

POWER AND WATER CORPORATION

PROCEDURE

Power Networks

Metrology Procedure: Metering Data Substitution and Estimation

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1 Purpose

The purpose of this procedure is to specify the key principles to be adopted by Power Networks Metering Services for the *estimation* of incomplete *meter data* for preliminary *settlements* statements from the commencement of the Interim Northern Territory Electricity Market (*I-NTEM*).

2 Scope

This document applies to any *meter data* made available to the *Market Operator* where Metering Services has advised that a *RecorderID* has *partial data*.

It covers the agreed services provided by the *Market Operator* on behalf of Power Networks (*Network Operator*) when applying modifications to *meter data* through an *estimation* process.

It does not cover *validation* and *substitution* of *meter data* by the *Market Operator*.

3 Roles and responsibilities

Role/Title	Responsibility
General Manager Power Networks	<ul style="list-style-type: none">• Approve this procedure.• Ensure that this procedure is complied with during its application.
Senior Manager Metering Services	<ul style="list-style-type: none">• Prepare and maintain the procedure.• Consult on the procedure when it is prepared and at any time it is substantially changed so that the <i>estimation</i> process represents an arrangement agreed by <i>I-NTEM Market Participants</i>.• For the period of the <i>I-NTEM</i> that the <i>Market Operator</i> is required to perform the <i>estimation</i> process, inform the <i>Market Operator</i> of any changes to that process.
Senior Executive Manager Strategy, Economics and Regulation	<ul style="list-style-type: none">• Role of <i>Market Operator</i> as specified in the System Control Technical Code.• Perform the <i>Market Operator</i> duties in accordance with this procedure.

4 Definitions

The definitions of words recorded in the Glossary of the System Control Technical Code apply to this document, in addition to the words recorded in the table below, as shown in italics throughout the document.

Word	Definition
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Metrology Procedure: Metering Data Substitution and Estimation

<i>Datastream</i>	The stream of <i>metering data</i> associated with a <i>metering point</i> , as represented by a <i>RecorderID</i> .
<i>Estimation, estimate, estimated</i>	For the purpose of this procedure, the modification of one or more interval meter <i>datastreams</i> prepared under an agreed approach but without automated rules.
<i>Meter data</i>	For the purpose of this procedure, the interval data obtained remotely from a meter by the Metering Services MV90 application.
<i>Partial data</i>	Incomplete <i>meter data</i> identified during the <i>settlements period</i> on which Metering Services requires an <i>estimate</i> to be performed by the <i>Market Operator</i> .
<i>RecorderID</i>	For the purpose of this procedure, the primary reference number provided within a <i>meter data</i> file exported from Metering Services' MV90 application.
<i>Substitution, substitute, substituted</i>	For the purpose of this procedure, the modification of one or more interval meter <i>datastreams</i> where the meter data has failed the validation test, prepared under a set of automated rules.
<i>Validation</i>	For the purpose of this procedure, the process of testing the veracity and integrity of the raw <i>meter data</i> in order to determine if <i>substitution</i> or <i>estimation</i> is required.

5 Principles

The following principles are to be used to guide the *estimation* of *datastream* in the *I-NTEM*:

5.1 Background:

- 5.1.1. On *business days* 1 and 2 after a *settlements period*, Metering Services (on behalf of the *Network Operator*) must provide the *Market Operator* with full data sets of *RecorderIDs* for the Darwin-Katherine power system.
- 5.1.2. At the commencement of the third *business day*, Metering Services must advise the *Market Operator* of the number of outstanding *RecorderIDs* to be delivered by the end of the fourth *business day* and which of those *RecorderIDs* the *Market Operator* should prepare an *estimate*.
 - (a) At this time Metering Services must provide the *Market Operator* with *partial data* sets for these *RecorderIDs*.
- 5.1.3. At the commencement of the fourth *business day*, Metering Services must provide the *Market Operator* with an update on which *RecorderIDs* are required to be *estimated* and any related *partial data* sets.
- 5.1.4. At the commencement of the fifth *business day*, Metering Services must advise/confirm with the *Market Operator* which *RecorderIDs* are required to be *estimated* for the preliminary *settlements* statements.

- 5.1 If during test runs of the Settlements System for a prescribed *settlements period* on the *meter data* provided by Metering Services the *Market Operator* detects data for a *RecorderID* that is partially complete, the *Market Operator* is to advise Metering Services of the list of *RecorderIDs* where partially complete data has been identified.

- 5.2 If Metering Services advises the *Market Operator* that one or more *RecorderID*'s contain *partial data* the *Market Operator* is to *estimate* the incomplete *datastream(s)* so as to produce a full *datastream* for each affected *RecorderID*.
- 5.3 The agreed approach for estimating an incomplete *datastream* is as follows:
- 5.3.1. If the duration of the incomplete *datastream* allows for like days to be copied earlier in the month from the same *datastream*, the *Market Operator* must manually select and paste that data, without further alteration, to the *trading intervals* where the data is incomplete.
- (a) A 'like day' means for example the replication of an earlier Monday to a later Monday for the same day type (calendar day, *business day*, public holiday).
- 5.3.2. If the duration of the incomplete *datastream* doesn't allow for like days to be copied from the same *datastream* earlier in the month, the *Market Operator* must manually select and paste like day data from the same month 12 months earlier, without further alteration, to the *trading intervals* where the data is incomplete.
- 5.4 The *Market Operator* must only perform an estimation of a *datastream* (part of full) in readiness for the preparation of Preliminary Settlements Statements, and only when advised of *partial data* by Metering Services.

6 References

#	Role/Title	Date	Location
1	Systems Control Technical Code v5 (2015) ¹	27/05/2015	TRIM: D2015/414673
2	INTEM Settlements Statements & Timetable procedure	02/06/2015	TRIM: D2015/133522

Note: 1: in draft – waiting for approval.

7 Attachments

Nil.

8 Records

This procedure is to be stored in Power and Water's Records Management System (TRIM) in accordance with the Document and Record Control Procedure.

9 Review

This document is to be reviewed in accordance with changes to the System Control Technical Code, or more frequently as required by Metering Services.

10 Document history

Date of issue	Version	Prepared by	Description of changes
13/05/2015	V01	Phacelift	Initial version

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15/05/2015	V01	Phacelift	Revised based on discussions between the Market Operator and Metering Services (meeting 13/05/2015)
04/06/2015	C01	Phacelift	Approved