a *Metering Data Provider* for the *estimation* of *metering data* where the scheduled meter reading cycle does not support the delivery time frames of *metering data* to AEMO or other *Registered Participants*.

1.6 Document Responsibility

- 1.6.1 In accordance with clauses 7.1.3, 7.1.4 and 7.14.1A or the *Rules*, AEMO is responsible for:
- a) Preparing the *service level procedure* in accordance with *Rules consultation procedures*;
 - b) Revising the *service level procedure* in accordance with *Rules consultation procedure*; and
 - c) Publishing the *service level procedure*.
- 1.6.2 The *service level procedure* must be available for public access on the AEMO website.
- 1.6.3 Where AEMO considers a proposed amendment to the *service level procedure* is of a minor or administrative nature, AEMO is not required to undertake consultation in accordance with the *Rules consultation procedures* but must comply with the requirements of clause 7.1.4 (e) of the *Rules*.

2. METERING DATA PROVIDER

2.1 Metering Data Provider Obligations

- 2.1.1 Where the *Metering Data Provider* is responsible for the provision of *metering data services*, the *Metering Data Provider* must:
- a) Provide compliant *metering data services*;
 - b) Establish and administer a *metering data services database*;
 - c) Establish and maintain a *metering register* in their *metering data service database*;
 - d) Maintain the security and confidentiality of any *metering* passwords;
 - e) Ensure that *metering data* and relevant *NMI Standing Data* is kept confidential and secure in accordance with *Rule* obligations;
 - f) Undertake the collection and/or calculation of *metering data* through the processes that the *Metering Data Provider* has been accredited and engaged for;
 - g) Collect *metering data*; and
 - h) Undertake *validation, estimation and substitution of metering data* in accordance with the *metrology procedure*: Part B.
- 2.1.2 The *Metering Data Provider* must comply with the provisions of the *Rules* and procedures authorised under the *Rules*.
- 2.1.3 The *Metering Data Provider* must ensure that any and all deliveries or transfers of *metering data*, relevant *NMI Standing Data* or *metering register* data for a *metering installation* from the *Metering Data Provider's metering data services database*, is only provided to persons entitled to have access to the data in accordance with clause 7.7(a) of the *Rules*.

2.2 Metering Data Provider Services

- 2.2.1 The *Metering Data Provider* must comply with this *service level procedure*.
- 2.2.2 The *Metering Data Provider* is required to provide *metering data services* which relate to the collection, calculation, processing and transfer of *metering data* and the management of relevant *NMI Standing Data* for all *connection points* for which they have responsibility for in MSATS. The *Metering Data Provider* must continue to perform the services until otherwise advised by:
- a) The *financially responsible Market Participant*, the *responsible person* or AEMO through the MSATS Procedures; or
 - b) AEMO, as part of an action undertaken within the 'Service Provider Compliance and Deregistration Procedure'.
- 2.2.3 In complying with clause 2.2.2 of this *service level procedure*, the *Metering Data Provider* must be compliant with the additional obligations within the 'Metering Data Churn Procedure' and the 'FRMP Churn Procedures' which are associated with customer transfers, participant role and metrology changes.
- 2.2.4 The *Metering Data Provider* is responsible for all *metering data services* from the point of collection of *metering data* from the physical *metering installation* to the point of *metering data* and relevant *NMI Standing Data* delivery interfaces to MSATS, the *B2B e-Hub*, *Registered Participants* and other service providers, as detailed in this *service level procedure*.

2.2.5 The *Metering Data Provider* is required to:

- a) Actively assist in the prompt registration of *connection point data streams* in accordance with the MSATS Procedures;
- b) Ensure registered details of the *connection point* are fully recorded in the *Metering Data Provider's metering data services database*. These details must be managed in an accessible and auditable manner;
- c) Ensure *metering* details are correct, particularly parameters that affect the translation of *metering data*, relevant *NMI Standing data* or *metering register* data from each *metering installation* into the *Metering Data Provider's metering data services database*;
- d) Facilitate the timely registration of the *metering installation* and the confirmation of *metering installation* details;
- e) Ensure that there is no continued *metering data* being registered for the *connection point* before deactivating the *data stream(s)* in MSATS or discontinuing the collection process from the *metering installation*;
- f) Be accredited by AEMO to provide *metering data services*;
- g) Comply with all directions from AEMO to fulfil any obligation under this *service level procedure*;
- h) Comply with any statutes, regulations, bylaws, codes, *Rules*, procedures under the *Rules* and governmental policies relating to the provision of *metering data services*;
- i) Provide and maintain equipment and facilities sufficient to enable the *Metering Data Provider* to properly carry out the *metering data services*;
- j) Maintain the auditability, integrity and veracity of the *Metering Data Provider's metering data services database* and *metering register* for all *metering installations* for which they are the nominated *Metering Data Provider* in MSATS; and
- k) Make all reasonable endeavours to co-operate in good faith with:
 - i. AEMO;
 - ii. All *Registered Participants*; and
 - iii. Other accredited *Metering Data Providers* and *Metering Providers* within the *National Electricity Market*.

2.2.6 Where the *metering installation* includes the measurement of *reactive energy*, the *Metering Data Provider* is required to store this *metering data* along with the *metering installations* active *metering data* in the *Metering Data Provider's metering data services database*. The *Metering Data Provider* is required to include the provisioning of all reactive *metering data* to *Registered Participants* who have right of access to that *metering data*.

3. PROCEDURAL OBLIGATIONS

3.1 NMI Procedure

- 3.1.1 The *Metering Data Provider* must maintain compliance with the NMI Procedure and in particular:
- a) That correct allocation and control of all *data stream* suffixes are maintained within the *Metering Data Provider's metering data services database*; and
 - b) Verify that the *NMI* is registered in MSATS.

3.2 MSATS Procedures

- 3.2.1 The *Metering Data Provider* is responsible for the provision of *metering data* services for all *connection points* for which they are the nominated *Metering Data Provider* in MSATS.
- 3.2.2 The *Metering Data Provider* must remain compliant with all applicable MSATS Procedures.
- 3.2.3 The *Metering Data Provider* must meet the specified obligations with respect to customer establishment and customer transfers within the timeframes defined in the MSATS Procedures.
- 3.2.4 The *Metering Data Provider* must maintain and operate an interface with AEMO's MSATS system for the delivery of *metering data* and relevant *NMI Standing Data* to AEMO's *metering database*.

3.3 B2B Procedures

- 3.3.1 The *Metering Data Provider* must remain compliant with all applicable *B2B Procedures*.
- 3.3.2 The *Metering Data Provider* must maintain and operate an interface with the *B2B e-Hub* for the purposes of managing relevant *B2B communications* and for the delivery of *metering data* and relevant *NMI Standing Data* to relevant *Registered Participants*, other *Metering Data Providers* and AEMO.

3.4 Metering Data File Format

- 3.4.1 The *Metering Data Provider* must deliver *metering data* to all relevant *Registered Participants* in a format that is compliant with the requirements of the MDFF specification.
- 3.4.2 The *Metering Data Provider* must deliver *metering data* to AEMO compliant with the process and format as specified in the 'MDM File Format and Load Process' procedure.
- 3.4.3 The *Metering Data Provider* must deliver *metering data* to all relevant *Registered Participants* and AEMO interfaces as specified within this *service level procedure*.

3.5 Meter Churn Data

- 3.5.1 The *Metering Data Provider* must comply with the Meter Churn Data Procedure.
- 3.5.2 The *Metering Data Provider* must be especially cognisant of *connection point* transfers that are retrospective and ensure that the integrity and veracity of *metering data* is not impaired with the change of service provision.
- 3.5.3 The *Metering Data Provider* may be requested to assist the *financially responsible Market Participant* and or *responsible person* in the management of meter churn as detailed in the FRMP Churn Procedures for *financially responsible Market Participants*.

3.6 Metrology Procedure: Part B

- 3.6.1 The *Metering Data Provider* must comply with the *metrology procedure: Part B* in so much that it applies to *metering installation* types 5, 6 and 7.
- 3.6.2 The *Metering Data Provider* must subject all *metering data* to full and complete *validation* before any *metering data* is delivered to *AEMO* and *Registered Participants*.
- 3.6.3 The *Metering Data Provider* must undertake *estimations* and *substitutions* in accordance with the *metrology procedure: Part B*.
- 3.6.4 The *Metering Data Provider* must have a process in place that ensures that all *connection points* are commissioned into the *Metering Data Provider's metering data services database* in accordance with the '*Validation within the Registration Process*', as detailed within the *metrology procedure: Part B*.
- 3.6.5 The *Metering Data Provider* must *validate* the *metering data* collected from each registered *metering installation* as soon as practicable after being advised by the *financially responsible Market Participant*, the *responsible person* or the *Metering Provider* that the installation is ready for service.
- 3.6.6 The *Metering Data Provider* must have a process in place to maintain auditable records that:
- a) Show all *metering data* has been *validated* within the registration process and that sign off with the *Metering Provider* was undertaken;
 - b) Show all *metering data* has been subjected to all of the required *validation* criteria inclusive of *meter* alarms and that all *validation* failures are authenticated;
 - c) Detail the reason code(s) and *substitution* method code(s) for any *substitution of metering data*; and
 - d) Detail the reason code(s) and *estimation* method code(s) for any *estimation of metering data*.

3.7 Metrology Procedure: Part A

- 3.7.1 The *Metering Data Provider* must comply with the *metrology procedure: Part A* in so much that it applies to the collection of *metering data* and the provision of *metering data services* for *metering installation* types 5, 6 and 7.

3.8 Responsible Person and Metering Provider

- 3.8.1 Notwithstanding that it is the *responsible person* who is primarily accountable for the compliance and performance of the *metering installation*, it must be recognised that the *Metering Data Provider*, through this *service level procedure*, affords the *responsible person* a very significant degree of support.
- 3.8.2 Disputes arising from failure to adequately deliver performance shall be addressed in good faith by the *Metering Data Provider*, the *responsible person* and *AEMO*, with the aim of jointly rectifying any problems. The review procedures put in place by *AEMO* will review the *Metering Data Provider's* success at meeting the performance criteria under this *service level procedure*.
- 3.8.3 The *Metering Data Provider* must keep the *responsible person* and the *Metering Provider* informed of any *outages* or *metering installation malfunctions*.

4. TECHNICAL REQUIREMENTS

4.1 Metering Register

- 4.1.1 The *Metering Data Provider* must establish and maintain a *metering register* in their *metering data services database* in support of AEMO's obligation under clause 7.5.1 of the *Rules* and in accordance with this *service level procedure*.
- 4.1.2 The *Metering Data Provider* must ensure that the *metering register* contains the applicable details listed in the clause S7.5 of the *Rules* with the exception of clause S7.5.2(b) of the *Rules* sub clauses 5, 6 and 7 and with exception of clause S7.5.2 (c) of the *Rules* for *meter* types 5 (including AMI), 6 and 7.
- 4.1.3 The *Metering Data Provider* must coordinate the registration of information in the *metering register* in cooperation with the *responsible person*, the *Metering Provider* and, where necessary, any other *Metering Data Provider* or *Metering Provider* associated with the transfer of a *connection point*.
- 4.1.4 The *Metering Data Provider* must provide the *metering register* information on request to respective persons entitled to have access to the data in accordance with clause 7.7(a) of the *Rules*.
- 4.1.5 The *Metering Data Provider* must facilitate communication of the *metering register* information to other respective *Metering Data Providers* having the right of access as a result of an active transfer of a *connection point*.

5. METERING DATA PROCESS

5.1 Metering Data Process

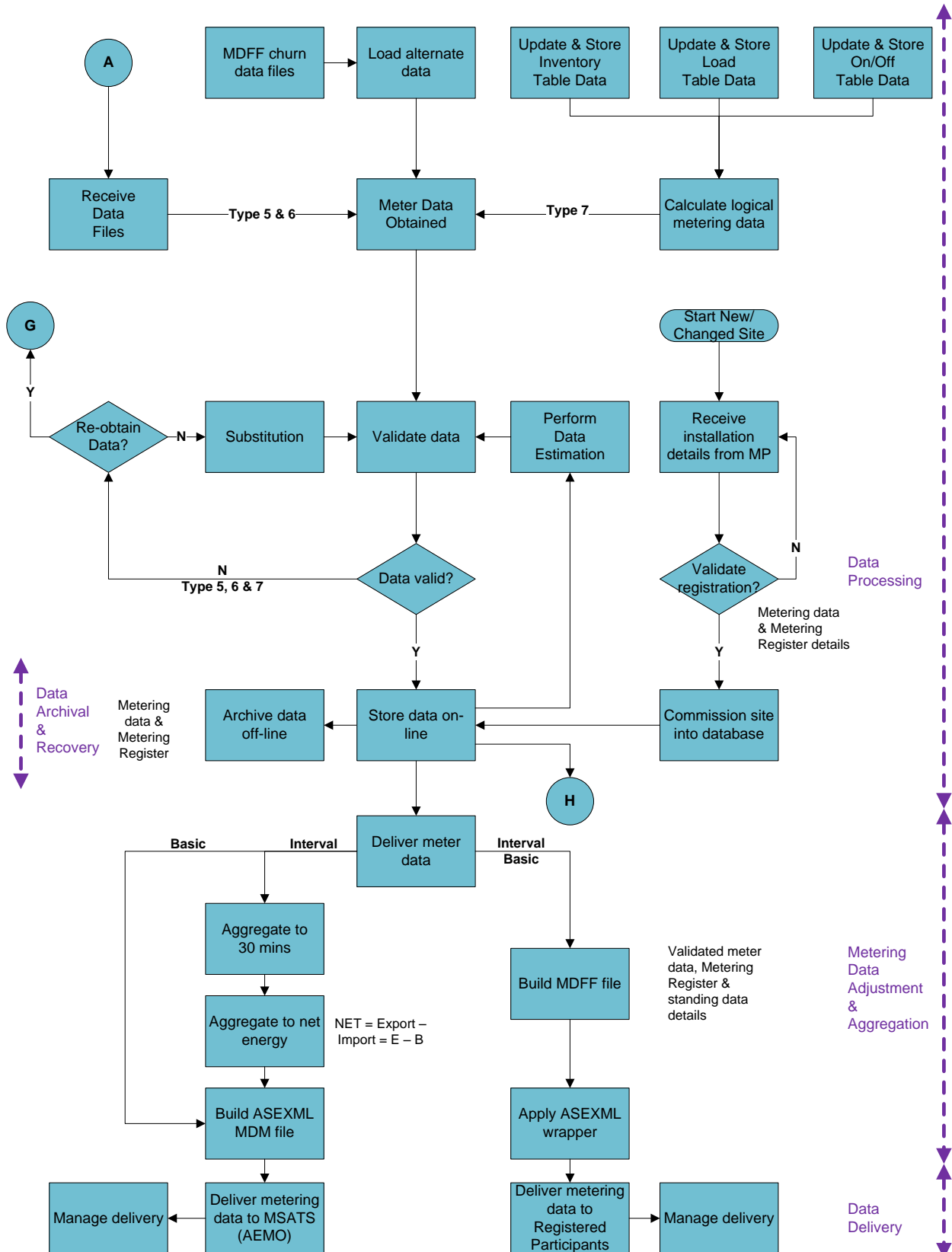


Figure 1: Metering Data Process

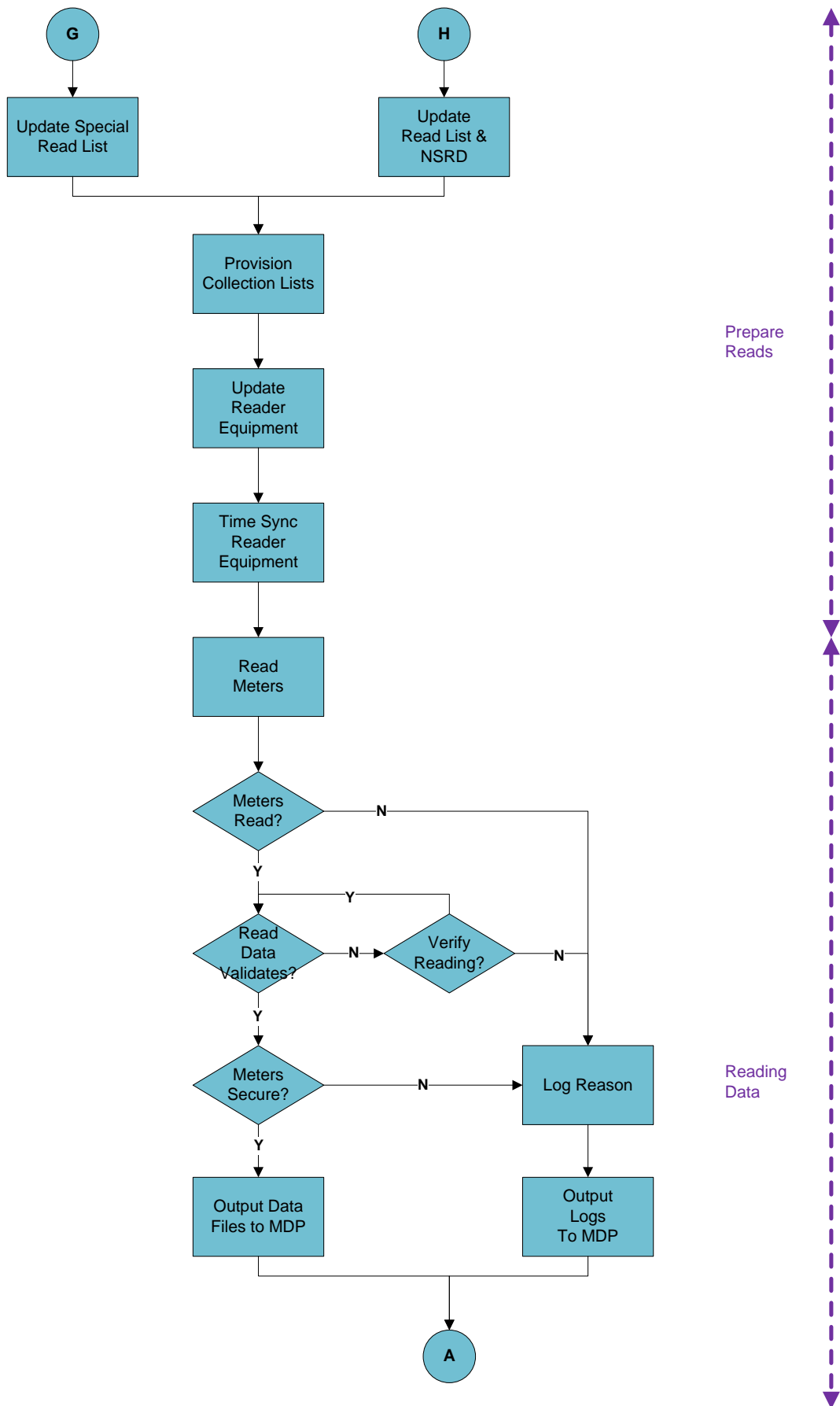


Figure 2: Prepare Reads and Reading Data

- 5.1.1 The *Metering Data Provider* is required to maintain and operate a *metering data* process as indicated in Figure 1 and Figure 2. The process and system must facilitate:
- a) The collection of *metering data*;
 - b) The calculation of *metering data*;
 - c) The storage (online) and archiving of collected and *calculated metering data*;
 - d) The processing of the collected and *calculated metering data*;
 - e) The *validation, estimation and substitution* of collected and *calculated metering data*;
 - f) The storage (online) and archiving of *validated metering data*;
 - g) System monitoring and exception reporting;
 - h) The delivery of *metering data* and *metering register* data to *AEMO, Registered Participants* and other service providers; and
 - i) The assignment and version management of participant roles for *connection points* as provided by the MSATS system.
- 5.1.2 The *Metering Data Provider* is required to maintain and operate a *metering data services database* that provides full audit trail and version control capabilities. This functionality must be applied to all:
- a) *Metering data* and relevant *NMI Standing Data*, including backups and archived data;
 - b) Assigned data quality flags;
 - c) *Estimation and substitution* types;
 - d) Significant *meter* alarms¹;
 - e) *Metering register* information; and
 - f) Delivery of *metering data* to *Registered Participants* and *AEMO*.
- 5.1.3 The *Metering Data Provider* is required to maintain and operate a system or process that supports the provision of various exception reports to enable the early detection of system and/or process errors. These exception reports should include but not be limited to:
- a) Missed reads and missing intervals of *metering data* within the *metering data services database* (Quantity checks);
 - b) Long term *substitutions* and *estimations* (Quality checks);
 - c) *Metering data* errors and data overlaps;
 - d) *Validation, relevant NMI Standing Data or metering register* errors;
 - e) Failed batch processing, database errors and hardware failures;
 - f) The trapping of file syntax errors, failed and rejected deliveries;
 - g) Status management of manual collection interfaces;
 - h) Status management of *B2B e-Hub* and MSATS interfaces;
 - i) Status management of *metering installation malfunctions*; and
 - j) Status management of the manual collection of *metering data*.

¹ Significant *meter* alarms are those listed in *metrology procedure: Part B*.

5.2 Collection Process

- 5.2.1 The *Metering Data Provider* must use reasonable endeavours to ensure actual *metering data* is collected for all *connection points* for which they have responsibility for *metering data services* in the MSATS.
- 5.2.2 The *Metering Data Provider* must develop and maintain a reading schedule in accordance with the *metrology procedure*.
- 5.2.3 The *Metering Data Provider* must use reasonable endeavours to ensure that *metering data* pertaining to Type 5 and Type 6 *Metering Installations* is read at a frequency which is at least once every three months.
- 5.2.4 The *Metering Data Provider* must maintain read routes with particular attention to any specific access requirements.
- 5.2.5 Subject to clause 5.2.11a) of this *service level procedure*, the *Metering Data Provider* must use reasonable endeavours to ensure that the *metering data* is read from Type 5 and Type 6 *meters* within two *business days* prior to or two *business days* subsequent to the scheduled reading date for that *Metering Installation*.
- 5.2.6 The *Metering Data Provider* must ensure that all *metering data* collected and any fault reason codes associated with a reading failure are transferred to the *metering data services database* within one *business day* of the data being collected or attempted to be collected from the *metering installation*.
- 5.2.7 The *Metering Data Provider* must ensure that special read requests are managed in accordance with the B2B Procedures.
- 5.2.8 The *Metering Data Provider* must ensure that all access issues are logged and communicated to the *responsible person* and *financially responsible Market Participant*.
- 5.2.9 The *Metering Data Provider* must ensure that scheduled reading lists and programmed reading equipment is provisioned, updated and maintained.
- 5.2.10 The *Metering Data Provider* must ensure that all meter reading equipment utilised for the reading of Type 5 and Type 6 *meters* is synchronised to *Eastern Standard Time* in accordance with the time accuracy requirements of the *Rules*.
- 5.2.11 For *Metering Data Providers* undertaking the provision of *metering data services* in relation to an AMI rollout and clause 9.9B of the *Rules*:
- a) *Metering data* may additionally be remotely collected from relevant *metering installations* or *substituted* earlier than two *business days* prior to the next scheduled read date. Access to the *metering data* may not be provided until 5pm on the second *business day* after the scheduled reading date, despite *metering data* being available in *Metering Data Provider* systems due to more frequent data collection or *substitution*.
 - b) A process which initiates a request for the manual collection of metering data where *remote acquisition* becomes unavailable.
 - c) The *Metering Data Provider* must maintain and operate a system to undertake *remote acquisition* and data collection services. Systems and process must be in place that enables:
 - i. The commissioning of each metering installation into the *Metering Data Provider's* metering database;
 - ii. The remote communication with the *metering installations* at each site;
 - iii. The *remote acquisition* of *metering data* from the *metering installation* inclusive of any assigned significant *metering data* alarms; and

- iv. The storage of metering data from the metering installation in the *Metering Data Provider's* metering database.
- d) The *Metering Data Provider's* system must facilitate:
 - i. The recovery of missing data by initiating a remote re-read of the *meter*;
 - ii. The remote re-read of a *metering installation* where *metering data* previously acquired is found to be erroneous or has failed *validation*;
 - iii. The provision of a reading event log that details successful read events for each *metering installation*, or alternatively an exception report of failed *meter* reads; and
 - iv. A process for the prompt notification of any *metering installation* faults to the *responsible person* and the *Metering Provider* so that repairs can be affected in a timely manner.
- e) The *Metering Data Provider* must use reasonable endeavours to ensure that *metering data* is collected for all *metering installations* for which they are the nominated *Metering Data Provider* in MSATS.
- f) The *metering data* collected under clause 5.2.11 relates to all *metering data* for all relevant channels, including significant *meter* alarms.
- g) The *Metering Data Provider* must undertake *validation* of all *metering data* in accordance with this *service level procedure* and the *metrology procedure: Part B* even though the significant *meter* alarms and *meter* register readings may be retrieved from the *meter* independently from the *metering data*.

5.3 Reading of Data

5.3.1 The *Metering Data Provider* must maintain and operate a system to undertake data collection services. Systems and processes must be in place that enables:

- a) The commissioning of each *metering installation* into the *Metering Data Provider's metering data services database*;
- b) The manual collection of *metering data* from the *metering installation* inclusive of any assigned significant *metering data* alarms; and
- c) The storage of *metering data* from the *metering installation* in the *Metering Data Provider's metering data services database*.

5.3.2 The *Metering Data Provider's* system must facilitate:

- a) A process for the prompt notification of any *metering installation malfunction*, to the *responsible person* and the *Metering Provider* so that repairs can be affected in a timely manner; and
- b) A process to support the *responsible person* and/or *Metering Provider* in the rectification of any *metering installation malfunction* and the management of *metering data substitutions*.

5.3.3 The *Metering Data Provider* is required to:

- a) Ensure that the *meter* time, where applicable, of all Type 5 and Type 6 *meter installations* is synchronised to *Eastern Standard Time* through the scheduled reading process within the accuracy requirements of the *Rules*; and
- b) Ensure that a process for the recording and logging of faults and problems associated with the reading function of *meters* is maintained. The process should log any:
 - i. Access problems;

- ii. *Meter* security issues;
- iii. *Meter* faults; and
- iv. Read failures.

5.4 Data Processing

- 5.4.1 The *Metering Data Provider* must maintain and operate a system to process collected and *calculated metering data*.
- 5.4.2 The *Metering Data Provider* must have a process that can confirm the responsibility for *connection points* by maintaining and updating a list that synchronises with MSATS.
- 5.4.3 The *Metering Data Provider* must have a process that can support the receipt and processing of Provide and Verify Meter Data Requests received from *Registered Participants* and service providers in accordance with *B2B Procedures*.
- 5.4.4 The *Metering Data Provider's* system must assign the relevant *metering data* quality flags to all *metering data* in accordance with the *metrology procedure: Part B*.
- 5.4.5 The *Metering Data Provider* must ensure that all *metering data* values stored in the *Metering Data Provider's metering data services database*, whether 'actual', 'estimated' or 'substituted', are stored with the correct:
 - a) Quality Flag;
 - b) *Substitution* or *Estimation Type* (where applicable);
 - c) *Substitution* or *Estimation Reason Code* (if applicable); and
 - d) Date/Time Stamp of when the *metering data* was entered into the *Metering Data Provider's metering data services database*.
- 5.4.6 The *Metering Data Provider* must undertake all *validation* of *metering data* whether 'estimated', 'substituted' or 'actual' in accordance with the *metrology procedure: Part B*.
- 5.4.7 The *Metering Data Provider* must have a process that checks the *metering data* for missing data and overlaps in the *metering data services database*.
- 5.4.8 The *Metering Data Provider* must *substitute* for any missing *metering data* in accordance with the *metrology procedure: Part B*.
- 5.4.9 The *Metering Data Provider* must *estimate metering data* in accordance with *metrology procedure: Part B*.
- 5.4.10 Subject to clause 5.7.11 of this procedure, the *Metering Data Provider* must have a process that ensures the creation of *estimated metering data* up to or beyond the published next scheduled read date. This process can either:
 - a) Create a single block of *estimated metering data* from the current reading event to a period beyond the newly published next scheduled read date; or
 - b) Create individual blocks of *estimated metering data* on a daily basis providing that the adoption of such a process ensures specified data quantity delivery requirements are met.
- 5.4.11 Where the *responsible person* or the *Metering Provider* informs the *Metering Data Provider* of a situation that may cause *metering data* to be erroneous, the *Metering Data Provider* must identify and *substitute* any erroneous *metering data*.
- 5.4.12 Where any *Registered Participant* for the *connection point* disputes a *metering data* calculation, *substitution* or *estimation*, the *Metering Data Provider* should investigate, and if necessary re-*substitute* the *metering data* in accordance with the *metrology procedure: Part B*.

- 5.4.13 The *Metering Data Provider* is required to notify *AEMO* and the *Registered Participants* for the *connection point* whenever any *estimations* or *substitutions* are carried out. This notification is to be achieved by delivery of the *metering data* within the MDM data file and MDFF file respectively.
- 5.4.14 Where the *meter* assigns alarms to the data channel and/or the *metering data* concerned, the *Metering Data Provider's* system must process the alarm along with the *metering data* as part of the required *metering data validation* process in accordance with the *metrology procedure: Part B*.
- 5.4.15 The *Metering Data Provider's* system must be capable of loading *metering data* provided in MDFF files relating to *meter* churn.
- 5.4.16 The *Metering Data Provider* must load *metering data* in an alternative format provided by the *Metering Provider* where there is a communications or reading *metering installation malfunction* and the *Metering Data Provider* has a system capable of loading the alternate format.

5.5 Type 7 Metering Data Processing

- 5.5.1 The *Metering Data Provider* must store inventory tables, load tables and on/off tables in the *metering data services database*.
- 5.5.2 The *Metering Data Provider* must ensure that:
- The inventory table is updated with any changed inventory details provided by the *Local Network Service Provider* or *responsible person*;
 - The on/off table is correct and compliant with details specified in the *metrology procedure Part B*; and
 - The load table is correct and is in agreement with details in the National Electricity Market Load Tables for Unmetered Connection Points, as published on *AEMO's* website.
- 5.5.3 The *Metering Data Provider* as part of the registration process must *validate* that load tables, inventory tables and on/off tables are complete and correct.
- 5.5.4 The *Metering Data Provider* must ensure the inventory table, load table and on/off table are the correctly versioned for *metering data* calculations.
- 5.5.5 The *Metering Data Provider* must ensure that *calculated metering data* for a type 7 *metering installation* is produced within the time-frames as required by the *metrology procedure* and this *service level procedure*.
- 5.5.6 The *Metering Data Provider* must ensure that all *calculated metering data* is *validated* and processed into trading intervals following any *validated* changes to the inventory table, load table or on/off table.

5.6 Metering Data Adjustment and Aggregation

- 5.6.1 The *Metering Data Provider* must have a process that will aggregate *interval metering data* for a *connection point* into a net *metering data stream* prior to delivery to *AEMO* as follows:
- Where *metering data* is collected in submultiples of 30 minute intervals, the metering data must be aggregated into 30 minute intervals, and
 - Where the *metering data* collected comprises separate export and import *data streams*, the respective export and import intervals must be aggregated into net *metering data*.

Note: the Net *metering data* for an active *Generator* is generally negative. Net *metering data* for a *data stream* is as follows.

$$\text{Net metering data}_{30 \text{ mins interval}} = \text{Export}_{30 \text{ mins interval}} - \text{Import}_{30 \text{ mins interval}}$$

i.e $N1_{30 \text{ mins interval}} = E1_{30 \text{ mins interval}} - B1_{30 \text{ mins interval}}$

- 5.6.2 The *Metering Data Provider's* system must have the functionality to aggregate *metering data* to meet Meter Churn Data Procedure requirements.

5.7 Delivery Performance of Metering Data

- 5.7.1 The *Metering Data Provider* must ensure that only *metering data* that has passed *validation* is delivered to *AEMO, Metering Data Providers* and *Registered Participants*.
- 5.7.2 Subject to clause 5.2.11 of this procedure, the *Metering Data Provider* must deliver to *AEMO, Metering Data Providers* and *Registered Participants* all actual *metering data* that has passed *validation* within two *business days* of the actual *metering data* being received into the *metering data services database*.
- 5.7.3 Subject to clause 5.2.11 of this procedure, the *Metering Data Provider* must *substitute, validate* and deliver to *AEMO, Metering Data Providers* and *Registered Participants* the *substituted metering data* within two *business days* of the actual *metering data* being received into the *metering data services database* and failing *validation*.
- 5.7.4 Subject to clause 5.2.11 of this procedure, the *Metering Data Provider* must *substitute, validate* and deliver to *AEMO, Metering Data Providers* and *Registered Participants* the *substituted metering data* within two *business days* of the receipt of any fault reason codes associated with a reading failure into the *metering data services database*.
- 5.7.5 The *Metering Data Provider* must *validate* and deliver to *AEMO, Metering Data Providers* and *Registered Participants* all *substituted metering data* within two *business days* of the *metering data* being *substituted*.
- 5.7.6 The *Metering Data Provider* must *validate* and deliver to *AEMO, Metering Data Providers* and *Registered Participants* all *estimated metering data* within two *business days* of the *metering data* being *estimated*.
- 5.7.7 The *Metering Data Provider* must deliver *metering data* that has passed *validation* to *AEMO* for the periods specified in the Data Delivery Calendar for all *connection points* that the *Metering Data Provider* has nominated responsibility for in MSATS for the specified weekly periods, to:
- A quantity level of at least 98% complete data for all settlement weeks; and
 - A quality level of at least 98% 'actual' or 'final', for periods specified as four monthly and six monthly revision settlement weeks only; and
 - By 5pm on the day specified in the Data Delivery Calendar for the relevant settlement week.
- 5.7.8 The *Metering Data Provider* must ensure that all failed *validations* are reviewed promptly such that:
- Where the initial review of the failed *validation* identifies that the actual *metering data* is valid, deliver the actual *metering data* to *AEMO, Metering Data Providers* and *Registered Participants* within two *business days* of the *metering data* being received into the *metering data services database*; and
 - Where further information is required to *validate* the actual *metering data*, and the receipt of such information identifies that the actual *metering data* is valid, deliver the actual *metering data* to *AEMO, Metering Data Providers* and *Registered Participants* within two *business days* of the *metering data* passing *validation*.

5.7.9 The *Meter Data Provider* must ensure that all *metering data* is delivered to *AEMO*, *Metering Data Providers* and *registered participants* for the full period of any retrospectively created *data streams* within two *business days* of that *data stream* becoming active in MSATS.

5.7.10 Summary Data Delivery Table.

	DELIVERY TO ENTITLED REGISTERED PARTICIPANT i.e. LNSP, TNSP, LR, FRMP	DELIVERY TO AEMO
Data Type	<i>NMI data stream</i> (e.g. E1, B1, 71, 44) Deliver <i>validated metering data</i> including any <i>estimations</i> and <i>substitutions</i> .	net <i>NMI data stream</i> (e.g. N1, 71, 44) Deliver <i>validated metering data</i> including any <i>estimations</i> and <i>substitutions</i> . Interval <i>metering data</i> must be as net aggregated to 30 minutes.
File Format	'MDFF' Meter Data File Format (or Agreed Format).	'MDM' <i>AEMO</i> aseXML data file format.
Delivery Point	To the <i>Registered Participants</i> via <i>B2B e-Hub</i> inbox (or Agreed Method)	To the <i>Metering Data Provider's</i> MSATS inbox

5.7.11 For *Metering Data Providers* undertaking the provision of *metering data services* in relation to AMI roll out and clause 9.9B of the *Rules*, *metering data estimation* is not required where *metering data* is delivered to *AEMO*, *Metering Data Providers* and *Registered Participants* on a daily basis for the previous day.

5.8 Delivery of Metering Data for Prudential Processing

5.8.1 *AEMO* must communicate to the *Metering Data Provider* the requirement for prudential *metering data* by 10am (*Eastern Standard Time*) the day before the data is required.

5.8.2 The *Metering Data Provider* must deliver prudential *metering data* for Type 5, Type 6 and Type 7 *metering installations* to *AEMO* and *Registered Participants* for periods nominated by *AEMO* as follows:

- a) The *Metering Data Provider* is required to deliver *metering data* to:
 - i. *AEMO* by 8am (*Eastern Standard Time*) on the day(s) specified; and
 - ii. *Registered Participants* by close of business on the same day.
- b) Deliver a minimum 80% complete data set to MSATS system for Prudential processing purposes, consisting of actual, *estimated* or *substituted metering data*.

5.8.3 The *performance requirements* set out in clause 5.8.2 relate to all *connection points* that the *Metering Data Provider* has responsibility for in MSATS.

6. INTERFACES

6.1 Interface Requirements

6.1.1 The *Metering Data Provider* must comply with AEMO's Market Management Systems Access Procedure.

6.1.2 The *Metering Data Provider* must establish and maintain business interfaces to:

- a) The MSATS system for the required management of *connection point* updates, notifications, objections, reports, relevant *NMI Standing Data*, data requests and delivery of *metering data* to the *metering database*;
- b) The *B2B e-Hub* for the required business interface with *Registered Participants*, other service providers and for the delivery of *metering data* to *Registered Participants* and other *Metering Data Providers*;
- c) The *Metering Data Provider* must demonstrate that any non public communications network which is to be used for the *remote acquisition* of *metering data* is first approved by AEMO and has controls and processes that support the following requirements:
 - i. Maintain data security, integrity and confidentiality;
 - ii. Meets functional, performance and capacity requirements; and
 - iii. Has contingency strategy for component failure.
- d) Other email, facsimile, phone, internet and interfaces for the general management of information and alternative delivery of *metering data* to *Registered Participants* and the *metering database*.

6.1.3 Figure 3 outlines the key *Metering Data Provider* interfaces:

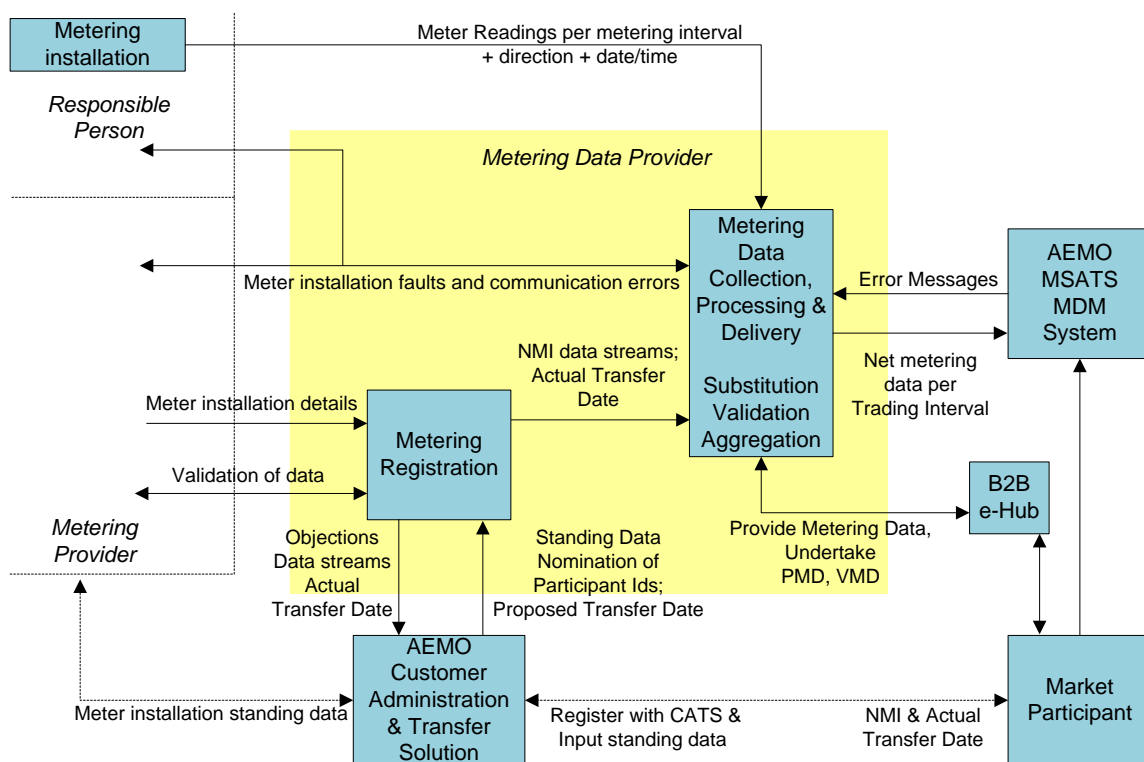


Figure 3: Metering Data Provider Interfaces

6.2 NEMNet

6.2.1 The *Metering Data Provider* must maintain a NEMNet connection for the purposes of communication and file transfer with MSATS.

6.3 MSATS Interface

6.3.1 The *Metering Data Provider* will be provided with an inbox and outbox directory on the MSATS file server, which the *Metering Data Provider* must use for the transfer of files to and from AEMO via NEMNet.

6.3.2 The *Metering Data Provider* is responsible for the placing of all files in the appropriate directory, and the collection and deletion of reports and file acknowledgments from the appropriate directory in accordance with the MSATS Procedures.

6.3.3 The *Metering Data Provider* must interface to MSATS either via the interactive browser interface or via a batch interface, or both, using the *market* aseXML file format in accordance with the related documentation and schemas.

6.3.4 The *Metering Data Provider* must manage any batch file transfers to MSATS to ensure that:

- a) Any data files transferred to MSATS have been received and acknowledged;
- b) Any file rejection notifications are processed;
- c) The naming structure as detailed in the aseXML file format schema is followed; and
- d) The deliveries of *metering data* files to MSATS are in file sizes no larger than one megabyte uncompressed.

6.4 B2B Interface

6.4.1 The *Metering Data Provider* must maintain an ongoing active line of communication with the *B2B e-Hub* for the management and response to *B2B e-Hub* Requests and Notifications.

6.4.2 The *Metering Data Provider* must ensure that:

- a) All transmitted messages comply with the requirements of the aseXML message format; and
- b) All files transacted through the *B2B e-Hub* interface must comply with the requirements of the aseXML message size requirements and B2B Technical Delivery Specification.

6.5 Other Interfaces

6.5.1 Except where otherwise required in this *service level procedure*, all voice communications with AEMO, *Registered Participants*, *Metering Providers* and other *Metering Data Providers* are to be undertaken between 9:00am and 5:00pm on *business days*.

6.5.2 The *Metering Data Provider* is required to liaise with the *responsible person* and the *Metering Provider* in the prompt resolution of any *metering installation malfunctions*.

6.5.3 The *Metering Data Provider* is required to work with AEMO in the provision of *metering data* and standing data files to AEMO and *Registered Participants* via alternate means in emergency situations where normal processes cannot be utilised.

7. SYSTEM ARCHITECTURE & ADMINISTRATION

7.1 Data Archival and Recovery

- 7.1.1 The *Metering Data Provider* must ensure that their *metering register* information and *metering data* is accessible, online and archived in accordance with clause 7.11.3 of the *Rules*.
- 7.1.2 The *Metering Data Provider* must have retrieval mechanisms that allow the archived data to be recovered, re-evaluated and dispatched in agreed timeframes to *AEMO* and *Registered Participants*.

7.2 Data Backup

- 7.2.1 All *metering data* and *metering register* information must be backed-up on a daily basis and held in a secure environment.

7.3 Disaster Recovery

- 7.3.1 The *Metering Data Provider* must ensure that a Disaster Recovery Plan is established and in place to ensure that in the event of a system failure, the system can be returned to normal operational service within two *business days*.
- 7.3.2 The *Metering Data Provider* must ensure that the Disaster Recovery Plan is:
 - a) Maintained fully up to date with all documentation showing revisions; and
 - b) Witnessed and dated at least annually by the *Metering Data Provider* as being current for the systems and processes in place.
- 7.3.3 Where the *Metering Data Provider* adopts a Disaster Recovery Plan that has a complete 'fail-over' system approach, the Disaster Recovery Plan must be:
 - a) Subjected to a test annually that facilitates a full 'fail-over' to the recovery system.
- 7.3.4 Where the *Metering Data Provider* adopts a Disaster Recovery Plan that has a segmented system approach, the Disaster Recovery Plan must also:
 - a) Detail the selected business system segments and the interfaces and relationships the segment has to other business system segments;
 - b) Be established for each individual segment of the business system;
 - c) Be tested annually with evidence retained to show disaster recovery for each individual segment of the business system; and
 - d) Have, for each individual segment of the business system, a procedure that clearly details the process to establish a return to a fully operational system.
- 7.3.5 Expected evidence to support Disaster Recovery Plan testing should include, but not be limited to:
 - a) A Test Plan of the fail-over;
 - b) Results of the fail-over including timing;
 - c) System logs indicating fail-over and recovery; and
 - d) Logs or notations evidencing resumption of *Metering Data Provider* operations.
- 7.3.6 In the event a system failure does occur, the *Metering Data Provider* must ensure that:
 - a) The *Metering Data Provider's metering data services database* is restored to operational service within the two *business days*; and

- b) That all processing and delivery backlogs of *metering data* to AEMO and *Registered Participants* is completed within the same two *business days*.

7.3.7 The *Metering Data Provider* must at its earliest opportunity notify AEMO of any failure where the *Metering Data Provider* has a requirement to implement its established Disaster Recovery Plan.

7.4 Time Synchronisation

7.4.1 The *Metering Data Provider's metering data services database*, including all distributed systems and personal computers used for data acquisition, must be synchronised to *Eastern Standard Time* within the accuracy requirements of clause 7.12 (e) of the *Rules*.

7.4.2 The *Metering Data Provider* through their *metering data* collection process must ensure that all *meters* are synchronised to *Eastern Standard Time* within the accuracy requirements of clause 7.12 (f) of the *Rules* for the relevant *metering installation* type.

7.5 System Administration and Data Management

7.5.1 Tools required by each *Metering Data Provider* for the administration and data management of their *metering data services database* must include, but should not be limited to:

- a) Operator Interface – for use by the database operator with the database processes, including facilities to:
 - i. Control access to systems and data using unique identification and password for each user, regular password changes, etc;
 - ii. Prevent an operator or user from deleting or over-writing data;
 - iii. Administer the database system using day-to-day operations management; system back-up and recovery; security management; process monitoring and control; etc., but restricting access to the underlying database tables to a nominated System Administrator using a separate password;
 - iv. View data in tabular and graphical form, where appropriate;
 - v. Viewing logs and reports, including reports from the *metering data* collection process;
 - vi. Monitor reporting processes, including *B2B communications* or e-mail requests by *Registered Participants*, the provision of reports, logs and delivery notifications and the transfer of *metering data* and relevant *NMI Standing Data* to each authorised recipient;
 - vii. Processes to support manual *metering data* calculation, *estimation* and *substitution* processes; and
 - viii. Exception monitoring facilities to support *metering data validation* requirements.
- b) Access Control – to assign/restrict *Registered Participant* access to *metering data* and relevant *NMI Standing Data* provided via reports, based on the relationships defined in the *metering register* and in accordance with clause 7.7 of the *Rules*.

- c) Task Control – for the *metering data service database* processes, including the ability to run processes out of sequence (e.g. to enable changes to *metering data* and relevant *NMI Standing Data* without initiating the *metering data* delivery process; or initiate a *metering data* delivery process for test purposes) and for the provision of back-up and recovery, archiving and recovery, and disaster recovery functionality.
 - d) System Availability – provide a service delivery that meets *AEMO's* and *Registered Participants' metering data* delivery requirements, with at least 95% availability (i.e. hardware and systems downtime do not exceed a maximum of 438 hours per annum (5%)).
- 7.5.2 The *Metering Data Provider* must maintain full audit trails of *metering register* information, *metering data* and relevant *NMI Standing Data* so that any data output produced by the system can be re-produced from source data at any time within seven years of the obtaining of that *metering data*, *metering register* information or relevant *NMI Standing Data* details.
- 7.5.3 The *Metering Data Provider* must ensure that version control and audit trails are maintained by the provision of a change-log to record any change that is not managed automatically within the *metering data service database*.

8. QUALITY CONTROL

8.1 Scheduled Metering Data Audits

- 8.1.1 The *Metering Data Provider* must undertake all services in a manner that is auditable by *AEMO*, and must support scheduled reviews of their *metering data service database*, processes, procedures and systems.
- 8.1.2 *AEMO* will undertake periodic review certification, to a negative assurance level of the *Metering Data Provider's* system, process and procedures to assess the *Metering Data Provider's* compliance to the *Rules*, Procedures under the *Rules* and this *service level procedure*.
- 8.1.3 All scheduled reviews will be through a centralised review process established by *AEMO* and will be undertaken at the *Metering Data Provider's* own costs.
- 8.1.4 Where a review is conducted under this *service level procedure*, the *Metering Data Provider* must, at its own cost, provide all reasonable assistance including making databases, equipment and premises available for inspection, making personnel available for questioning, and providing copies of any data or information as requested.
- 8.1.5 Scheduled reviews of the *Metering Data Provider's* system will be as follows:
- a) The first audit to be nominally within six months after accreditation at a time that suitably coincides with *AEMO's* market audit report.
 - b) Subsequent audits will be nominally six monthly and at a time that suitably coincides with *AEMO's* market audit report; or
 - c) At *AEMO's* discretion, at twelve month intervals based on previous satisfactory audit reviews of the *Metering Data Provider*.
- 8.1.6 The *Metering Data Provider* is required to establish with *AEMO* the *business days* for audit reviews in advance. A minimum of 15 *business days* notice will be given to the *Metering Data Provider* for the provision of any specific data requests as part of the audit.

8.2 Other Audits

- 8.2.1 Audits may be undertaken at any time by *AEMO*, in accordance with *Rules* requirements. Audits may be carried out by *AEMO* following a request from a *Registered Participant*.
- 8.2.2 Where an audit of a *metering installation* is conducted by *AEMO* under clause 7.6.3 (d) of the *Rules*, and *metering data* is required to be obtained from the *Metering Data Provider* in support of this audit, the *Metering Data Provider* is required to provide the *metering data* within two *business days* of *AEMO's* request.

8.3 Reporting

- 8.3.1 *AEMO* will undertake to provide regular reports to the *Metering Data Provider* relating to quality and timeliness of deliverables as part of *AEMO's* performance monitoring and benchmarking processes.
- 8.3.2 The content of the *Metering Data Provider* reports will reflect performance monitoring across all *Metering Data Providers* with respect to the deliverables of this *service level procedure*.
- 8.3.3 The frequency of the *Metering Data Providers* reports provided by *AEMO* will be nominally monthly, unless otherwise advised.

8.4 Corrective Action

- 8.4.1 The *Metering Data Provider* is required to take corrective action on any reported instances of non-compliance documented within either the monthly reporting process or through the scheduled *Metering Data Provider* audit process.
- 8.4.2 Where the *Metering Data Provider* becomes aware that incorrect *metering data* has been delivered to *AEMO* and *Registered Participants*, the *Metering Data Provider* must provide corrected *metering data* to all affected parties within one *business day* as required by clause 7.11.3 (e) of the *Rules*.
- 8.4.3 Subject to any concerns that *AEMO* may have relating to *metering data*, *metering register* or relevant *NMI Standing Data* details, *AEMO* may further request the *Metering Data Provider* to undertake *metering data*, *metering register* or relevant *NMI Standing Data* investigations and corrections where errors or omissions are found within *AEMO*'s *settlements* process. These requests are to be actioned as a priority by the *Metering Data Provider*.
- 8.4.4 Where *AEMO* in the preparation of *settlements* ready data detects *metering data* that fails *AEMO validation* processes, *AEMO* will notify the *Metering Data Provider* within one *business day* of detection in accordance with clause 7.9.4 of the *Rules*.
- 8.4.5 Where *AEMO* has notified the *Metering Data Provider*, the *Metering Data Provider* must use best endeavours to provide corrected *metering data* to *AEMO* within one *business day* or notify *AEMO* of the reason for the delay.
- 8.4.6 Where there is a reason for delay in delivering the correct *metering data*, the *Metering Data Provider* and *AEMO* must agree on the revised delivery time frame.

8.5 Non Compliance and De-registration

- 8.5.1 The 'Service Provider Compliance Assessment and Deregistration Procedure' (established under clause 7.4.3 (a) of the *Rules*) shall be used by *AEMO* in any assessment of a non-conformance or breach by a *Metering Data Provider* to remain compliant with the *Rules*, any procedure authorised under the *Rules* or this *service level procedure*.
- 8.5.2 Subject to the assessed breach level as defined within the 'Service Provider Compliance Assessment and Deregistration Procedure', actions that may be taken by *AEMO* in the event that the *Metering Data Provider* has failed to take corrective action, includes:
- a) Loss of accreditation of the *Metering Data Provider*;
 - b) Deregistration from categories of accreditation;
 - c) Suspension from operation in the *National Electricity Market*;
 - d) Other applied limitation or level of restriction; or
 - e) Any combination of the above.

8.6 Review of Accreditation

- 8.6.1 Circumstances where *AEMO* may require a *Metering Data Provider* to review its accreditation and subsequently apply for re-accreditation include:
- a) Where a *Metering Data Provider* has been de-registered and seeks re-registration;
 - b) Where a *Metering Data Provider* has been suspended from providing services under certain categories and seeks to have the suspension lifted;

- c) Subsequent changes to *Rules* requirements, Procedures under the *Rules*, or *Service Level Procedures*. This is likely to apply in instances where *Rules* changes have been made or new versions of the Metrology Procedure have been issued which require significant functional system, process or procedural changes to be made by *Metering Data Providers*.
- d) Significant changes or upgrades to a *Metering Data Provider's* existing systems or a system platform change to any part of the *metering data service database*. The *Metering Data Provider* must apply and be re-accredited prior to implementing the changes into their production environment and accepting or transmitting any market transactions, in accordance with the *Metering Service Provider Accreditation Procedure*; and
- e) Organisational mergers and acquisitions.

8.7 Sub-Contractors

- 8.7.1 Where an accredited *Metering Data Provider* engages a sub-contractor to perform any of the obligations specified within the *Rules* or this *service level procedure*, the *Metering Data Provider* must ensure that auditable processes are in place to certify that all work performed by the sub-contractor is compliant with the *Rules* and this *service level procedure*.
- 8.7.2 The *Metering Data Provider* is responsible and liable for all acts and omissions of any engaged sub-contractor.
- 8.7.3 In the event a *Metering Data Provider* elects to change a subcontractor that is delivering any part of the *metering data services*, the *Metering Data Provider* must notify *AEMO* prior to implementing the change, further:
 - a) Subject to *AEMO's* assessment, the *Meter Data Provider* may be required to undertake an accreditation review to *validate* the new systems or processes in place; and
 - b) Where practicable the re-accreditation review process would take place as part of a scheduled industry audit. The scope of the re-accreditation and the timing of the review would be assessed on a case by case basis between *AEMO* and the *Metering Data Provider*.

9. ADMINISTRATION

9.1 Change Management

- 9.1.1 This document may only be changed or updated in accordance with the *Rules consultation procedures*.

9.2 Document Location

- 9.2.1 The *AEMO* documents listed in this document are available from *AEMO*'s website: <http://www.aemo.com.au>.

9.3 Bilateral Agreements

- 9.3.1 A *Registered Participant* may request the *Metering Data Provider* to:
- a) Provide *metering data* in an alternate format; and/or
 - b) Deliver *metering data* in an alternate method; and/or
 - c) Deliver *metering data* in an alternate time frame; and/or
 - d) Provide any other *metering data services*.
- 9.3.2 Pursuant to clause 9.3.1 of this procedure, there is no mandated requirement for a *Metering Data Provider* to implement system changes and processes to facilitate bilateral agreements.
- 9.3.3 Any acceptance by the *Metering Data Provider* to deliver *metering data* to a *Registered Participant* in accordance with clause 9.3.1 of this procedure must not impact on *metering data* delivery to *AEMO* or any other *Registered Participant* for the *connection point(s)* concerned.
- 9.3.4 Any bilateral agreement established between the *Registered Participant* and the *Metering Data Provider* must be supported in writing for *service level procedure* audit compliance purposes.

9.4 Professionalism

- 9.4.1 Wherever a common approach to services is required across *Metering Data Providers* and *Metering Providers* in the NEM, each *Metering Data Provider* must develop, document and apply its procedures for the services in cooperation with *AEMO* and each relevant *responsible person* and *Network Service Provider* to facilitate the effective management of *metering data* flows between all relevant *Registered Participants*.
- 9.4.2 The *Metering Data Provider* must establish the necessary working relationships to ensure that matters of customer transfer, data provisioning and maintenance of relevant *NMI Standing Data* are achieved proficiently.
- 9.4.3 The *Metering Data Provider* is required to assist *AEMO* with reasonable requests for the provisioning of *metering data* and relevant *NMI Standing Data* information relating to *connection points* that are part of the market audit process of *AEMO*, *responsible persons*, *Metering Providers* and *Metering Data Providers*.
- 9.4.4 In regard to *connection points* that are part of *retailer of last resort* events or where the participating jurisdiction has requested *AEMO* to undertake customer transfers, the *Metering Data Provider* is required to proactively assist *AEMO* and *Registered Participants* with functionality associated with the management of transfers, the processing and transfer of *metering data*, *metering register* and relevant *NMI Standing Data* information in relation to those *connection points*.

9.5 Quality Systems

9.5.1 The *Metering Data Provider* must:

- a) Apply and comply with appropriate quality system standards in providing the services required by this *service level procedure*; and
- b) Have and retain a quality system that meets clause S7.6.3 of the *Rules* to the satisfaction of *AEMO*. *AEMO* has traditionally accepted quality accreditation to the ISO9001 or ISO9002 standards, subject to the respective business system design and level of accreditation, as meeting this requirement.

9.6 Disputes

9.6.1 If a dispute arises between the *Metering Data Provider* and *AEMO*, a *Registered Participant*, a *Metering Provider* or any other *Metering Data Provider*, in relation to the provision of *metering data services* or this *service level procedure*, then the Dispute Resolution process as detailed clause 8.2 of the *Rules* shall apply.