WA B2B Procedure

Meter Data Process

WA Version No:0.4~~1.4~~

Published: 18 Dec 2008~~30 June 2007~~

Document Number: published #5364693

source #4907334

This document uses, as a baseline, the NEM Version 1.4 of the B2B Procedure Meter Data Process.

Contents

High-level statements

This document defines how the WA electricity market operates its B2B Procedure within the process defined for Meter Data.

This document is based on the NEMMCO document B2B Procedure Meter Data Process, Version 1.4, Published 30 June 2007. This version of the NEMMCO document remains valid, save for the exceptions/deviations that are specified in the WA version.

This document uses **red** text to highlight where changes have been made to the baselined source document. Due to the limitations in page real estate that Acrobat documents put in place, there will be occasions where it will be necessary to insert or append pages. When this has to happen, it will not be practicable to renumber Acrobat page numbers. Accordingly, if significant information needs to be inserted on page 2, new pages 2a, 2b, etc. will be inserted between pages 2 and 3.

Within this WA B2B Procedure: Meter Data Process document:

- **MSATS** should be taken to read "the Network Operator's systems that support standing data and customer transfer".
- **CATS** should be taken to read "the Network Operator's systems that support the transfer of customers under the Customer Transfer Code 2004."
- **DNSP** should be taken to read "the Network Operator".
- **NEMMCO** should be taken to read "the WA Network Operator, in its role as the market data manager."
- **NEMMCO B2B** should be taken to read "the B2B system operated within Western Australia by the Network Operator".
- **MDP** should be taken to read "Network Operator".
- **aseXML** should be taken to read "waeXML".
- **MSATS B2B Handler** should be taken to read "WA B2B Gateway".
- **National B2B Infrastructure** should be taken to read "WA B2B Infrastructure".
- **B2B Browser Application** should be taken to read "Metering Service Centre".
- **MSATS Procedures** refer to the schedule of documents that support the operation the WA Electricity Market. Part 4 of the Electricity Industry Metering Code 2005 Communication Rules defines this schedule.
- **Rules** should be taken to read as a reference to the Metering Code 2005 and the Customer Transfer Code 2004, plus all their subsidiary documents that give legal and regulatory foundation to the operation of the WA Electricity Market.

Document History

Version	Date	Author	Comments
0.3	10/7/2008	Western Power	This document is based on the NEMMCO document B2B Procedure Meter Data Process, Version 1.4, Published 30 June 2007
0.4	18/12/2008	Western Power	Minor adjustments following feedback from NEMMCO. To avoid confusion, references to NEMMCO and the National Electricity Rules have been changed or removed.

Interpretation

For details of the interpretation of key words, such as addresses, dates, times and field types, refer to the WA B2B Procedure: Technical Guidelines for B2B Procedures.

Documentation Conventions

Refer to the WA B2B Procedure: Technical Guidelines for B2B Procedures for the details of the documentation conventions.

1 INTRODUCTION

1.1 Document Structure

a. Section One provides an introduction to this Procedure.

b. Section Two details the high-level process flows.

c. Section Three defines the Timing Requirements for the Meter Data process.

d. Section Four itemises the data to be provided in each transaction.

1.2 Introduction

a. ~~This WA B2B Procedure: Meter Data Process ("Procedure") is deemed to have been the subject of an Information Exchange Committee Recommendation and to have been approved by NEMMCO in accordance with clause 7.2A.5(a)(1) of the National Electricity Rules ("Rules").~~

b. This document comes into operation in accordance with the WA Electricity Industry Customer Transfer Code 2004 and the WA Electricity Industry Metering Code 2005 ("Rules").

c. This Procedure (including this provision) may only be amended in accordance with the change management procedure described in the Electricity Industry Metering Code 2005 Communication Rules~~clause 7.2A.3 of the Rules~~.

d. In the event of any inconsistency between this Procedure and the provisions of the Rules, the provisions of the Rules shall prevail to the extent of any inconsistency.

e. In the event of any inconsistency between this Procedure and the provisions of the relevant Metrology Procedure, the provisions of the Metrology Procedure shall prevail to the extent of any inconsistency.

f. ~~In the event of any inconsistency between this Procedure and the provisions of a MSATS Procedure the MSATS Procedure shall prevail to the extent of any inconsistency.~~

g. In the event of any inconsistency between this Procedure and the provisions of the WA B2B Procedures: Technical Delivery Specification and/or the provisions of the WA B2B Procedures: Technical Guidelines for B2B Procedures (together referred to as the "B2B Technical Procedures"), unless this Procedure provides specially otherwise, the relevant B2B Technical Procedure shall prevail to the extent of any inconsistency.

h. In this Procedure, a word or phrase which commences with capital letters has the meaning given to it:

1. in this Procedure;
2. if no meaning is given to it in this Procedure, then as that term is defined in the Technical Guidelines for B2B Procedures; or
3. if no meaning is given to it in the Technical Guidelines for B2B Procedures, then as that term is defined in the Rules.

i. This Procedure shall be interpreted in accordance with the rules of interpretation set out in ~~clause 1.7 of~~ the Rules and the Technical Guidelines for B2B Procedures. Provisions which are placed in a square box coloured grey are provided by way of explanation and to assist readers and do not form any obligation on Participants nor do they affect the interpretation of this Procedure. Provisions which fall within a section entitled "Worked Example" are provided for assistance only and do not form any obligation on the Participants nor do they affect the interpretation of this Procedure.

1.3 Jurisdictional Instruments

a. ~~Certain obligations contained in this Procedure reflect the requirements of Registered Participants stated in relevant jurisdictional instruments, as those jurisdictional instruments exist on 23 December 2004.~~ To the extent of any inconsistency between this Procedure and the provisions of any relevant jurisdictional instrument, the relevant jurisdictional instrument shall prevail to the extent of such inconsistency.

1.4 Purpose

a. This Procedure defines the standard Meter Data Process and transaction data requirements, with which the relevant Registered Participants must comply.

1.5 Scope

1.5.1 Inclusions

a. This Procedure enables Meter Data Providers (MDP) to send MDFF Data to Retailers, DNSPs and other MDPs, and to receive confirmation that the MDFF Data has been received and accepted.

b. The Procedure allows Participants to request the latest version of MDFF Data.

c. The Procedure allows Participants to query the MDFF Data.

1.5.2 Exclusions

a. This Procedure does not apply to:

1. Processes for inventory and load tables for unmetered supplies as dealt with in the Metrology Procedures;
2. Metering configuration information, namely NMI Standing Data, as dealt within Existing MSATS Procedures;
3. Changes to the recorded Next Scheduled Read Date;
4. Delivery of Metering Data to MSATS pursuant to the Metrology Procedures and Meter Data Providers Service Level Requirements.

1.6 aseXML

a. A Participant must use the agreed WA market derivation of the industry standard of aseXML (i.e. waeXML) messaging to deliver Transactions pursuant to this Procedure. Participants must ensure that any MDFF Data provided complies with the requirements of the MDFF Specification and is delivered using a MeterDataNotification transaction.

1.7 Application of this Procedure

a. In accordance with and subject to the provisions in clause 1.6 of the Metering Code 2005, Participants~~, NEMMCO~~ and Metering Providers must comply with this Procedure except to the extent set out in paragraph 1.7(b).

b. ~~In accordance with clause 7.2A.4(k) of the Rules~~ Participants may on such terms and conditions as agreed between them communicate a B2B Communication on a basis other than as set out in this Procedure, in which case the parties to the agreement need not comply with this Procedure to the extent that the terms and conditions agreed between them are inconsistent with this Procedure.

c. This Procedure applies to all Meter Installations.

d. This Procedure applies to MDFF Data in respect of a NMI located in a Participating Jurisdiction as follows:

Transaction	ACT	NSW	QLD	SA	VIC	TAS*	WA
Provide Meter Data Request	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Verify Meter Data Request	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Meter Data Notification	Yes	Yes	Yes	Yes	Yes	Yes	Yes

* Note: Applies to second tier sites only in Tasmania.

Key	
Yes	Applicable as defined.
No	Not applicable.

1.8 Enforceability of the Procedures

a. The Procedure is enforceable by the Economic Regulatory Authority (ERA) in accordance with its powers under the Electricity Industry Metering Code (2005).

1.9 Terminology and Definitions

1.9.1 Terminology

a. In this Procedure:

1. the term “Basic Meter Data” refers to accumulated consumption and/or demand data (i.e. data from a Type 6 Metering Installation).
2. The term “Interval Meter Data” refers to meter consumption data and/or demand for time periods (i.e. data from a Types 1-5, or 7 metering installation).

3. The term "MDFF" is used to refer to the current effective version of the Participant Meter Data File Format specification (NEMMCO document ME_MA0001v007~~xxx~~).

b. The term “Participant” is limited in its meaning and is not as defined in the Technical Guidelines for B2B Procedures. In this Procedure Participant means the party receiving MDFF Data from the MDP. A Participant may be any one of the LR, FRMP, TNSP, DNSP or another MDP.

c. The term “ Notification” refers to a MeterDataNotification Transaction.

d. The term “Request” refers to either ProvideMeterDataRequest or a VerifyMeterDataRequest Transaction

1.9.2 Business Documents

a. Throughout this Procedure, the term "Business Document" is used to refer to the key B2B Messages or Transactions sent between the various Participants.

b. In this Procedure, the relevant Business Documents are:

1. ProvideMeterDataRequest;
2. VerifyMeterDataRequest, and the
3. MeterDataNotification

1.9.3 Business Signals

a. The B2B Procedure:Technical Delivery Specification details of the transactions the subject of this Procedure are contained in the B2B Technical Delivery Specification.

b. Participants must ensure that their technical delivery mechanism supports the following Business Signals:

1. *BusinessReceipt*; and
2. *BusinessAcceptance/Rejection*

c. A *BusinessReceipt* indicates that a Business Document has been received and its contents indicate if it is readable by the Recipient.

d. A *BusinessAcceptance/Rejection* represents formal acceptance or rejection of the appropriate Business Document by the Recipient based on the application of business rules.

1.10 Related Documents

a. This Procedure has been prepared in conjunction with and should be read in conjunction with:

1. WA B2B Procedures: Technical Delivery Specification
2. WA B2B Procedures: Technical Guidelines for B2B Procedures
3. Meter Data File Format Specification

b. Participants should also refer to the following documents. It should be noted that these documents have been prepared by way of assistance only and are not a legally binding document nor does it affect in any way the interpretation of this Procedure.

1. Meter Churn Data Management Rules
2. WA Participant Build Pack - B2B System Interface Definitions
3. ~~Frequently Asked Questions: Meter Data Process~~

2 Business Process

2.1 Process Overview

a. There are three distinct business processes associated with this overall process.

1. Meter Data Notification Process - The provision of MDFF Data as part of the MDPs' normal production process obligations. These may include scheduled meter reads, reads in response to a service order request and other MDFF Data (such as forward estimates).
2. Provide Meter Data Process - The process by which a Participant requests the provision of the latest version of MDFF Data held by the MDP. This does not involve the investigation of problems with MDFF Data.
3. Verify Meter Data Process - The process by which a Participant queries MDFF Data. This is normally executed after a ProvideMeterDataRequest to ensure that the latest version of data is being queried.

2.2 Process Diagrams

a. The following diagrams illustrate the high-level process flows and are provided by way of explanation only.

b. Refer to Section 3.1 for the definition of the timing points (triangles A-F) shown in Figures 2 and 3 below.

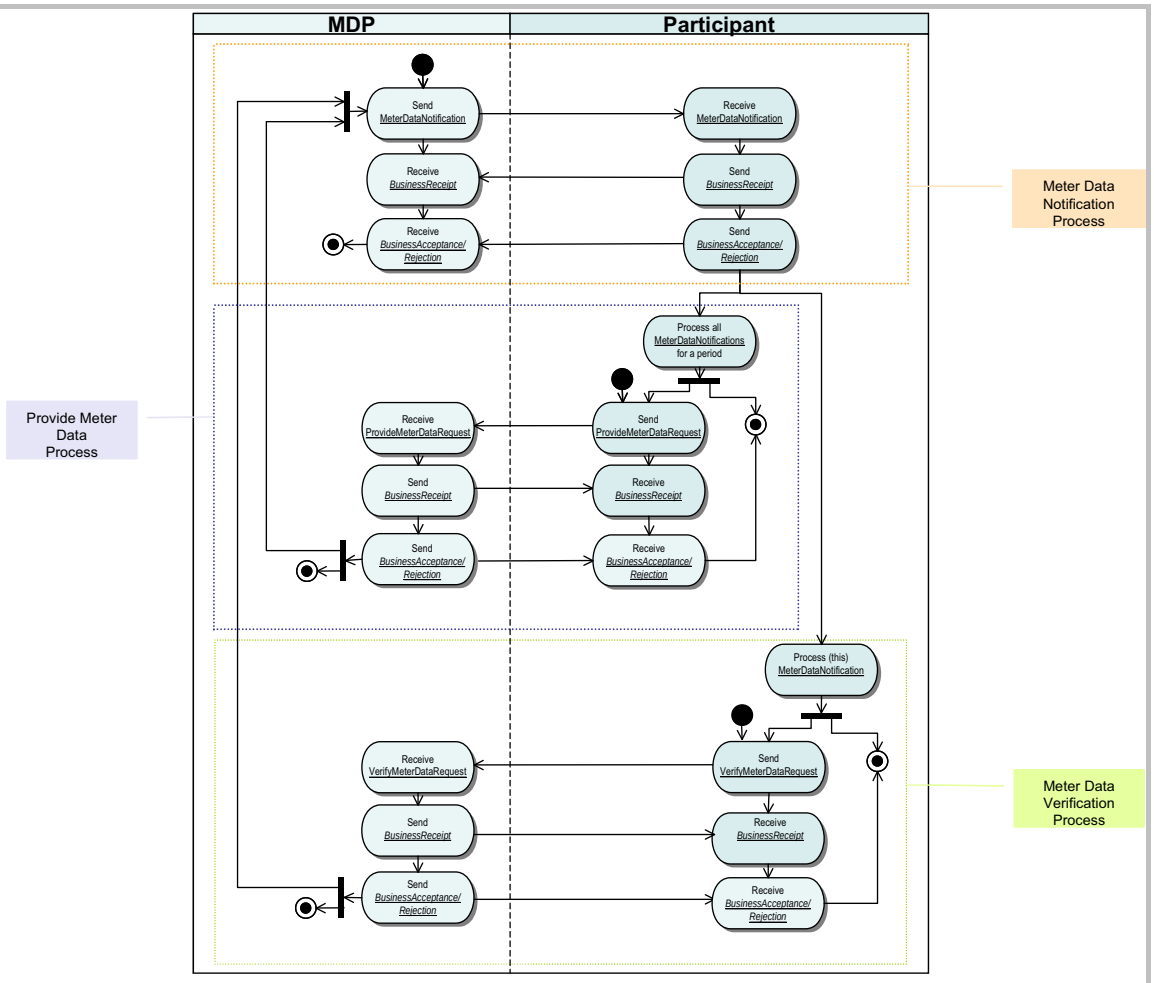

Figure 1: Overview of the Meter Data process

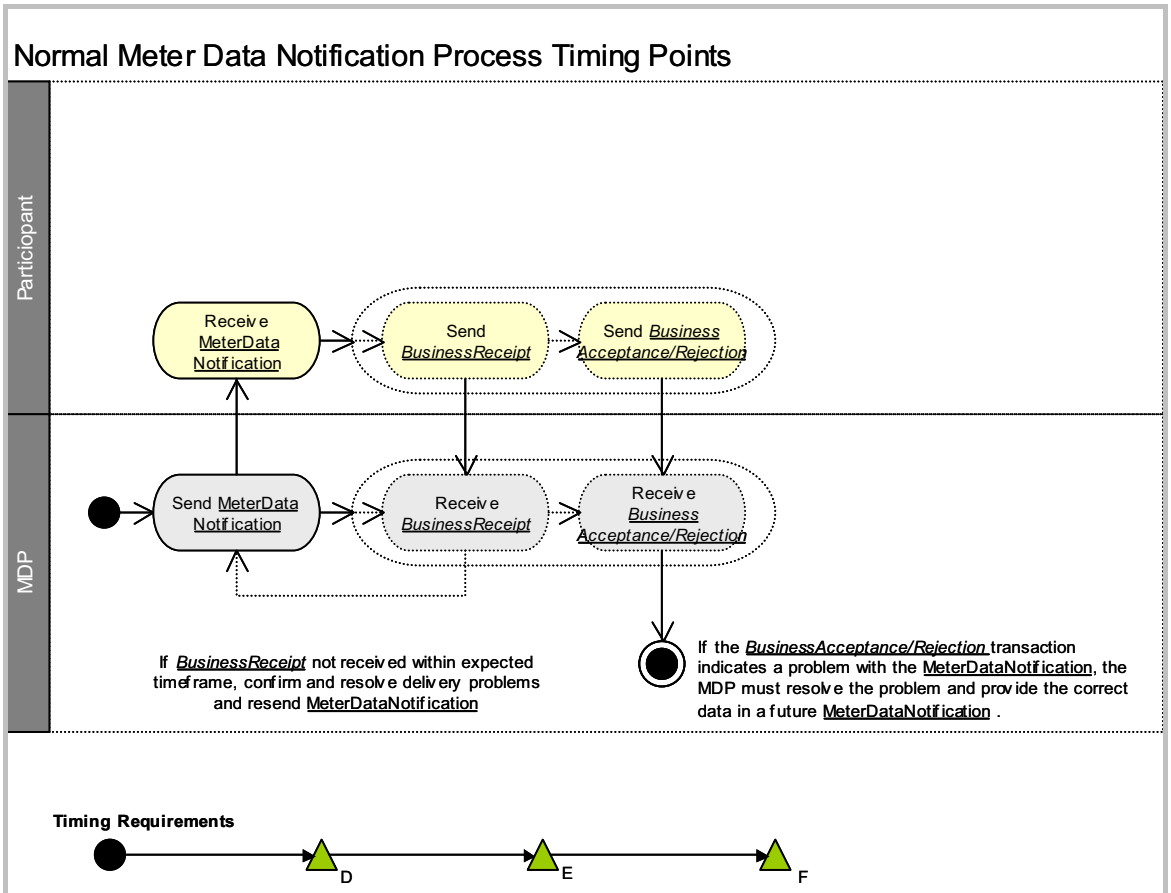

Figure 2: Meter Data Notification process

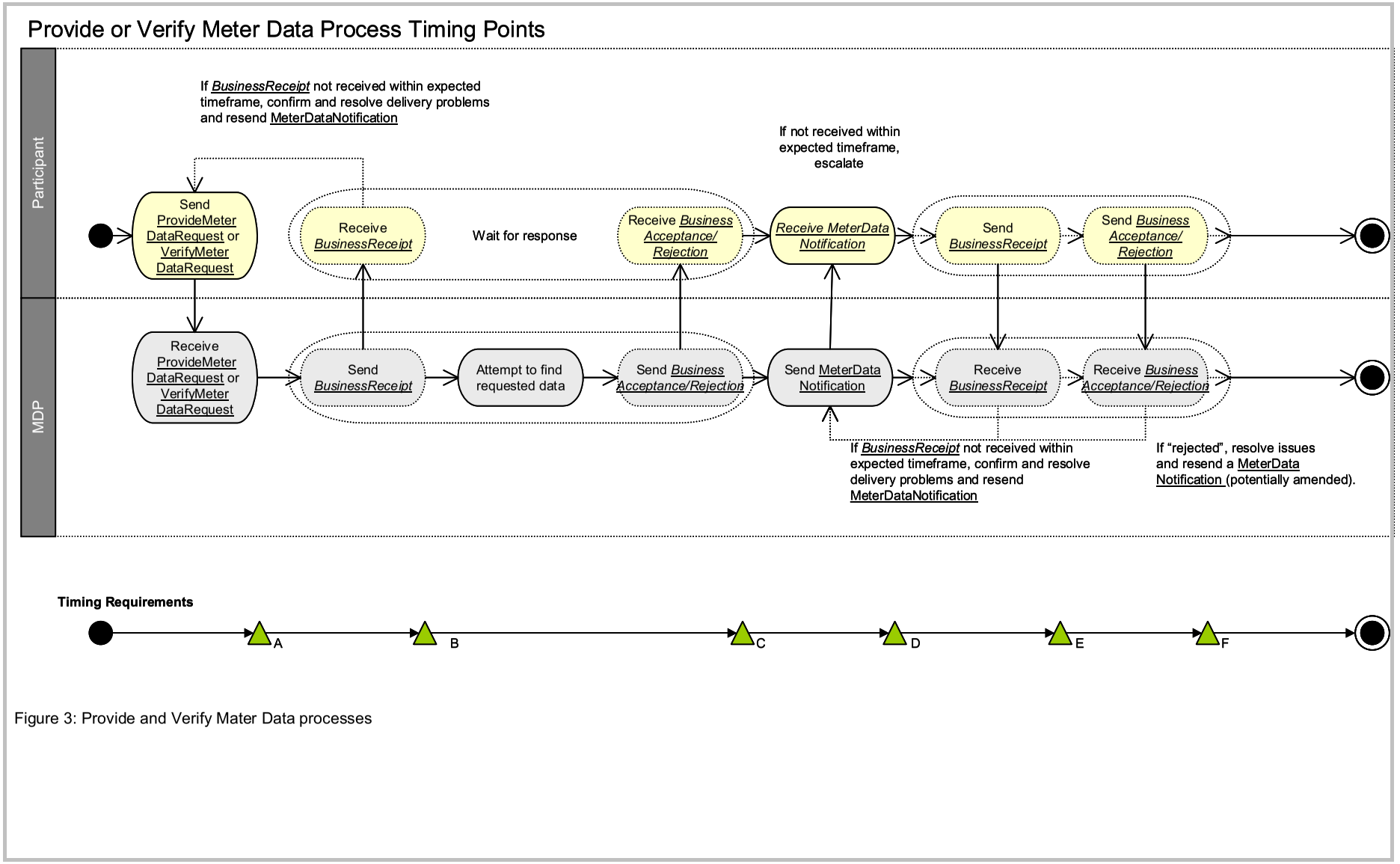

Figure 3: Provide and Verify Mater Data processes

2.3 Timing

a. All obligations set out in this section 2 of this Procedure must be completed in accordance with the Timing Requirements set out in section 3 of this Procedure.

2.4 Meter Data Notification Process

a. A MDP must provide MDFF Data to Participants pursuant to the Metrology Procedure and Meter Data Providers Service Level Requirements. This MDFF Data must be provided by way of a MeterDataNotification.

b. Upon receipt of a MeterDataNotification from an MDP, a Participant must return a *BusinessReceipt* to the MDP to confirm the receipt of that MeterDataNotification.

c. The Participant must then send a *BusinessAcceptance/Rejection* to the MDP as follows:

1. A *BusinessAcceptance/Rejection* with *Status* of "Accept" is to be used to indicate acceptance of the B2B Transaction, including the format of the MDFF Data but excluding the business content of the MDFF Data, and that the entire file has been accepted.
2. A *BusinessAcceptance/Rejection* with *Status* of "Reject" is to be used to indicate rejection of the B2B Transaction, including the format of the MDFF Data but excluding the business content, and that the entire file has been rejected. Upon receipt of the *BusinessAcceptance/Rejection* the MDP must resolve the problem and resend the data if appropriate. If the file format is invalid, the MDP must resolve the problem and resend the data if appropriate. If otherwise, the MDP must communicate the results of the investigation to the Participant who sent the *BusinessAcceptance/Rejection*.
3. A *BusinessAcceptance/Rejection* with *Status* of "Partial" is to be used to indicate a rejection of the B2B Transaction, excluding the business content of the MDFF Data, that relates to only part of the file. This is indicated by *KeyInfo* fields with one or more line numbers. The data to be returned by the MDP must include all data relating to each NMI that relates to a line number in the *BusinessAcceptance/Rejection*. Upon receipt of the *BusinessAcceptance/Rejection* the MDP must investigate the rejection and determine if the rejection is valid. If the rejection is valid, the MDP must resolve the problem and resend the data if appropriate. If otherwise, the MDP must communicate the results of the investigation to the Participant who sent the *BusinessAcceptance/Rejection*.
4. If the error relates to the business content of the MDFF Data, the file should be accepted by the Receiver via a *BusinessAcceptance/Rejection*. Queries regarding the MDFF Data must be communicated via either a ProvideMeterDataRequest or a VerifyMeterDataRequest.
5. The term "business content" in the above points means the types of issues covered by the *InvestigationCodes* used in VerifyMeterDataRequests.

2.5 Provide Meter Data Process

a. If:

1. a Participant reasonably believes that they have not received MDFF Data for a NMI from an MDP;
2. a Participant requires historical Metering Data from a MDP to which they are entitled pursuant to the CATS Procedures and/or a jurisdictional instrument; or.
3. a Participant requires a MDP to re-send certain MDFF Data,

then a Participant may commence the Provide Meter Data Process.

b. Upon receipt of a ProvideMeterDataRequest, a MDP must return a *BusinessReceipt* to the Participant who sent ProvideMeterDataRequest to confirm the receipt by that MDP of the ProvideMeterDataRequest.

c. Upon receipt of a ProvideMeterDataRequest, a MDP must respond to the Participant who sent the ProvideMeterDataRequest as follows:

1. If the MDP is able to fully satisfy the Request, the MDP must send a BusinessAcceptance/Rejection with a *Status* of "Accept" and send a MeterDataNotification in response to the Request; or
2. If the MDP can partially satisfy the Request, the MDP must send a BusinessAcceptance/Rejection with a *Status* of "Partial" and send a MeterDataNotification in response to the Request. The MDP must provide appropriate *EventCodes* and associated details in the BusinessAcceptance/Rejection to explain why the Request cannot be fully satisfied. The *EventCodes* in the BusinessAcceptance/Rejection must have a *Severity* of "Information"; or
3. If the MDP is unable to satisfy the Request, the MDP must send a BusinessAcceptance/Rejection with a *Status* of "Reject" and must not send a MeterDataNotification in response to the Request. The MDP must provide appropriate *EventCodes* and associated details in the BusinessAcceptance/Rejection to explain why the Request cannot be satisfied. The *EventCodes* in the BusinessAcceptance/Rejection must have a *Severity* of "Error".

d. If the *BusinessAcceptance/Rejection* transaction sent by a MDP indicates a problem (using an appropriate *EventCode*) with the ProvideMeterDataRequest, the Participant must use reasonable endeavours to resolve the problem and provide a new ProvideMeterDataRequest or VerifyMeterDataRequest, if appropriate.

e. Where a MeterDataNotification is provided in response to a ProvideMeterDataRequest the MDP must ensure that the MeterDataNotification contains the MDFF Data requested in the ProvideMeterDataRequest for that *RequestID*.

f. The Participant must respond to a MeterDataNotification with *BusinessReceipt* and *BusinessAcceptance/Rejection* transactions.

g. If the *BusinessAcceptance/Rejection* transaction for a MeterDataNotification has a Status of "Reject" or "Partial", the MDP must use reasonable endeavours to resolve the problem which may include providing the correct MDFF Data to the Participant in a new MeterDataNotification, if appropriate. Any additional MeterDataNotification which is dealing with a problem from a previous MeterDataNotification must have the same *RequestID* as in the original MeterDataNotification.

2.6 Verify Meter Data Process

a. If:

1. a Participant reasonably believes the MDFF Data in the MeterDataNotification is erroneous (including but not limited to a potential anomaly with part of the data); or
2. a Participant reasonably believes that the response provided to a previous Request has not resolved their query,

then that Participant may commence the Meter Data Verification Process.

b. A Participant must ensure that a VerifyMeterDataRequest sent to a MDP contains sufficient details to enable that MDP to investigate and resolve the query which is the subject of the VerifyMeterDataRequest.

c. Upon receipt of a VerifyMeterDataRequest, an MDP must return a *BusinessReceipt* to the Participant who sent the VerifyMeterDataRequest to confirm the receipt by that MDP of the VerifyMeterDataRequest.

d. Upon receipt of a VerifyMeterDataRequest, a MDP must use reasonable endeavours to verify the MDFF Data which is the subject of the Participant's VerifyMeterDataRequest to that Participant. The verification process is re-validation of the data that is held in the MDP's systems without an obligation to perform a field visit.

e. Upon completion by the MDP of the action in clause (d) above, the MDP must respond to the Participant who sent the VerifyMeterDataRequest as follows:

1. With the exception of where an *InvestigationCode* of "Recipient not responsible for the NMI" is used, if the MDP is able to fully satisfy the Request, the MDP must send a BusinessAcceptance/Rejection with a *Status* of "Accept" and send a MeterDataNotification in response to the Request. Where an *InvestigationCode* of "Recipient not responsible for the NMI" is used, and the MDP sends a *BusinessAcceptance/Rejection* with a *Status* of "Accept", the MDP must not send a MeterDataNotification in response to the Request; or
2. If the MDP can partially satisfy the Request, the MDP must send a BusinessAcceptance/Rejection with a *Status* of "Partial" and send a MeterDataNotification in response to the Request. The MDP must provide appropriate *EventCodes* and associated details in the BusinessAcceptance/Rejection to explain why the Request cannot be fully satisfied. The *EventCodes* in the BusinessAcceptance/Rejection must have a *Severity* of "Information" or "Error"; or
3. If the MDP is unable to satisfy the Request, the MDP must send a BusinessAcceptance/Rejection with a *Status* of "Reject" and must not send a MeterDataNotification in response to the Request. The MDP must provide appropriate *EventCodes* and associated details in the BusinessAcceptance/Rejection to explain why the Request cannot be satisfied. The *EventCodes* in the BusinessAcceptance/Rejection must have a *Severity* of "Error".

f. If the *BusinessAcceptance/Rejection* transaction indicates a problem (using an appropriate *EventCode*) with the VerifyMeterDataRequest, that Participant must use reasonable endeavours to resolve the problem which may include providing a new VerifyMeterDataRequest, if appropriate.

g. Where a MeterDataNotification is provided in response to a VerifyMeterDataRequest the MDP must ensure that the MeterDataNotification contains the MDFF Data requested in the VerifyMeterDataRequest for that *RequestID*.

h. A Participant must respond to the MeterDataNotification with *BusinessReceipt* and *BusinessAcceptance/Rejection* transactions.

i. If the *BusinessAcceptance/Rejection* transaction for a MeterDataNotification has a Status of "Reject" or "Partial", the MDP must use reasonable endeavours to resolve the problem which may include providing the correct MDFF Data to the Participant in a new MeterDataNotification, if appropriate. ~~Any additional MeterDataNotification which is dealing with a problem from a previous MeterDataNotification must have the same *RequestID* as in the original MeterDataNotification.~~

2.7 Common Business Rules

a. Prior to rejecting a Notification or Request Transaction on the basis that the sending Participant does not have the correct Role for the Connection Point, Participants must use reasonable endeavours to confirm that this is correct on the basis of information held in MSATS.

b. Special circumstances, such as meter changeovers, may create situations where the *ParticipantID* in the Request does not match the Participant relationships for the NMI in MSATS. For further details regarding these situations refer to the ~~NEMMCO document Meter Churn Data Management Rules.~~WA Customer Transfer Procedure.

c. Participants should be aware that MeterDataNotifications may be received out of sequence.

d. If a Participant accepts a MeterDataNotification (with a *BusinessAcceptance/Rejection* transaction) and subsequently discovers a problem with the MDFF Data provided, the Participant may raise a Request to resolve the situation.

2.8 Meter Data Notification Business Rules

a. A Participant issuing a MeterDataNotification must ensure that the MeterDataNotification only contains basic (a *CSVConsumptionData* record*)* or interval meter (a *CSVIntervalData* record) data and does not contain a mixture of basic and interval MDFF Data.

The description of these CSV files is defined in the NEMMCO document *Meter Data File Format ME_MA0001v007~~xxx~~ ~~(as amended from time to time)~~*.

b. The MDP must ensure that the MDFF Data provided in a MeterDataNotification is the latest version of that data.

2.9 Provide Meter Data Process Business Rules

a. Participants must be aware that an MDP is only required to maintain Metering Data on-line for a period of 13 months[1]. Any ProvideMeterDataRequest with a *StartReadDate* earlier than 13 months prior to the date of the ProvideMeterDataRequest may be rejected by the MDP.

b. A MDP who receives a ProvideMeterDataRequest must determine what readings the Participant has requested in accordance with the following:

1. For basic meters, the MDP must provide all available MDFF Data that the Participant is entitled to for the inclusive period of the *StartReadDate* and *EndReadDate* specified in the ProvideMeterDataRequest. This includes all reading periods that ended in the Requested date range.

Worked Example (basic meter only)

MDFF content provided in response to a request for MDFF Data for the period 1 January to 15 April				
Start date	End date	Start read	End read	Consumption
1 Dec	1 Feb	0	100	100
1 Feb	1 Mar	100	200	100
1 Mar	1 Apr	200	300	100

2. For interval meters, the MDP must provide all available MDFF Data that the Participant is entitled to for the inclusive period of the *StartReadDate* and *EndReadDate* specified in the ProvideMeterDataRequest.

c. If the *EndReadDate* is not provided by a Participant in the ProvideMeterDataRequest, the MDP must provide all MDFF Data on and after the *StartReadDate* that the Participant is entitled to.

d. Participants must not repeatedly request MDFF Data which they require as a result of a fault within the processing of the data by the Participant's systems.

e. A Participant must not send a ProvideMeterDataRequest until the regulated period (refer 3.2.2.a) for the delivery of MDFF Data has expired.

f. If the MDP has the MDFF Data which is the subject of a ProvideMeterDataRequest, they must send a MeterDataNotification transaction containing a MDFF file with the requested data to the relevant Participant. If the MDP is unable to provide the MDFF Data the subject of a ProvideMeterDataRequest, or the MDFF Data to which the MDP has access and wishes to provide to the Participant does not exactly correlate to the subject of the ProvideMeterDataRequest, the associated *BusinessAcceptance/Rejection* transaction for the ProvideMeterDataRequest must contain a relevant *EventCode* to explain the situation.

g. MDPs may provide multiple MeterDataNotifications in response to a single ProvideMeterDataRequest.

[1] Or, as defined by the Service Level Requirements for MDPs.

h. Where a Participant requests MDFF Data in a ProvideMeterDataRequest for a period which covers a change between basic and interval metering, the MDP must provide to that Participant MeterDataNotifications with the MDFF Data required for each date range applicable to each meter installation type.

i. A Participant must use reasonable endeavours to ensure that the MDFF Data they are requesting is only for a period where they have a relevant Participant Relationship with the NMI.

2.10 Verify Meter Data business rules

a. Participants must be aware that an MDP is only required to maintain Metering Data on-line for a period of 13 months. Any VerifyMeterDataRequest with a *StartReadDate* earlier than 13 months prior to the date of the VerifyMeterDataRequest may be rejected by the MDP.

b. A Participant must provide values in the fields in the VerifyMeterDataRequest to match the level of the data being queried:

1. If the data being queried is at the NMI level, only the *NMI* needs to be provided.
2. If the data being queried is at the single meter level, the *NMI* and the *MeterSerialNumber* must be provided.
3. If the data being queried is at an individual data stream level, the *NMI*, *MeterSerialNumber* and *NMISuffix* must be provided.
4. If the data being queried relates to the configuration of the site, the *NMI* and *NMIConfiguration* must be provided.
5. The Participant must ensure that the *InvestigationCode* and *InvestigationDescription* match the level of data provided per points 1 to 4 above.

c. A VerifyMeterDataRequest transaction does not replace a Special Read ServiceOrderRequest. If a Participant requires a site visit the Participant must raise a Special Read ServiceOrderRequest.

d. MDPs may provide multiple MeterDataNotifications in response to a single VerifyMeterDataRequest.

e. A Participant must ensure that the MDFF Data they are querying is only for a period where they have a relevant Participant Relationship with the NMI.

f. A Participant must not send a VerifyMeterDataRequest until the regulated period (refer 3.2.2.a) for the delivery of Metering Data has expired.

2.10.1 Investigation Codes Usage

a. The Participant must use the appropriate *InvestigationCode* as defined in the following table to communicate the reason for the VerifyMeterDataRequest.

InvestigationCode	**Business Rules**
Confirm Reading For Vacant Site	This code is used where a substitution or estimate is provided for a vacant site and the Recipient reasonably believes the consumption is overstated.
Confirm Zero Consumption	This code is used where the Participant requires confirmation of a zero consumption value.
Incomplete Data	This code is used where the Participant reasonably believes that they have not received a complete set of data. For example, there is a gap in the provided data (eg one day's data is not provided for the period requested). This code must only be used following a ProvideMeterDataRequest that has resulted in incomplete MDFF Data being provided.
Invalid MDFF Data	This code is used where the Participant reasonably believes that the MDFF Data does not match the configuration information in the MDFF Data. For example, a datastream is provided in the MDFF Data that does not match the *NMIConfiguration*.
Invalid Standing Data	This code is used where the Participant reasonably believes that the configuration data in the MDFF Data is not consistent with MSATS. The Participant must not use this code until the required timeframe for updating MSATS has passed (~~as defined in the MSATS Procedures: CATS Procedures~~2 business days).
Missing Datastream	This code is used where the Participant reasonably believes that the data is incomplete based on the configuration information provided in the MDFF file. This code must only be used following a ProvideMeterDataRequest that has resulted in incomplete MDFF Data being provided.
Recipient not responsible for the NMI	This code is used where a Participant has received MDFF Data for a NMI that they do not have a market relationship with.
Require Actual Reading or Substitute	This code is used where the Participant has received an Estimate reading and requires either an Actual or Substitute reading. This code must only be used following a ProvideMeterDataRequest that has resulted in Estimated MDFF Data being provided.
Require Final Substitute	This code is used where the Participant has received a Substitute reading and requires a Final Substitute reading. This code must only be used following a ProvideMeterDataRequest that has resulted in Substitute MDFF Data being provided.
Require Latest Version	This is where the correct latest version of the meter and configuration data (as recorded in MSATS) has not been made available to the Participant within the required timeframe. This code must only be used following a ProvideMeterDataRequest.

InvestigationCode	**Business Rules**
Scheduled Reading Required	This code is used where the Participant reasonably believes that the Next Scheduled Read Date has lapsed and the MDFF Data has not been provided within the required timeframe. This code must only be used following a ProvideMeterDataRequest that has resulted in Estimated MDFF Data being provided.
Service Order Reading Required	This code is used where the Participant has received a ServiceOrderResponse with a *ServiceOrderStatus* of "Partially Completed" or "Completed" and the associated MDFF Data has not been provided within the required timeframe. The Participant must use reasonable endeavours to provide the Service Order Number in the *InvestigationDescription* field. This code must only be used following a ProvideMeterDataRequest that has resulted in Estimated MDFF Data being provided.
Verify High Reading	This code is used where the Participant reasonably believes the meter reading is too high compared to the consumption history for the site, or following a customer complaint. This request may not initiate a site visit to check readings.
Verify Low Reading	This code is used where the Participant reasonably believes the meter reading is too low compared to the consumption history for the site, or following a customer complaint. This request may not initiate a site visit to check readings.
Other	Any other reason not covered by the other *InvestigationCodes*, or where multiple *InvestigationCodes* apply.

3 Timing Requirements

3.1 Definition of Timing Points and Periods

a. The diagrams in Section 2.2 above will assist in understanding the tables below.

b. The timing points A to F described and used below are shown in the diagrams in section 2.2.

c. The following definitions apply:

Timing Point	Definition
A	This timing point is when the Participant issues a Request to the MDP.
B	This timing point is when the Participant receives a *BusinessReceipt* from the MDP in response to the Request
C	This timing point follows the MDP's attempt to satisfy the Request and is when the MDP sends a *BusinessAcceptance/Rejection* for a Request to the Participant.
D	This timing point is when the MDP sends a Notification to the Participant.
E	This timing point is when the MDP receives a *BusinessReceipt* for a Notification from the Participant.
F	This timing point is when the MDP receives a *BusinessAcceptance/Rejection* for a Notification from the Participant.

d. The following definitions apply:

Timing Period	Definition	Usage
BusinessReceipt for Requests	This is the period from the Participant sending the ProvideMeterDataRequest or VerifyMeterDataRequest to the receipt of the associated *BusinessReceipt* by the Participant. Timing Points **A** and **B** define this period.	Used by the Participant to determine whether the Request has been received and can be read. If the *BusinessReceipt* has not been received before the expiry of this period, the Participant may escalate the non-receipt and /or resend the original request.

Timing Period	Definition	Usage
BusinessAcceptance/Rejection for Requests	This is the period from the Participant sending the ProvideMeterDataRequest or VerifyMeterDataRequest to the receipt of a *BusinessAcceptance/Rejection* for the Request by the Participant. Timing Points **A** and **C** define this period.	Used by the Participant to determine whether a Request has been accepted by the MDP. If the *BusinessAcceptance/Rejection* has not been received before the expiry of this period, the Participant may escalate the non-receipt.
MeterDataNotification for Requests	This is the period from the Participant sending the ProvideMeterDataRequest or VerifyMeterDataRequest to the Participant receiving the associated MeterDataNotification from the MDP. Timing Points **A** and **D** define this period.	If the MeterDataNotification has not been received before the expiry of this period, the Participant may escalate the non-receipt.
BusinessReceipt for MeterDataNotification	This is the period from the MDP sending the MeterDataNotification to the receipt of the associated *BusinessReceipt* by the MDP. Timing Points **D** and **E** define this period.	Used by the MDP to determine whether a MeterDataNotification has been received and can be read. If the *BusinessReceipt* has not been received before the expiry of this period, the MDP may escalate the non-receipt and /or resend the original request.
BusinessAcceptance/Rejection for MeterDataNotification	This is the period from the MDP sending the MeterDataNotification to the receipt of a *BusinessAcceptance/Rejection* for the Request by the MDP. Timing Points **D** and **F** define this period.	Used by the MDP to determine whether a MeterDataNotification has been accepted by the Participant. If the *BusinessAcceptance/Rejection* has not been received before the expiry of this period, the MDP may escalate the non-receipt.

3.2 Timing requirements

3.2.1 All transactions

a. The Timing Requirements for *BusinessReceipt* and a *BusinessAcceptance/Rejection* are set out in section 4.10 of the B2B Technical Delivery Specification, except for *BusinessAcceptance/Rejections* for Requests. In this case the MDP must send a *BusinessAcceptance/Rejection* for the Request within the same timeframe as the MeterDataNotification (as specified in 3.2.3.a and 3.2.4a).

b. The priority granted to these transactions must comply with clause 4.7(a) of the B2B Technical Delivery Specification.

3.2.2 Timing Requirement for Normal Meter Data Notification Process

a. ~~A MDP must send the MeterDataNotification within the timeframe defined in each jurisdiction's Metrology Procedure and the Metering Data Providers Service Level Requirements.~~Please see following page.

3.2.3 Timing Requirement for sending a **MeterDataNotification** for a **ProvideMeterDataRequest**.

a. Where a MDP is required to send a MeterDataNotification in response to a ProvideMeterDataRequest, the MDP must send the MeterDataNotification within one business day of receiving the ProvideMeterDataRequest.

3.2.4 Timing Requirement for sending a **MeterDataNotification** for a **VerifyMeterDataRequest**

a. Where a MDP is required to send a MeterDataNotification in response to a VerifyMeterDataRequest, the MDP must send the MeterDataNotification within five business days of receiving the VerifyMeterDataRequest.

3.2.2 a. Timing Requirement for normal Meter Data Notification process.

This section defines the Network Operator's service level requirements in respect of the different Meter Types.

Service Standard[1]

Meter Type	Market Transaction	Reading Type	Service Standard
1 - 5	Meter Data Notification (NEM12)	Actual Passed Validation	<5pm on the first business day after reading obtained
		Actual Resolved[2] Validation	<5pm on the second business day after reading obtained
		Substitution	<5pm on the second business day after NSRD
6 (MVRS Read)	Meter Data Notification (NEM13)	Actual Passed Validation	<5pm on the first business day after reading obtained
		Actual Resolved[2] Validation	<5pm on the second business day after reading obtained
		Substitution	<5pm on the fifth^ business day after NSRD
6 (Customer Supplied Read)	Meter Data Notification (NEM13)	Actual Passed Validation	<5pm on the first business day after reading obtained
		Actual Resolved[2] Validation	<5pm on the second business day after reading obtained
		Substitution	<5pm on the fifteenth^ business day after NSRD

[1] The market standard is 2 *business days*, but this may be varied in individual Service Level Agreements.
[2] Resolved means that initial validation was failed, but subsequently resolved, prior to first publication to market.

4 Transactions

Key

M = Mandatory (must be provided in all situations).
R = Required (must be provided if this information is available or has changed).
O = Optional (may be provided and should be used if provided).
N = Not required (not required and may be ignored if provided).

4.1 ProvideMeterDataRequest Transaction Data

a. Each of the Participants must ensure that the ProvideMeterDataRequest conforms with the usage, format and definitional rules detailed in the following table:

Field	Format	Use	Definition
ParticipantID	VarChar(10)	M	The Participant requesting the MDFF Data. Participant ID as published in MSATS.
ParticipantRole	VarChar(4)	M	The market role of the Participant requesting the MDFF Data. Participant Role as published in MSATS.
MDPID	VarChar(10)	M	The MDP being asked to provide MDFF Data. Participant ID as published in MSATS.
RequestID	VarChar(15)	M	Participant defined reference, used for reference and tracking. Must be a new (unused) number, unique for the initiating Participant.
NMI	Char(10)	M	NMI for the connection point missing data.
NMIChecksum	Char(1)	O	NMI Checksum for the connection point missing data.
StartReadDate	DATE	M	The start date for the period for which the Participant is requesting MDFF Data.
EndReadDate	DATE	O	The end date for the period for which the Participant is requesting MDFF Data. Refer 2.9.

4.2 VerifyMeterDataRequest Transaction Data

a. Each of the Participants must ensure that the VerifyMeterDataRequest conforms with the usage, format and definitional rules detailed in the following table:

Field	Format	Use - Interval Data	Use - Basic Data	Definition
ParticipantID	VarChar(10)	M	M	The Participant querying the MDFF Data. Participant ID as published in MSATS.
ParticipantRole	VarChar(4)	M	M	The market role of the Participant querying the MDFF Data. Participant Role as published in MSATS.
MDPID	VarChar(10)	M	M	The MDP being asked to verify MDFF Data. Participant ID as published in MSATS.
RequestID	VarChar(15)	M	M	Participant defined reference, used for reference and tracking. Must be a new (unused) number, unique for the initiating Participant.
NMI	Char(10)	M	M	NMI for the Connection Point being queried.
NMIChecksum	Char(1)	O	O	NMI Checksum for the connection point missing data.
NMIConfiguration	VarChar(240)	M/N	M/N	The *NMIConfiguration* provided in the MDFF Data being queried. If this value is provided, the expected NMI Configuration or the perceived problem of the configuration must be provided in the *InvestigationDescription* field. Refer to 2.10.b for the rules regarding the usage of this field.
MeterSerial	VarChar(12)	M/N	M/N	Meter serial number. Only Required if the data being queried is at the single meter level or is at an individual data stream level. Refer to 2.10.b for the rules regarding the usage of this field.
NMISuffix	Char(2)	M/N	M/N	As defined in the National Metering Identifier Procedures (Document No: ME_GN059vxxx) eg. “E1”,”K1”,”Q2” etc. Mandatory if the data being queried is at an individual data stream level (ie a single *NMISuffix*) or if a *CurrentRead* value is provided. Refer to 2.10.b for the rules regarding the usage of this field.
RegisterID	VarChar(10)	O	O	Register identifier. Defined the same as the RegisterID field in the CATS_Register_Identifier table. The value must match the value in MSATS. E.g. “1”, “2”, “E1”, “B1”. May be provided where the data being queried relates to a single *RegisterID* or if a *CurrentRead* value is provided

Field	Format	Use - Interval Data	Use - Basic Data	Definition
CurrentRead	VarChar(15)	N	M/N	Original meter reading provided in the MDFF Data that is being queried. This must be presented as a Register Read. Example of values: 1234567.123 or 0012456.123. Values must include leading zeros. Values must be exclusive of meter multipliers. Mandatory for Basic Meters if any of the following *InvestigationCodes* are used: ▪ Confirm Reading For Vacant Site ▪ Verify High Reading ▪ Verify Low Reading ▪ Confirm Zero Consumption If this field is populated, then the *NMISuffix* must be populated and the *RegisterID* may be populated.
CurrentReadDate	DATE	N	M/N	Date of the meter reading in the MDFF Data being queried. Must be provided if *CurrentRead* is populated.
CurrentConsumption	Numeric(15,3)	N	M/N	Original consumption figure (in kWh) in the MDFF Data that is being queried. Must be provided if *CurrentRead* is populated.
StartReadDate	DATE	M	M	The first day of the period the Participant is querying.
EndReadDate	DATE	M	O	The last day of the period the Participant is querying. If querying a single day's interval data or a single basic meter reading, this date is the same as the *StartReadDate.*
InvestigationCode	VarChar(40)	M	M	Allowed values: • Confirm Reading For Vacant Site • Confirm Zero Consumption • Incomplete Data • Invalid MDFF Data • Invalid Standing Data • Missing Datastream • Recipient not responsible for the NMI • Require Actual Reading or Substitute • Require Final Substitute • Require Latest Version • Scheduled Reading Required • Service Order Reading Required • Verify High Reading • Verify Low Reading • Other
InvestigationDescription	Varchar(240)	M	M	Free text that must be used to assist the investigation. The Participant must clearly defined the reading, the period and the description of the problem.

4.3 MeterDataNotification Transaction Data

a. Each of the Participants must ensure that the MeterDataNotification conforms with the usage, format and definitional rules detailed in the following table:

Field	Format	Use	Definition
MDPID	VarChar(10)	M	MDP Participant ID as published in MSATS.
ParticipantID	VarChar(10)	M	The Participant to whom the data is being provided. Participant ID as published in MSATS.
ParticipantRole	VarChar(4)	M	The market role of the Participant to whom the data is being provided. Participant Role as published in MSATS.
RequestID	VarChar(15)	N/M	The *RequestID* provided in the initiating Request. Not required when transaction sent as part of the normal meter data notification process. Mandatory when the transaction is sent to the requesting Participant as a response to a ProvideMeterDataRequest or VerifyMeterDataRequest.
CSVConsumptionData	CSVDATA	R	Contains embedded data in CSV format for basic meters. This is the standard file format for basic meter data-defined in a valid MDFF. Refer to 2.8.a for details of the usage of this field.
CSVIntervalData	CSVDATA	R	Contains embedded data in CSV format for interval meters. This is the standard file format for interval meter data-defined in a valid MDFF. Refer to 2.8.a for details of the usage of this field.

4.4 Business Acceptance / Rejection transaction

a. A Participant must ensure that a *BusinessAcceptance/Rejection* transaction has a Status field completed as follows.

Field	Format	Use	Definition
Status	Enumeration	M	Allowed values Accept Partial Reject Refer to s 2.4, 2.5 and 2.6 for usage.

b. If the *Status* is not "Accept", a Participant must ensure that one or more of the following Event blocks is provided.

Field	Format	Use	Definition
EventCode	NUMERIC(4)	M	Non-negative number. A code to indicate the reason for the rejection. Applicable codes are in the table at 4.5.
KeyInfo	NUMERIC(~~*~~8)	M/N	If this field is populated with a number, the number is the line number within the CSV data block that the event occurred. If the field is not populated, the *EventCode* refers to the aseXML transaction, not the .csv data.
Context	EventContext	M/N	The Data Element in the received Business Document that cause the Event. For an error in the .csv data block (*KeyInfo* is populated) this will be a copy of the line where the event was found. Where the line is longer than the field size available, the field is to be fully populated starting from the first character of the line.
Explanation	Unlimited Varchar	M/O	An explanation of the event. Must be provided where the Business Event requires an *Explanation*.

4.5 Applicable Events

a. Participants must use the most relevant *EventCode* for the Business Event. Where multiple *EventCodes* are applicable, these should all be provided.

b. Where the *EventCode* is not in the aseXML reserved range (0-999), an *EventCodeDescription* should be included in accordance with the aseXML Guidelines.

c. The following table identifies the Events that can arise with this process and the relevant Business Signals to which they relate. Note: this list does not limit the use of Standard aseXML Event Codes.

d. The *EventCodes* for the Business Events will be published in the implementation documentation (termed Build Packs) for this Procedure.

Business Event	*Explanation* Required	Severity	*BusinessAcceptance/ Rejection* for:			Document Reference or Notes
			MeterData Notification	ProvideMeter DataRequest	VerifyMeter DataRequest	
Requested data has previously been sent in response to a previous ProvideMeterDataRequest.	No	Error		Yes		Participant has made more than one request for the same version of the MDFF Data.
Participant is not entitled to requested data for part of the date range requested	No	Information		Yes		The *Severity* is Information as the MDP will send a MeterDataNotification to the Requester with the available MDFF Data. Refer s 2.9.i.
Participant is not entitled to requested data for part of the date range requested	No	Error			Yes	The *Severity* is Error as the MDP will not send a MeterDataNotification to the Requester with the available MDFF Data. Refer s 2.10.e

Business Event	*Explanation* Required	Severity	***BusinessAcceptance/ Rejection*** for:			Document Reference or Notes
			MeterData Notification	ProvideMeter DataRequest	VerifyMeter DataRequest	
Participant is not entitled to requested data for date range requested	No	Error		Yes	Yes	General market principle.
Insufficient information provided to action Request.	Yes	Error			Yes	The Participant has not clearly defined the reading, the period and the description of the problem.
NSRD not past yet (ie allowed timeframe to provide reading has not expired yet).	No	Error			Yes	2.10.1
Query has been investigated and no change made to the MDFF Data.	Yes	Error			Yes	
StartReadDate is before the MDP SLR on-line storage requirement.	No	Information		Yes	Yes	2.9.a, 2.10.a
Requested data is no longer on-line	No	Error		Yes	Yes	2.9.a
No data found	No	Error		Yes	Yes	
New request with previously used *RequestID*.	Yes	Error		Yes	Yes	4.1 and 4.2 *RequestID* field definition.
NMI abolished.	No	Error		Yes	Yes	
No active meters.	No	Error		Yes	Yes	
Recipient is not the MDP for the whole period.	No	Information		Yes		
Recipient is not the MDP for the whole period.	No	Error			Yes	
Recipient is not responsible for the supplied NMI.	Yes	Error		Yes	Yes	The MDP is not responsible for the NMI.
Format problem found in MDFF	Yes	Error	Yes			This event indicates that an error occurred while loading the MDFF. *Status* indicates the data that has been rejected (see s4.4 for details).
Required timeframe for updating MSATS has not passed	No	Error			Yes	Used where the participant has not waited the required time for MSATS to be updated.

Business Event	*Explanation* Required	Severity	***BusinessAcceptance/ Rejection*** for:			Document Reference or Notes
			MeterData Notification	ProvideMeter DataRequest	VerifyMeter DataRequest	
Invalid Request	Yes	Error			Yes	Used where the Request does not make sense to the MDP.
Recipient did not initiate request	Yes	Error	Yes			Standard aseXML Code. The *RequestID* in the MeterDataNotification is not one provided by the recipient of the MeterDataNotification.
Accept	No	Information	Yes	Yes	Yes	Standard aseXML Code
Data missing. Details provided in *Explanation*	Yes	Error	Yes	Yes	Yes	Standard aseXML Code Used where data with a usage of Required in the Procedure is missing.
Invalid data. Details provided in *Explanation*	Yes	Error	Yes	Yes	Yes	Standard aseXML Code Covers situations where the data in individual or combinations of fields is invalid.
Agree that NMI is not Sender's	No	Information			Yes	Refer 2.6.e.1 and 2.10.1.
Request matches an existing Request. The *TransactionID* of the related Request is provided in *Explanation*.	Yes	Error			Yes	
No further data available.	No	Information		Yes		Used where the MDP provides all the data they have but this does not fully satisfy a ProvideMeterDataRequest. Used in a *BusinessAcceptance/Rejection* with a *Status* of "Partial"

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