

# CARBON DIOXIDE EQUIVALENT INTENSITY INDEX PROCEDURES

FINAL REPORT AND DETERMINATION

Published: **10 June 2019**





## EXECUTIVE SUMMARY

The publication of this Final Report and Determination (Final Report) concludes the Rules consultation process conducted by the Australian Energy Market Operator (AEMO) to consider amendments to the Carbon Dioxide Equivalent Intensity Index Procedures (Procedures) under the National Electricity Rules (NER).

On 1 March 2019, AEMO published the Notice of First Stage Consultation. On 8 May 2019, AEMO published the Notice of Second Stage Consultation and Draft Determination. AEMO did not receive any submissions to the First or Second Stage of the consultation. As such, AEMO's final determination is to amend the Procedures in the form published with this Final Report, reflecting the following outcomes:

- No changes to the Procedures with respect to the current calculation methodologies for the Carbon Dioxide Equivalent Intensity Index or supplementary indices.
- Amendments to the Procedures to allow emissions factor data to be sourced from the National Transmission Network Development Plan (NTNDP) database, or any database maintained and published by AEMO that supersedes the NTNDP database and includes emission factor assumptions.
- Amendments to the Procedures to reflect the current AEMO procedures template, correct minor errors and remove or replace obsolete provisions, references and website links.



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## 1. STAKEHOLDER CONSULTATION PROCESS

AEMO has consulted on the Carbon Dioxide Equivalent Intensity Index Procedures (Procedures) in accordance with clause 3.13.14(a) of the NER and the Rules consultation process in rule 8.9.

AEMO's timeline for this consultation is outlined below.

Deliverable	Date
Notice of first stage consultation and Issues Paper published	1 March 2019
First stage submissions closed	12 April 2019
Draft Report & Notice of second stage consultation published	8 May 2019
Submissions due on Draft Report	24 May 2019
Final Report published	10 June 2019

The publication of this Final Report marks the conclusion of this consultation.

Note that there is a glossary of terms used in this Final Report at **Appendix A**.

## 2. BACKGROUND

### 2.1. NER requirements

Under NER clause 3.13.14 (a), AEMO is responsible for developing and publishing the Procedures. The Procedures may be amended in accordance with the 'rules consultation procedures' set out in NER rule 8.9.

### 2.2. Carbon Dioxide Equivalent Intensity Index Procedures

The Carbon Dioxide Equivalent Intensity Index (CDEII) is calculated under a formal framework contained within the NER. It replaced the informal Greenhouse Intensity Index published by AEMO's predecessor NEMMCO.

The CDEII calculation combines sent out metering data with publicly-available generator emission and efficiency data to provide a National Electricity Market (NEM)-wide CDEII. This is calculated on a daily basis and published weekly to the AEMO website, in accordance with the timing of the issue of preliminary statements.

The Procedures, background information, and current and historical CDEII results are published on AEMO's website at: <https://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Settlements-and-payments/Settlements/Carbon-Dioxide-Equivalent-Intensity-Index>.

### 2.3. Context for this consultation

#### 2.3.1. Mandatory review of the CDEII Procedures

Under clause 3.13.14(e) of the NER, AEMO must conduct a review of the Procedures at least once every three years. The NER do not specify any particular scope for this review, but AEMO considered that a broad review was appropriate, including the extent to which the Procedures and the underlying index continue to provide value to stakeholders.

#### 2.3.2. Emission Factor data source

The Procedures provide for emission factor data to be sourced from the current final National Transmission Network Development Plan (NTNDP). The NTNDP is referenced and linked in eight separate sections of the Procedures. Currently, under the NER, AEMO is required to publish the NTNDP by 31 December each



year. However, based on the 2017 recommendations of the Independent Review into the Future Security of the National Electricity Market (Finkel Review), in 2018 most of the relevant content of the NTNDP was published in a broader Integrated System Plan (ISP).

On 20 December 2018, the Energy Security Board (ESB) recommended that the NTNDP currently provided for in the NER should be replaced by the ISP, to be published every two years with updates between plans as required. Although the NER have not yet been amended to implement this recommendation, AEMO anticipates that the NTNDP framework will be formally transitioned to the ISP in the near future.<sup>1</sup>

### 2.3.3. Format change and other minor corrections

The Procedures require several minor changes, including a move to the current AEMO procedures template, grammatical corrections, removal of obsolete references and website link updates.

## 2.4. First stage consultation

On 1 March 2019, AEMO issued a Notice of First Stage Consultation<sup>2</sup>, inviting Consulted Persons to consider the following questions:

- Are the calculation methodologies for the CDEII and supplementary intensity indices still appropriate, or can they reasonably be improved? How?
- Does the CDEII data, as published by AEMO annually, remain of value to participants in the NEM or related financial markets, relevant and fit for the purpose intended under the NER?
- Do you have any comments on how the required emission factor data in the CDEII Procedures should be referenced, given the timing uncertainty of the proposal to transition the NTNDP to the ISP?

AEMO did not receive any submissions in response to the First Stage Consultation.

## 2.5. Second stage consultation

On 8 May 2019, AEMO issued a Notice of Second Stage Consultation<sup>3</sup>, and published a Draft Report and Determination (Draft Report) and Draft Procedures. The Draft Report included a summary of the specific amendments proposed for the Procedures.

AEMO did not receive any submissions in response to the First Stage Consultation.

## 3. SUMMARY OF MATERIAL ISSUES

The key material issues arising from the proposal are summarised in the following table:

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<sup>1</sup> On 17 May 2019, the ESB published a consultation paper indicating that it would consult on changes to the NER in the second half of 2019, with a view to implementing the revised framework by the end of that year. Available at: <http://www.coagenergycouncil.gov.au/publications/energy-security-board-%E2%80%93-converting-integrated-system-plan-action-consultation-paper>

<sup>2</sup> Available at: <https://www.aemo.com.au/Stakeholder-Consultation/Consultations/Carbon-Dioxide-Equivalent-Intensity-Index-Procedure?Convenor=AEMO%20NEM>

<sup>3</sup> Available at: <https://www.aemo.com.au/Stakeholder-Consultation/Consultations/Carbon-Dioxide-Equivalent-Intensity-Index-Procedure?Convenor=AEMO%20NEM>



No.	Issue	Raised by
1.	Whether the calculation methodologies for the CDEII and supplementary intensity indices are still appropriate.	AEMO
2.	Whether the CDEII data, as published by AEMO annually, remain of value to participants in the NEM or related financial markets, relevant and fit for the purpose intended under the NER.	AEMO
3.	How the required emission factor data in the Procedures should be referenced, given the timing uncertainty of the proposal to transition the NTNDP to the ISP.	AEMO

Section 4 discusses each of these material issues, including a summary of AEMO's draft and final assessment of the issues and AEMO's final determination on each of them.

## 4. DISCUSSION OF MATERIAL ISSUES

### 4.1. Calculation methodologies for the CDEII

#### 4.1.1. Issue summary

The CDEII calculation combines sent out metering data with publicly-available generator emission and efficiency data to provide a NEM-wide CDEII. This is calculated on a daily basis and published weekly on the AEMO website, in accordance with the timing of the issue of preliminary statements. The CDEII calculation methodology was last reviewed in 2014.

#### 4.1.2. AEMO's Draft Assessment

AEMO believed that the current calculation methodologies for the CDEII and supplementary indices remained appropriate.

#### 4.1.3. AEMO's Draft Determination

AEMO did not identify the need for any changes to the current calculation methodologies for the CDEII or the supplementary indices. As such, AEMO made no changes to the Procedures with respect to calculation methodologies.

#### 4.1.4. AEMO's Final Assessment

AEMO maintains its proposed approach to make no changes to the current calculation methodologies for the CDEII or the supplementary indices. This is reflected in the Final Procedure, published with this Final Report.

#### 4.1.5. AEMO's Final Determination

AEMO's final determination is to retain the current calculation methodologies for the CDEII and the supplementary indices.



## 4.2. Value of the CDEII data to market participants

### 4.2.1. Issue summary

CDEII data for the current year contains the daily summarised regional and NEM-wide CDEII results and is published weekly on the AEMO website<sup>4</sup>. An annual summary of the CDEII data is also published, containing the daily summarised regional and NEM-wide CDEII results<sup>5</sup>. The annual CDEII data summaries are available for every year to 2011.

AEMO understands that the CDEII data is incorporated into the AFMA Carbon Benchmark Addendum and is used in relation to some retailer–customer contracts.

### 4.2.2. AEMO’s Draft Assessment

AEMO believed that the CDEII data published remains of use to market participants and others related to or interested in the electricity sector. Additionally, the CDEII data could have further uses depending on the future of emissions related policies.

### 4.2.3. AEMO’s Draft Determination

Given the relatively small impost of publishing the CDEII for AEMO, and the fact that the data remains useful for some market participants and other parties, AEMO will continue to publish the CDEII data in its current form.

### 4.2.4. AEMO’s Final Assessment

AEMO maintains its proposed approach to continue to publish the CDEII data in its current form.

### 4.2.5. AEMO’s Final Determination

AEMO’s final determination is to continue to publish the CDEII data in its current form.

## 4.3. Emission Factor data source

### 4.3.1. Issue summary

Clause 3.13.14(l)(2) of the NER states that the data on emission factors should be publicly available and from a reliable source. To date, under the Procedures, emission factor data was sourced from published NTNDP documentation.

Currently, under the NER, AEMO is required to publish the NTNDP by 31 December each year. Although the NER have not yet been amended to change this requirement, AEMO anticipates that the matters to be covered in the NTNDP and included in the NTNDP database will in future be covered by the ISP.

### 4.3.2. AEMO’s Draft Assessment

The Procedures are to be amended to reflect the likelihood that the NTNDP will be superseded and relevant emissions factor data will be sourced from the ISP database. Given that no changes have yet been made to the NER, AEMO considered it prudent to allow for future publication name changes, but maintain the central requirement that the data comes from an AEMO published source containing the emission factor assumptions.

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<sup>4</sup> Available at: [http://www.nemweb.com.au/Reports/CURRENT/CDEII/CO2EII\\_SUMMARY\\_RESULTS.CSV](http://www.nemweb.com.au/Reports/CURRENT/CDEII/CO2EII_SUMMARY_RESULTS.CSV)

<sup>5</sup> Available at: <https://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Settlements-and-payments/Settlements/Carbon-Dioxide-Equivalent-Intensity-Index>



#### 4.3.3. AEMO's Draft Determination

The Procedures are to be amended to allow emissions factor data to be sourced from the NTNDP database<sup>6</sup>, or any database maintained and published by AEMO that supersedes the NTNDP database (i.e. the ISP database) and includes emission factor assumptions. All are to be updated to refer to AEMO's CDEII page, which will contain the link to the latest NTNDP (or other) database.

#### 4.3.4. AEMO's Final Assessment

AEMO maintains its proposed approach to amend the Procedures to allow emissions factor data to be sourced from the NTNDP database, or any database maintained and published by AEMO that supersedes the NTNDP database. This is reflected in the Final Procedure, published with this Final Report.

#### 4.3.5. AEMO's Final Determination

AEMO's final determination is to amend the Procedures to allow emissions factor data to be sourced from the NTNDP database, or any database maintained and published by AEMO that supersedes the NTNDP database.

### 5. OTHER MATTERS

As part of this review, AEMO moved the Procedures to the current AEMO procedures template, and made grammatical corrections, removed obsolete provisions and references and updated website links.

### 6. FINAL DETERMINATION

Having considered the matters raised in this review, AEMO's Final Determination is to amend the Procedures in the form published with the Final Report, reflecting the following outcomes:

- No changes to the Procedures with respect to the current calculation methodologies for the CDEII or supplementary indices.
- Amendments to the Procedures to allow emissions factor data to be sourced from the NTNDP database, or any database maintained and published by AEMO that supersedes the NTNDP database and includes emission factor assumptions.
- Amendments to the Procedures to reflect the current AEMO procedures template, correct minor errors and remove or replace obsolete provisions, references and website links.

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<sup>6</sup> The NTNDP database contains the assumptions and inputs used for the NTNDP. These inputs constitute the NTNDP database in accordance with clause 5.20.4 of the NER.





## APPENDIX A. GLOSSARY

Term or acronym	Meaning
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AFMA	Australian Financial Markets Association
CDEII	Carbon Dioxide Equivalent Intensity Index
ESB	Energy Security Board
ISP	Integrated System Plan
NEM	National Electricity Market
NEMMCO	National Electricity Market Management Company
NER	National Electricity Rules
NTNDP	National Transmission Network Development Plan