

METROLOGY PROCEDURE TRAFFIC SIGNAL DIMMING – DRAFT DETERMINATION AND REPORT

PREPARED BY: Retail Markets and Metering

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DRAFT DETERMINATION

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NOTICE OF SECOND STAGE OF RULES CONSULTATION

INTRODUCTION OF TRAFFIC SIGNAL DIMMING and TYPE 65 SUBSTITUTIONS – AMENDMENT TO THE METROLOGY PROCEDURE

This Notice of Second State of Rules Consultation informs all Consulted Persons of the second stage of consultation on the *metrology procedures*

The consultation is being conducted under clause 7.1.4 of the National Electricity Rules (**Rules**) in accordance with the *Rules consultation procedures* in clause 8.9 of the *Rules*.

Date of notice

This Notice of Second Stage of Rules Consultation was issued on *20 November 2014*

First Stage of Consultation

AEMO issued the Notice of First Stage of Rules Consultation on *18 September 2014*, together with a draft procedure.

Four submissions were received. All non-confidential submissions have been published on the *AEMO* website.

There were no requests for meetings.

AEMO has considered the issues raised in the submissions and has now produced a Draft Determination and Report.

The Draft Determination and Report is now available to all Consulted Persons for their consideration.

Objectives of the consultation

The objectives of the consultation are to:

- Vary the *metrology procedures* to facilitate the introduction of a methodology for the production of calculated metering data for dimmed traffic signals;
- Introduce Type 65 metering data substitution method;
- Align version numbering for Metrology Procedures Part A and Part B;
- Improve clarity and correct errors in the *metrology procedures*; and
- To ensure that Consulted Persons are properly informed about the proposed and the final outcome.

Background

The NSW Roads and Maritime Services advised AEMO of its intention to operate its traffic signal installations that are fitted with LED lamps in a dimmed mode to reduce energy consumption.

As traffic signals in NSW are classified as market unmetered loads, the Metrology Procedure is to be updated to incorporate the methodology to facilitate the calculation of metering data for traffic signals operating in dimmed mode.

Changes to the Metrology Procedure are also required to formalise the use of a metering data substitution method that is based on an average daily load value.

The recommended procedure changes under this consultation will become Metrology Procedure:

- Part A National Electricity Market Version 5.30,
- Part B: Metering Data Validation, Substitution and Estimation Procedure for Metering Types 1 – 7 Version 5.30.

Matter under consultation

Clause 7.1.4 of the *Rules* requires AEMO to conduct the *Rules consultation procedures* for amendments to the *metrology procedures*.

The *metrology procedures* are to be amended to support the introduction of traffic signal dimming, Type 65 metering data substitutions and correct minor errors.

The consultation process

The following table contains an outline of the remaining consultation process, including key dates. Please note that some of these dates are proposed dates and may be subject to change by AEMO.

| PROCESS | DATE |
|--------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| Closing date for submissions received in response to this Notice of Second Stage of Rules Consultation | 5 December 2014 |
| Publication of the Final Determination | Currently, proposed date is 21 January 2015 |
| Effective date | 15 May 2015 |

Invitation to make submissions

AEMO invites submissions on the Draft Determination and Report on the *National Electricity Market metrology procedures: Part A and Part B*.



Comments are also invited on any other issues relating to the subject matter of the consultation.

Submissions should identify any information considered to be confidential and reasons why information is to be treated as confidential should be provided. AEMO reserves the right to publish material that it does not consider to be confidential, despite a submission stating so.

It should also be noted that material identified as confidential may be accorded less weight in the decision-making process than material that is published.

Closing date for submissions

Submissions in response to this Notice of Second Stage of Rules Consultation should reach **AEMO** by **5:00pm EST on 5 December 2014**

AEMO has discretion to consider late submissions. Any late submission should explain:

- the reason for the lateness; and
- the detriment to you if *AEMO* fails to consider your submission.

Contact details

AEMO prefers that submissions be forwarded in electronic format (both pdf and Word) as they will be published on the *AEMO* website.

Please send all e-mail submissions to *Roy Kaplan* at roy.kaplan@aemo.com.au.

Date of Second Stage Rule Consultation publication: 20 November 2014.

1. Background

1.1 Matter under consultation

The NSW Roads and Maritime Services advised AEMO of its intention to operate its traffic signal installations that are fitted with LED lamps in a dimmed mode to reduce energy consumption.

Changes to the Metrology Procedure are also required to formalise the use of a metering data substitution method that is based on an average daily load value.

As a consequence of these changes, the Metrology Procedure is to be updated to incorporate the methodology to facilitate the calculation of metering data for traffic signals operating in dimmed mode and introduce a Type 65 substitution method.

The objectives of this consultation are to:

- Vary the *metrology procedures* to facilitate the introduction of a methodology for the production of calculated metering data for dimmed traffic signals;
- Introduce Type 65 metering data substitution method;
- Align version numbering for Metrology Procedures Part A and Part B;
- Improve clarity and correct errors in the *metrology procedures*; and
- To ensure that Consulted Persons are properly informed about the proposed and the final outcome.

1.2 The consultation and decision-making process

The following table provides an outline of the consultation process to date:

| PROCESS | DATE |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| Notice of First Stage of Rules Consultation issued | <i>18 September 2014</i> |
| Closing date for submissions received in response to the Notice of First Stage of Rules Consultation | <i>24 October 2014</i> |
| Publication of this Draft Determination and issue of Notice Of Second Stage of Rules Consultation inviting submissions in response to the Draft Determination | <i>20 November 2014</i> |

AEMO issued a Notice of First Stage of Rules Consultation on 18 September 2014 (**First Stage Notice**). A copy of the First Stage Notice is contained in **Attachment 1**. The First Stage Notice invited submissions by 24 October 2014. Four submissions were received and there were no meetings held.

AEMO also published drafts of the Metrology Procedure: Part A and Metrology Procedure: Part B indicating proposed changes.

The table below lists the remainder of the steps in the consultation process, together with the proposed dates for their completion. Please note that the proposed dates are subject to change by *AEMO*.

| PROCESS | DATE |
|-------------------------------------------------------------------------------|----------------------------------------------------|
| Closing date for submissions received in response to this Draft Determination | Currently, proposed date is <i>5 December 2014</i> |
| Publication of the Final Determination | Currently, proposed date is <i>21 January 2015</i> |
| Effective Date of Metrology Procedure | <i>15 May 2015</i> |

2. Consideration of Submissions

2.1 List of submissions received

AEMO received three submissions in response to the First Stage Notice.

The following table contains a list of respondents:

| RESPONDENT | PARTICIPANT TYPE OR OTHER ROLE |
|-------------------------|--------------------------------|
| <i>Ausgrid</i> | <i>Distributor</i> |
| <i>Energy Australia</i> | <i>Retailer</i> |
| <i>Endeavour Energy</i> | <i>Distributor</i> |
| <i>Origin Energy</i> | <i>Retailer</i> |

All submissions were published on *AEMO*'s website on the same date that this Draft Determination and Report was released.

Appendix 1 details the proposed changes to Metrology Procedure: Part A, for each Consulted Person, each issue raised and, for issues *AEMO* considers to be non-material, *AEMO*'s response.

Appendix 2 details the proposed changes to Metrology Procedure: Part B, for each Consulted Person, each issue raised and, for issues *AEMO* considers to be non-material, *AEMO*'s response.

Responses from Consulted Persons indicated that there are no further proposals to change Metrology Procedures Part A and Part B – refer to **Appendix 3**.

2.2 Meetings and forums

There were no requests for meetings and no forums were held.

3. Material issues raised by Consulted Persons

There were no material issues raised by Respondents as the purpose of this consultation is to amend the Metrology Procedures to reflect the principles and content of introducing traffic signals dimming and a Type 65 substitution method. AEMO, in consultation with the Metrology Reference Group (MRG), developed Draft Determination outcomes detailed in Appendices 1, 2 and 3.

4. Determination

Under clause 7.1.4 of the *Rules*, AEMO determines that, in AEMO's opinion, the *metrology procedures* have been amended to reflect the principles and content of the metering data calculation methodology for dimmed traffic signals, Type 65 metering data substitution methodology and the correction of minor errors.

Appendix 1 – Proposed changes to Metrology Procedure: Part A

| ITEM | DESCRIPTION | PARTICIPANT RESPONSE TO INITIAL CONSULTATION | DRAFT DETERMINATION |
|------|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| 1.1 | <p>Align version numbering</p> <p>Align version number of Metrology Procedure: Part A with that for Part B to Version 5.30.</p> | <p>Ausgrid – Agreed</p> <p>Endeavour Energy – Agree</p> <p>EnergyAustralia – No comment</p> <p>Origin Energy – Agree</p> | <p>AEMO notes that respondents supported this proposal.</p> |
| 1.2 | <p>Clause 2.4.26</p> <p>Correct clause reference to 2.2.24, i.e. change 2.4.23 to 2.4.24.</p> | <p>Ausgrid – Agreed</p> <p>Endeavour Energy – Agree</p> <p>EnergyAustralia – No comment</p> <p>Origin Energy – Agree</p> | <p>AEMO notes that respondents supported this proposal.</p> |
| 1.3 | <p>3.3.3(d)</p> <p>Italicise <i>calculated metering data</i>.</p> | <p>Ausgrid – Agreed</p> <p>Endeavour Energy – Agree</p> <p>EnergyAustralia – Agree</p> | <p>AEMO notes that respondents supported this proposal.</p> |

| ITEM | DESCRIPTION | PARTICIPANT RESPONSE TO INITIAL CONSULTATION | DRAFT DETERMINATION |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| | | Origin Energy – Agree | |
| 1.4 | <p>Clause 3.9.4</p> <p>Correct clause reference to 3.9.1, i.e. change 3.10.1 to 3.9.1.</p> | <p>Ausgrid – Agreed</p> <p>Endeavour Energy – Agree</p> <p>EnergyAustralia – No comment</p> <p>Origin Energy – Agree</p> | AEMO notes that respondents supported this proposal. |
| 1.5 | <p>Effective Date of the Metrology Procedure: Part A</p> <p>The proposed effective date of the Metrology Procedure: Part A is 15 May 2015.</p> | <p>Ausgrid – Agreed</p> <p>Endeavour Energy – Agree</p> <p>EnergyAustralia – No comment</p> <p>Origin Energy – Agree</p> | AEMO notes that respondents supported this proposal. |

Appendix 2 – Proposed changes to Metrology Procedure: Part B

| ITEM | DESCRIPTION | PARTICIPANT RESPONSE TO INITIAL CONSULTATION | DRAFT DETERMINATION |
|------|----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.1 | <p>Type 65 Substitution</p> <p>Table 1.8</p> <p>Change “Type 65 EST” to “Type 65 SUB or EST”.</p> | <p>Ausgrid – Agreed</p> <p>Endeavour Energy – Agree</p> <p>EnergyAustralia – EnergyAustralia endorsed this change however notes that the development of the ADL paper by AEMO is now well over a year in progressing to allow industry to understand how the ADL is used and the interrelation to various other factors in industry such as CTC, x/y values, NMI Class etc.</p> <p>EnergyAustralia continues to request this paper is developed and shared with industry.</p> <p>Origin Energy – Agree</p> | <p>AEMO notes that respondents supported this proposal.</p> <p>The Principles of Calculating Annual Energy Volumes paper is being developed.</p> |
| 1.2 | <p>Type 65 Substitution</p> | <p>Ausgrid – Should read:</p> <p>The Metering Data Provider may use a type</p> | <p>AEMO, in consultation with the MRG, determined that the wording as proposed in the consultation will be</p> |

| ITEM | DESCRIPTION | PARTICIPANT RESPONSE TO INITIAL CONSULTATION | DRAFT DETERMINATION |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| | <p>Clause 4.2.7</p> <p>The <i>Metering Data Provider</i> may use type 65 <i>substitution or forward estimation</i> type 65 only when the <i>metering data</i> from the same, or similar, <i>meter</i> reading period last year or the <i>metering data</i> from the previous <i>meter</i> reading period is not available (i.e. when type 61 and type 62 <i>substitution or forward estimation</i> methods cannot be used).</p> | <p>65 substitution or a type 65 forward estimation type 65 only when the metering data from the same, or similar, meter reading period last year or the metering data from the previous meter reading period is not available (i.e. when type 61 and type 62 substitution or forward estimation methods cannot be used).</p> <p>Endeavour Energy – Agree</p> <p>EnergyAustralia – As per 1.1</p> <p>Origin Energy – Agree</p> | retained for consistency with clause 4.2.6 wording. |
| 1.3 | <p>Type 65 Substitution</p> <p>4.2.9(a)</p> <p><i>Substitutions</i> may be type 61, 62, 63, 64, 65, 66, 67 or 68.</p> | <p>Ausgrid – Agreed</p> <p>Endeavour Energy – Agree</p> <p>EnergyAustralia – As per 1.1</p> <p>Origin Energy – Agree</p> | AEMO notes that respondents supported this proposal. |
| 1.4 | <p>Type 65 Substitution and replace “meter reading” with “energy consumption”</p> | <p>Ausgrid – Agreed</p> <p>Endeavour Energy – Agree</p> | AEMO, in consultation with the MRG, determined that Origin Energy’s proposed wording is to be included in |

| ITEM | DESCRIPTION | PARTICIPANT RESPONSE TO INITIAL CONSULTATION | DRAFT DETERMINATION |
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| 4.3.5 | <p>Type 65 – Forward Estimation by ADL Method</p> <p>The <i>Metering Data Provider</i> must provide a <i>substitution or forward estimation</i> of the meter reading <i>energy consumption</i> in accordance with the following formula:</p> <p>Meter Reading Energy Consumption = Average Daily Load * number of days required.</p> | <p>EnergyAustralia – As per 1.1</p> <p>Origin Energy – Origin suggests the following wording below. This provides clarity that the meter reading for MDFF is accurately reflected as per the derived consumption calculation. It is the meter reading that is used to calculate Settlement or Billing and provided on customer bills (i.e. new meter reading = previous meter reading + estimated energy consumption)</p> <p>The <i>Metering Data Provider</i> must provide a <i>substitution or forward estimation</i> of the meter reading by calculating the <i>energy consumption</i> in accordance with the following formula:</p> | this clause. |
| 1.5 | Replace “meter reading” with “energy consumption” | Ausgrid – Agreed | AEMO, in consultation with the MRG, determined that Origin Energy’s proposed wording is to be included in |

| ITEM | DESCRIPTION | PARTICIPANT RESPONSE TO INITIAL CONSULTATION | DRAFT DETERMINATION |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| 4.3.1 | <p>Type 61 - Previous Year Method (Average Daily Consumption method)</p> <p>The Metering Data Provider must provide a <i>substitution</i> or forward estimation of the meter reading energy consumption as per the following formula:</p> <p style="text-align: center;">Meter-Reading Energy Consumption = ADC_{LY} * number of days required</p> <p style="text-align: center;">where</p> <p>ADC_{LY} = average daily consumption from the same or similar <i>meter</i> reading period last year.</p> | <p>Endeavour Energy – Agree</p> <p>EnergyAustralia – No comment</p> <p>Origin Energy – The <i>Metering Data Provider</i> must provide a substitution or forward estimation of the meter reading energy consumption in accordance with the following formula:</p> | <p>this clause.</p> |
| 1.6 | <p>Replace “meter reading” with “energy consumption”</p> <p>4.3.2 Type 62 - Previous Meter Reading Method (Average Daily Consumption Method)</p> | <p>Ausgrid – Agreed</p> <p>Endeavour Energy – Agree</p> <p>EnergyAustralia – No comment</p> | <p>AEMO, in consultation with the MRG, determined that Origin Energy’s proposed wording is to be included in this clause.</p> |

| ITEM | DESCRIPTION | PARTICIPANT RESPONSE TO INITIAL CONSULTATION | DRAFT DETERMINATION |
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| | <p>The <i>Metering Data Provider</i> must provide a <i>substitution</i> or forward <i>estimation</i> of the meter reading energy consumption as per the following formula:</p> <p style="text-align: center;">Meter-Reading Energy Consumption = ADC_{PP} * number of days required.</p> <p style="text-align: center;">where</p> <p>ADC_{PP} = average daily consumption from the previous <i>meter</i> reading period.</p> | <p>Origin Energy – The <i>Metering Data Provider</i> must</p> <p>provide a <i>substitution</i> or forward <i>estimation</i> of the meter reading by calculating the energy consumption in accordance with the following formula:</p> | |
| 1.7 | <p>Replace “meter reading” with “energy consumption”</p> <p>4.3.3</p> <p>Type 63 Customer Class Method</p> <p>The <i>Metering Data Provider</i> must provide a <i>substitution</i> or forward <i>estimation</i> of the meter reading energy consumption as per the</p> | <p>Ausgrid – Agreed</p> <p>Endeavour Energy – Agree</p> <p>EnergyAustralia – No comment</p> <p>Origin Energy – The <i>Metering Data Provider</i> must</p> <p>provide a <i>substitution</i> or forward <i>estimation</i> of the meter reading by calculating the</p> | <p>AEMO, in consultation with the MRG, determined that Origin Energy’s proposed wording is to be included in this clause.</p> |

| ITEM | DESCRIPTION | PARTICIPANT RESPONSE TO INITIAL CONSULTATION | DRAFT DETERMINATION |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>following formula:</p> <p>Meter-Reading Energy Consumption = ADC_{CC} * number of days required</p> <p>where</p> <p>ADC_{CC} = average daily consumption for this customer class with the same type of usage.</p> | <p>energy consumption in accordance with the following formula:</p> | |
| 1.8 | <p>Correction</p> <p>14.3.3(a)(v) – change “shall” to “must” to be consistent with 14.4.3(a)(iii).</p> <p>If a device is shared with another <i>NMI</i>, the proportion of <i>load</i> that is agreed by affected <i>Registered Participants</i> to be attributable to that <i>NMI</i> (k). Each k factor will be less than 1. The sum of the k factors for a shared device across each respective <i>NMI</i> shall must be equal to 1,</p> | <p>Ausgrid – Mention should be made of the fact that where a device is not shared, the k factor must be equal to 1.</p> <p>Endeavour Energy – Agree</p> <p>EnergyAustralia – No comment</p> <p>Origin Energy – Agree</p> | <p>AEMO, in consultation with the MRG, determined that a new sub-clause will be included under 14.3.3(a) and 14.4.3(a) as follows:</p> <p>If a device is not shared with another <i>NMI</i>, the k factor must be equal to 1.</p> |
| 1.9 | <p>Correction</p> | <p>Ausgrid – Should read:</p> <p>Each device in the inventory table is a</p> | <p>AEMO, in consultation with the MRG, determined that Ausgrid’s proposed wording is to be included in this</p> |

| ITEM | DESCRIPTION | PARTICIPANT RESPONSE TO INITIAL CONSULTATION | DRAFT DETERMINATION |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| | <p>14.3.3(b) – clarify apportioning of shared devices.</p> <p>Each device in the <i>inventory table</i> is a unique combination of physical hardware, time control classification and shared portion, for example, if a device is shared with another <i>NMI</i>, the individual portion(s) of the device(s) must be included in the <i>inventory table</i> as a separate device type.</p> | <p>unique combination of physical hardware, time control classification and shared portion. For example, if a device is shared with another <i>NMI</i>, the individual portions of the device(s) must be included in the inventory table as a separate device type on each <i>NMI</i>.</p> <p>Endeavour Agree</p> <p>EnergyAustralia – No comment</p> <p>Origin Energy – Agree</p> | <p>clause.</p> |
| 1.10 | <p>Correction</p> <p>14.3.5(b) – use <i>Rules</i> defined term <i>Eastern Standard Time</i>.</p> <p>The <i>responsible person</i> must ensure that the appropriate sunset times and sunrise times are obtained from the Australian Government Geoscience website (www.ga.gov.au/geodesy/astro/sunrise.jsp), based on the longitude and latitude of the relevant town as specified below, and Australian Eastern Time</p> | <p>Ausgrid – Agreed</p> <p>Endeavour Energy – Agree</p> <p>EnergyAustralia – No comment</p> <p>Origin Energy – Agree</p> | <p>AEMO notes that respondents supported this proposal.</p> |

| ITEM | DESCRIPTION | PARTICIPANT RESPONSE TO INITIAL CONSULTATION | DRAFT DETERMINATION |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| | <i>Eastern Standard Time:</i> | | |
| 1.11 | <p>Correction</p> <p>14.3.5(b) – change “SP AusNet” to “AusNet Services” in latitude/longitude table to reflect entity name change.</p> | <p>Ausgrid – Agreed</p> <p>Endeavour Energy – Agree</p> <p>EnergyAustralia – No comment</p> <p>Origin Energy – No comment</p> | AEMO notes that respondents supported this proposal. |
| 1.12 | <p>Correction</p> <p>14.3.4(b) – clarify apportioning of shared devices</p> <p>Each device in the <i>inventory table</i> is a unique combination of physical hardware, time control classification and shared portion, for example, if a device is shared with another <i>NMI</i>, the individual portion(s) of the device(s) must be included in the <i>inventory table</i> as a separate device type.</p> | <p>Ausgrid – Clause does not exist – Should be 14.4.3(b).</p> <p>Should read:- Each device in the inventory table is a unique combination of physical hardware, time control classification and shared portion. For example, if a device is shared with another <i>NMI</i>, the individual portions of the device(s) must be included in the inventory table as a separate device type on each <i>NMI</i>.</p> <p>Same as 14.3.3(b).</p> | AEMO, in consultation with the MRG, determined that Ausgrid’s proposed wording is to be included in this clause. |

| ITEM | DESCRIPTION | PARTICIPANT RESPONSE TO INITIAL CONSULTATION | DRAFT DETERMINATION |
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| | | <p>Endeavour Energy – Agree</p> <p>EnergyAustralia – No comment</p> <p>Origin Energy – Agree</p> | |
| 1.13 | <p>Insert new section 14.6 – Traffic signal dimming</p> <p>New section 14.6 added to Metrology Procedure: Part B facilitate the calculation of metering data for traffic signals operating in dimmed mode – refer to change marked version of Metrology procedure: Part B included with consultation document package.</p> | <p>Ausgrid – Clause 14.6.1</p> <p>Should read:- ...metering data is not based on an annual energy consumption. Clause 14.6.2:- There is no k factor associated with traffic signals.</p> <p>Clause 14.6.3 (a) (v):- There is no k factor associated with traffic signals.</p> <p>Clause 14.6.3 (b):- There is no k factor associated with traffic signals.</p> <p>Endeavour Energy – Agree</p> <p>EnergyAustralia – EnergyAustralia questions how the calculation works if there is a dimmed traffic light in a tunnel that</p> | <p>AEMO, in consultation with the MRG, determined that a review of the basis of energy consumption calculation will be the subject of a future consultation.</p> <p>AEMO, in consultation with the MRG, determined that references to k factor will be retained to facilitate the prospect of shared costing of NMIs.</p> <p>AEMO has been advised by NSW Roads and Maritime Services that “we do not have any traffic signals sites that are inside any tunnel”.</p> |

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| | | <p>operates 24/7. Or the reverse where a traffic light is always full wattage.</p> <p>EnergyAustralia questions why the extra section is needed, if the new traffic lights are in the load table correctly for both dimmed and full wattage the existing documentation for control unmetered loads is appropriate.</p> <p>Origin Energy – Agree</p> | <p>Therefore the energy calculation algorithm, as proposed, is relevant for dimmed traffic signals.</p> <p>Section 14.6 added to Metrology Procedure: Part B to highlight that dimmed traffic signals energy consumption calculations are a hybrid of controlled and other unmetered loads. Energy consumption algorithm also details the apportionment of full and dimmed load values for the trading intervals in which sunset and sunrise occur.</p> <p>AEMO, in consultation with the MRG, determined that the 14.6 methodology is to be applied for periods after the clause 14.6 effective date and that revisions for calculated metering data for periods before the clause 14.6 effective dates will have the current calculation methodology applied. Clause 14.6.1 has been changed to reflect this position.</p> |

| ITEM | DESCRIPTION | PARTICIPANT RESPONSE TO INITIAL CONSULTATION | DRAFT DETERMINATION |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.14 | <p>Effective Date of the Metrology Procedure: Part B</p> <p>The proposed effective date of the Metrology Procedure: Part B is 15 May 2015.</p> <p>Effective Date for Clause 14.6:</p> <p>Proposed effective date for 14.6 is 1 July 2015.</p> | <p>Ausgrid – Agreed</p> <p>Endeavour Energy – Agree</p> <p>EnergyAustralia – EnergyAustralia endorses this proposed effective date.</p> <p>Origin Energy – Agree</p> | <p>AEMO, in consultation with the MRG, determined that Metrology Procedure effective dates are to align with MSATS release dates to minimise impacts to participant system changes.</p> |

Appendix 3 – Other consultation related issues – Metrology Procedure: Part A and Part B

| ITEM | ISSUE/COMMENT | | DRAFT DETERMINATION |
|------|---------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------|
| | Ausgrid – No comment Endeavour Energy – No comment EnergyAustralia – No comment Origin Energy – No comment | | AEMO notes that there are no further proposed changes to Metrology Procedures: Part A and Part B. |
| | | | |
| | | | |

Attachment 1 – Copy the Notice of First Stage of Rules Consultation

Notice of First Stage of Rules Consultation

NEM - First Stage of Rules Consultation: Metrology Procedure Update – Traffic Signal Dimming, Type 65 Substitutions and Corrections

AEMO is conducting a consultation on Metrology Procedure: Part A National Electricity Market version 5.30 and Metrology Procedure: Part B: Metering Data Validation, Substitution and Estimation Procedure for Metering Types 1 – 7 version 5.30 and invites all National Electricity Market Registered Participants, Metering Service Providers, Intending Participants and interested parties to make written submissions on the proposed Metrology Procedure changes.

This consultation is being conducted under clause 7.1.4 of the National Electricity Rules (**Rules**) in accordance with the Rules consultation requirements detailed in clause 8.9 of the Rules

The NSW Roads and Maritime Services advised AEMO of its intention to operate its traffic signal installations that are fitted with LED lamps in a dimmed mode to reduce energy consumption.

As traffic signals in NSW are classified as market unmetered loads, the Metrology Procedure is to be updated to incorporate the methodology to facilitate the calculation of metering data for traffic signal operating in dimmed mode.

Scope of Metrology Procedure Changes

The proposed Metrology Procedure changes under consultation are:

- Introduction of a methodology for the production of calculated metering data for dimmed traffic signals,
- Introduction of Type 65 metering data substitution method,
- Alignment of version numbering for Metrology Procedures Part A and Part B, and
- Correction of errors in the Metrology Procedure.

The changes proposed to the Metrology Procedure are indicated in the documents titled:

- Metrology Procedure Part A and Part B v5.30 Change Pack – Initial Consultation
- Metrology Procedure: Part A v5.30 Draft Traffic Signal Dimming Change Marked
- Metrology Procedure: Part B v5.30 Draft Traffic Signals Dimming Change Marked

The Consultation Process

The following table contains an outline of the consultation process, including key dates. Please note that these dates are proposed dates and may be subject to change by AEMO.

| PROCESS | DATE |
|-----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| Closing date for submissions received in response to this Notice of First Stage of Rules Consultation | <i>24 October 2014</i> |
| Publication of the Draft Determination and Report and invitation to make submissions in response to the Draft Determination | Currently, proposed date is <i>20 November 2014</i> |
| Closing date for submissions received in response to the Draft Determination and Report | Currently, proposed date is <i>5 December 2014</i> |
| Publication of Final Determination | Currently, proposed date is <i>21 January 2015</i> |
| Effective Date | Currently, proposed for <i>24 April 2015</i> |

Invitation to make Submissions

AEMO invites written submissions on the *National Electricity Market Metrology Procedure Part A and Part B*.

Comments are also invited on any other issues relating to the subject matter of the consultation.

Submissions should identify any information considered to be confidential and reasons why information is to be treated as confidential should be provided. AEMO reserves the right to publish material that it does not consider to be confidential, despite a submission stating so.

It should be noted that material identified as confidential may be accorded less weight in the decision-making process than material that is published.

Closing Date for Submissions

Submissions in response to this Notice of First Stage of Rules Consultation should reach AEMO by **5:00pm EST on 24 October 2014**.

AEMO has discretion to consider late submissions. Any late submission should explain:

- the reason for the lateness; and
- the detriment to you if AEMO fails to consider your submission.

Meetings

A request for a meeting may be made in a submission. The reasons why such a meeting is necessary or desirable must be included in the submission.

Please note that details of matters discussed at a meeting may be made available to other Consulted Persons.



Contact Details

AEMO prefers that submissions be forwarded in electronic format (both pdf and Word) as they will be published on the AEMO website.

Please send all e-mail submissions to *Roy Kaplan* at roy.kaplan@aemo.com.au.

Date of First Stage Rule Consultation publication: 18 September 2014.