



**Economic benchmarking RIN**  
**For distribution network service providers**

**Instructions and Definitions**  
**NSP Name (ACN XXX XXX XXX)**

November 2013

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# 1 Purpose of this document

Economic benchmarking measures the efficiency of a firm in the use of its inputs to produce outputs. It also accounts for the substitutability of different types of inputs and for the costs of providing different outputs.

This document accompanies the AER's regulatory information notice to collect information for economic benchmarking, issued on NSP Name (ACN XXX XXX XXX) (**DNBP**) on 28 November 2013 (**Notice**). The Notice requires DNBP to complete the Microsoft Excel Workbooks attached at Appendix A to the Notice in accordance with this instructions and definitions document.

This means that DNBP must complete "*DNBP economic benchmarking data templates – Consolidated Information.xlsx*" (the **Templates**). DNBP must then, for the purpose of independent audit or review (as applicable) copy Actual and Estimated Information from the Templates to "*DNBP economic benchmarking data templates – Actual Information.xlsx*" and "*DNBP economic benchmarking data templates – Estimated Information.xlsx*", respectively, in accordance with section 1.1.4.

The purpose of this document is to aid DNBP in complying with the Notice so DNBP should read it in conjunction with the Notice. This document explains process requirements, provides instructions for each worksheet in the Templates and contains definitions for terms used in the Templates.

DNBP must complete the Templates in accordance with the instructions contained within this document and the Notice. Chapters 2 to 8 provide guidance on completing each worksheet within the Templates. Chapter 9 contains definitions. Terms defined in chapter 9 or the Notice are capitalised. This chapter explains process requirements.

## 1.1 Process requirements

For the avoidance of doubt, the overarching requirement of the Notice is that DNBP must complete the Templates. DNBP must also provide a Basis of Preparation, which explains, for each Variable, the basis upon which DNBP prepared information to populate the input cells. DNBP's completed Templates and Basis of Preparation must be independently audited and verified by statutory declaration. DNBP must also update the Templates annually and submit them to the AER.

### 1.1.1 Completing the Templates

Subject to a small number of exceptions, DNBP must complete all input cells in the Templates. By this, we mean that DNBP must enter a value into the cell that corresponds to the unit required. In most cases this is a number. For the avoidance of doubt, DNBP must not input 'N/A' or similar – this will amount to non-compliance with the Notice. When DNBP cannot provide Actual Information, DNBP must provide its best estimate of the required information.

#### Best estimates

If DNBP cannot populate an input cell in the Templates with Actual information, it must provide the best estimate it can. Because the back cast dataset requires DNBP to populate input cells going back a number of years, we acknowledge that DNBP will likely need to estimate some Variables.

If DNBP provides an estimate, it must, in its Basis of Preparation, explain:

- why it could not use Actual Information;

- how DNSP derived the estimate; and
- why it is DNSP's best estimate.

However, we expect DNSP to set up systems to collect Actual Information in the format prescribed by the Templates such that in future years the amount of estimation can be reduced. This means we expect that DNSP will populate the Templates using (subject to a small number of exceptions) no Estimated Information for the 2015 Regulatory Year onwards. Exceptions include some Variables in the '6. Assets (RAB)' worksheet, which will inherently require estimation. This document identifies other Variables that may continue to be estimated in the relevant chapters.

In the Notice (and chapter 9) we define Actual Information as:

*Information presented in response to the Notice whose presentation is Materially dependent on information recorded in DNSP's historical accounting records or other records used in the normal course of business, and whose presentation for the purposes of the Notice is not contingent on judgments and assumptions for which there are valid alternatives, which could lead to a Materially different presentation in the response to the Notice.*

*'Accounting records' include trial balances, the general ledger, subsidiary accounting ledgers, journal entries and documentation to support journal entries. Actual financial information may include accounting estimates, such as accruals and provisions, and any adjustments made to the accounting records to populate DNSP's regulatory accounts and responses to the Notice. 'Records used in the normal course of business', for the purposes of non-financial information, includes asset registers, geographical information systems, outage analysis systems, and so on.*

## Variables that are not applicable

In some limited circumstances, the correct response to the Notice will be a blacked out input cell. These circumstances are limited to those that this document and the Templates clearly identify as potentially not applicable to DNSP. **It is not for DNSP to decide whether any other Variable could potentially be not applicable to it.** There are two circumstances where we have determined that a Variable could potentially be not applicable to DNSP.

The first circumstance is when DNSP does not currently measure the information in accordance with the Variable requirement and we (in this document) consider that it be both:

- unnecessarily burdensome for DNSP to estimate the information; and
- illogical for DNSP to enter '0' in response to the Variable when posed as a question.

These cells are shaded orange in the Templates.

The second circumstance is when DNSP has made no Material changes (over the course of the back cast time series) to its:

- Cost Allocation Approach, or
- Basis of Preparation for its Regulatory Accounting Statements, or
- the Annual Reporting Requirements.

These cells are shaded blue in the Templates.

For each Variable which this document and the Templates (through orange or blue shading) identify as potentially not applicable to DNSP, DNSP must consider whether the Variable is actually

applicable to it. If the Variable is actually applicable to DNSP, DNSP must complete the Variable in accordance with this document.

However, if, and only if:

- this document (in Table 1.1 and Table 1.2) and the Templates (through orange or blue shading) identify a Variable as potentially not applicable to DNSP; and
- that Variable is also actually not applicable to DNSP,

then DNSP may black out the cells relating to that Variable rather than input information. In these circumstances, blacking out that Variable will comply with the requirements of the Notice for the provision of back cast information.

This does not mean that we are allowing DNSP to not respond to part of the Notice. Rather, it means that, in the circumstances set out above, the correct response required by the Notice will be a blacked out cell. Any other use of blacked out cells, empty cells or entries such as "not applicable" will not comply with the terms of the Notice. For the avoidance of doubt, all cell shadings are reproduced and explained below.

Yellow cells require input, with no exceptions. If a yellow cell is not applicable to DNSP in accordance with this document, the input will be '0'.
Orange cells allow a blacked out input if DNSP does not currently measure the information in accordance with the variable requirement, it would be unnecessarily burdensome to estimate and it is illogical to enter '0'.
Blue cells allow a blacked out input only where there has been no Material (as defined in chapter 9) change in DNSP's Cost Allocation Approach, basis of preparation for Regulatory Accounting Statements or the Annual Reporting Requirements.

### **Yellow variables**

Yellow Variables are standard input Variables. DNSP must enter a value into these cells, without exception. There may be input cells that DNSP considers do not apply to it. For these cells, DNSP must nevertheless provide an input, even if that input is '0'. There may be several Variables that fall into this category. Some examples include the Energy Delivery Variables, revenue Variables, or assets at voltages that DNSP does not operate.

For these Variables, DNSP should consider the Variable as a question and the input it is providing as a response to the question. For example, if DNSP uses peak or off-peak periods but does not use a shoulder period, DNSP can still provide a logical, compliant answer to the question 'what is the quantity of energy delivered at shoulder times?' by inputting '0'. Similarly, if DNSP does not receive any *Alternative Control Services* revenue from fixed customer charges, the logical and compliant input is '0'.

DNSP must not enter '0' because DNSP considers it would be difficult or burdensome to provide the information if a Variable warrants a non-zero response.

### **Orange variables**

Orange Variables are limited to weather corrected Maximum Demand variables, certain RAB Variables, certain operational data Variables and certain operating environment Variables. Table 1.1 specifies all orange Variables.

**Table 1.1 Orange variables that may be blacked out in certain circumstances**

Variable code	Variable name	Must be provided from
DRAB1207	Easements	2014
DRAB0801	Opening value (for Easements)	2014
DRAB0802	Inflation addition (for Easements)	2014
DRAB0805	Actual additions (recognised in RAB) (for Easements)	2014
DRAB0806	Disposals (for Easements)	2014
DRAB0807	Closing value for Easements asset value (for Easements)	2014
DOPED0405	Energy into DNSP network at On-peak times from Residential Embedded Generation	2014
DOPED0406	Energy into DNSP network at Shoulder times from Residential Embedded Generation	2014
DOPED0407	Energy into DNSP network at Off-peak times from Residential Embedded Generation	2014
DOPED0408	Energy received from Embedded Generation not included in above categories from Residential Embedded Generation	2014
DOPSD0102	Non-coincident Summated Weather Adjusted System Annual Maximum Demand 10% POE	2014
DOPSD0103	Non-coincident Summated Weather Adjusted System Annual Maximum Demand 50% POE	2014
DOPSD0105	Coincident Weather Adjusted System Annual Maximum Demand 10% POE	2014
DOPSD0106	Coincident Weather Adjusted System Annual Maximum Demand 50% POE	2014
DOPSD0108	Non-coincident Summated Weather Adjusted System Annual Maximum Demand 10% POE	2014
DOPSD0109	Non-coincident Summated Weather Adjusted System Annual Maximum Demand 50% POE	2014
DOPSD0111	Coincident Weather Adjusted System Annual Maximum Demand 10% POE	2014
DOPSD0112	Coincident Weather Adjusted System Annual Maximum Demand 50% POE	2014
DOPSD0202	Non-coincident Summated Weather Adjusted System Annual Maximum Demand 10% POE	2014
DOPSD0203	Non-coincident Summated Weather Adjusted System Annual Maximum Demand 50% POE	2014
DOPSD0205	Coincident Weather Adjusted System Annual Maximum Demand 10% POE	2014
DOPSD0206	Coincident Weather Adjusted System Annual Maximum Demand 50% POE	2014
DOPSD0208	Non-coincident Summated Weather Adjusted System Annual Maximum Demand 10% POE	2014
DOPSD0209	Non-coincident Summated Weather Adjusted System Annual Maximum Demand 50% POE	2014

DOPSD0211	Coincident Weather Adjusted System Annual Maximum Demand 10% POE	2014
DOPSD0212	Coincident Weather Adjusted System Annual Maximum Demand 50% POE	2014
DOEF0202	Urban and CBD vegetation Maintenance Spans	2013
DOEF0203	Rural vegetation Maintenance Spans	2013
DOEF0204	Total vegetation Maintenance Spans	2013
DOEF0208	Average number of trees per urban and CBD vegetation maintenance span	2013
DOEF0209	Average number of trees per rural vegetation maintenance span	2013
DOEF0210	Average number of Defects per urban and CBD vegetation maintenance span	2013
DOEF0211	Average number of Defects per rural vegetation maintenance span	2013
DOEF0212	Tropical proportion	2013
DOEF0213	Standard Vehicle Access	2013
DOEF0214	Bushfire risk	2013

Some NSPs collect this information already or could reasonably estimate it. For these NSPs, orange cells are applicable and require input. However, for NSPs that do not already collect this information, we consider that it:

- would not be reasonable to require an estimate of these Variables; and
- would be illogical for an NSP to enter '0' as an input.

For example, there are NSPs who do not currently measure weather corrected Maximum Demand. It would be, in our view, unreasonable to require these NSPs to estimate an entire back cast series of weather correction. It would also be illogical to enter '0' as an input because Maximum Demand cannot logically be zero. From 2014, we require NSPs to provide weather corrected Maximum Demand.

The operating environment Variables are similar, except that we require DNSP to estimate the most recent year of the back cast series (2013).

### **Blue variables**

Blue Variables are limited to certain Opex Variables. Table 1.2 specifies all blue Variables.

**Table 1.2 Blue variables that may be blacked out in certain circumstances**

Variable code	Variable name
DOPEX01	Opex for Table 3.1.1 in Current Opex categories and cost allocations
DOPEX0201	Opex for Network Services
DOPEX0202	Opex for metering
DOPEX0203	Opex for Connection Services
DOPEX0204	Opex for public lighting
DOPEX0205	Opex for amounts payable for easement levy or similar direct charges on DNSP
DOPEX0206	Opex for transmission connection point planning

Blue cells are applicable only for these Opex variables. Blue cells are not applicable (and hence may be blacked out) unless DNSP has made Material changes (over the course of the back cast time series) to its:

- Cost Allocation Approach, or
- Basis Of Preparation for its Regulatory Accounting Statements, or
- Annual Reporting Requirements.

If any of the above has Materially changed, the blue cells become applicable, and hence require input.

## Financial inputs

All monetary input values relating to Regulatory Years must be in nominal terms unless otherwise stated. DNSP must also enter monetary values in thousands (\$'000), rounded to the nearest dollar (unless stated otherwise).

### 1.1.2 Basis of preparation

The Notice requires DNSP to prepare a Basis of Preparation. By this, we mean that for every variable in the Templates, DNSP must explain the basis upon which DNSP prepared information to populate the input cells. The Basis of Preparation must be a separate document (or documents) that DNSP submits with its completed Templates. We will publish DNSP's Basis of Preparation along with the Templates.

We require the Basis of Preparation to follow a logical structure that enables auditors, assurance practitioners and the AER to clearly understand how DNSP has complied with the requirements of the Notice.

To do this, we recommend DNSP structures its Basis of Preparation with a separate section to match each of the worksheets titled '2. Revenue' to '8. Operating environment' in the Templates. DNSP may consider structuring these sections with subheadings for each subject matter table in each worksheet. For example, for the worksheet '5. Operational data', DNSP would explain its Basis of Preparation for the Variables under the heading '5.1 Energy delivery', '5.2 Customer numbers' and '5.3 System demand'.

DNSP must include in its Basis of Preparation, any other information DNSP prepares in accordance with the requirements of the Notice (including this document). For example, if DNSP chooses to disaggregate its RAB using its own approach in addition to the AER's standard approach, DNSP must explain this in its Basis of Preparation.

At a minimum, the Basis of Preparation must:

- (1) demonstrate how the information provided is consistent with the requirements of the Notice;
- (2) explain the source from which DNSP obtained the information provided;
- (3) explain the methodology DNSP applied to provide the required information, including any assumptions DNSP made; and
- (4) in circumstances where DNSP cannot provide input for a Variable using Actual Information, and therefore must use an estimate, explain:
  - (i) why an estimate was required, including why it was not possible for DNSP to use Actual Information;
  - (ii) the basis for the estimate, including the approach used, assumptions made and reasons why the estimate is DNSP's best estimate, given the information sought in the Notice.
- (5) For Variables that contain Financial Information (Actual or Estimated) the relevant Basis of Preparation must explain if accounting policies adopted by DNSP have Materially changed during any of the Regulatory Years covered by the Notice:
  - (i) the nature of the change; and
  - (ii) the impact of the change on the information provided in response to the Notice.

DNSP may provide additional detail beyond the minimum requirements if DNSP considers it may assist a user to gain an understanding of the information presented in the Templates.

In relation to providing an audit opinion, or making an attestation report on the Templates presented by DNSP, an auditor or assurance practitioner shall provide an opinion or attest by reference to DNSP's Basis of Preparation.

### 1.1.3 Information for future Regulatory Years

The Notice requires DNSP to update the Templates each year, up to and inclusive of 2024. For each subsequent Regulatory Year until 2024 DNSP must add additional columns as indicated on each of the worksheets titled '2. Revenue' to '8. Operating environment' with information for the most recent Regulatory Year. That is, in 2015, DNSP must update the Templates with 2014 information; in 2016 DNSP must update the Templates with 2015 information, and so on. The Notice requires DNSP to retain all information.

DNSP must insert the subsequent Regulatory Year between the last Regulatory Year of data and the 'insert subsequent Regulatory Year' column in each of the aforementioned worksheets. We expect any future Regulatory Information Notices or Regulatory Information Orders will require the retention and provision of the same information beyond 2024.

Subsequent Regulatory Year updates are due at the same time as Annual Reporting Requirements. So, NSPs who report on a financial year, April to March or July to June basis must submit the annual subsequent Regulatory Year information on 30 June or 31 October, respectively (or the next business day if 30 June or 31 October is not a business day). NSPs who report on a calendar year (January to December) basis must submit subsequent Regulatory Year information on 30 April (or the next business day if 30 April is not a business day). Table 1.3 provides an example for all NSPs.

**Table 1.3 Information requirements by NSP**

NSP	Example RIN year	Regulatory Year equivalent	Unaudited back cast data due	Audited back cast data due	Audited 2014 Year due	Audited 2015 Year due <sup>a</sup>
CitiPower, Powercor, JEN, SP AusNet (distribution), UED	2013	2013	3 March 2014	30 April 2014	30 April 2015	30 April 2016
SP AusNet (transmission)	2013	2012/13	3 March 2014	30 April 2014	31 July 2014	31 July 2015
ActewAGL, AusGrid, Aurora, ElectraNet, Endeavour, Energex, Ergon, Essential, Powerlink, SA Power Networks, Transend, Transgrid	2013	2012/13	3 March 2014	30 April 2014	31 October 2014	31 October 2015

Note: (a) The audited 2014 year is the last year where estimates may be used. Thereafter, NSPs must provide Actual Information except for those variables that are inherently estimates as specified in this document.

DNSP must subject each year's data to independent audit, and provide an annual statutory declaration in accordance with the requirements of the Notice. DNSP is not required to re-audit the information previously audited and supplied to the AER. That is, when DNSP submits the information for the 2014 Regulatory Year, audit and attestation by statutory declaration is required only for the 2014 information. The 2006<sup>1</sup> to 2013 data would have been audited and verified already, so it will not need to be re-audited or re-verified unless DNSP Materially changes its CAM in the future. In this case, DNSP must re-cast the relevant opex data in accordance with the new CAM, and have it independently audited.

### 1.1.4 Auditing and statutory declaration

The Notice requires DNSP's completed Templates and basis of preparation to be independently audited and verified by statutory declaration. The statutory declaration, which must be completed by DNSP's Chief Executive Officer (CEO) is in Appendix C to the Notice. The auditing and review requirements are set out in Appendix D to the Notice.

DNSP must submit their first response to the Notice by 3 March 2014 (**First Response**). Because the Notice requires DNSP to provide a back cast time series (2006<sup>1</sup> to 2013 Regulatory Years), we do not require the First Response to be Audited or verified by statutory declaration. On 30 April 2014, DNSP must submit to the AER the Audited and verified version of the First Response to the Notice and the

<sup>1</sup> Due to its half year in 2008, Aurora will need to provide the data from 1 July to 31 December of the 2005 regulatory year to make up the full 8 year back cast data set. Aurora may provide the full 2005 calendar year if it prefers, which would equate to a total of 8.5 years of back cast data.

accompanying Audit Report and Review Reports. However, we only require the Audit Report and Review Reports to cover Regulatory Years 2009 to 2013 (five years).

The CEO's statutory declaration is required to verify the entire back cast time series.

For subsequent submissions (from July 2014, when NSPs who report on an April to March financial year basis must submit their 2014 information) DNSP must submit audited and verified information only. That is, the provision of unaudited and unverified information by DNSP after 3 March 2014 will not be compliant with the Notice.

## Class of auditor

We require an independent registered company auditor who is a member of the Institute of Chartered Accountants Australia (CA or FCA) or of CPA Australia (CPA or FCPA) that holds a Certificate of Public Practice to conduct the audits and reviews of financial information.

Where the review involves Non-financial Information, we generally expect the auditor to engage an engineering expert for assistance. However, if DNSP's current practice is to engage an independent assurance practitioner (who is not necessarily a registered company Auditor as defined above) to review Non-financial Information for AER Annual Reporting Requirements, DNSP may do the same for the Non-Financial information required by the Notice. The assurance practitioner must satisfy the requirements in paragraph 2.2 of Appendix D to the Notice. These include that the practitioner must:

- be an 'assurance practitioner' as defined in ASAE 3000 *Assurance engagements other than audits or reviews of historical financial information*;
- review the non-financial information in accordance with ASAE 3000 *Assurance engagements other than audits or reviews of historical financial information*.

## Auditing procedure

For financial information:

- Actual Information must be audited in accordance with ASA 805 *Special Considerations — Audits of Single Financial Statements and Specific Elements, Accounts or Items of a Financial Statement*; and
- Estimated Information must be reviewed in accordance with ASRE 2405 *Review of Historical Financial Information Other than a Financial Report*.

Non-financial information must be reviewed in accordance with ASAE 3000 *Assurance engagements other than audits or reviews of historical financial information*.

The Notice requires DNSP to complete three separate Microsoft Excel Workbooks. This is to ensure auditors and assurance practitioners understand exactly which information is estimated and which is actual, given that Actual Financial Information is subject to reasonable assurance but Estimated Financial Information is subject to limited assurance.

DNSP must complete the Templates ("*DNSP economic benchmarking data templates – Consolidated Information.xlsx*") and ensure it contains all information required by the Notice.

DNSP must then copy all Actual Information to the Microsoft Excel Workbook titled “*DNSP economic benchmarking data templates – Actual Information.xlsx*” and all Estimated Information to the Microsoft Excel Workbook titled “*DNSP economic benchmarking data templates – Estimated Information.xlsx*”.

DNSP must submit all Microsoft Excel Workbooks to us.

## 2 Revenues

This section applies to the worksheet entitled '2. Revenue' in the Templates. Economic benchmarking outputs can be measured on an 'as billed' basis or on a broader 'functional' basis. We are collecting revenue data to allow for the application of an 'as billed' (or billed outputs) specification in addition to a functional outputs specification. The 'as billed' basis measures outputs in terms of the services for which businesses charge customers. In order to weight the outputs under an 'as billed' basis it is necessary to collect data on revenues.<sup>2</sup> The objective of this template is to collect revenues split out in accordance with the main outputs for which DNSP bills its customers.

### 2.1 Directions

DNSP must report revenues split in accordance with the categories in the Templates. The Templates require DNSP to report revenues by chargeable quantity (Table 2.1) and by customer class (Table 2.2). The total of revenues by chargeable quantity must equal the total of revenues by customer class because they are simply two different ways of disaggregating revenue information. DNSP must also separately provide revenues received or deducted as a result of incentive schemes (Table 2.3).

DNSP must report revenues split in accordance with definitions of *Standard Control Services* and *Alternative Control Services* provided in chapter 9. These definitions specify the services to be reported against Standard Control Services and Alternative Control Services in periods where different service classifications applied.

DNSP must enter '0' into cells that have no effect on the revenues of DNSP. For instance, if DNSP does not use a shoulder period for Energy Delivery charges then the amount of revenue reported for the variable would be '0'.

#### Box 1 Revenue Financial Reporting Framework

Revenues must be reported in accordance with the requirements of, and should reconcile to, the Direct Control Services revenues reported in the Regulatory Accounting Statements as per the Annual Reporting Requirements. For instance if revenues in the Regulatory Accounting Statements for Direct Control Services are inclusive of taxes or the penalties or rewards of incentive schemes then revenues must be reported inclusive of these amounts.

As a consequence, total revenues for Direct Control Services will equal those reported in the Regulatory Accounting Statements (with the exception of total revenue in Table 2.3).

#### Table 2.1 Revenue grouping by chargeable quantity

Revenues reported must be allocated to the chargeable quantity that most closely reflects the basis upon which the revenue was charged by DNSP to customers (the chargeable quantities are the Variables DREV0101–DREV0112).

Revenues that cannot be allocated to the specific chargeable quantities in variables DREV0101 to DREV0112 must be reported against 'Revenue from other Sources' (DREV0113).

'Revenue From Unmetered Supplies' is the same for table 2.1 as for table 2.2, so they must be equal.

<sup>2</sup> For further explanation of the billed outputs specification see: Economic Insights Pty Ltd, *Economic Benchmarking of Electricity Network Service Providers: Report prepared for Australian Energy Regulator*, 25 June 2013, Denis Lawrence and John Kain, p. 6.

## **Table 2.2 Revenue grouping by customer type or class**

DNSP must allocate revenues to the customer type that most closely reflects the customers from which DNSP received its revenue.

Revenues that DNSP cannot allocate to the customer types DREV0201–DREV0205 must be reported against 'Revenue from other Customers' (DREV0206).

## **Table 2.3 Revenue (penalties) allowed (deducted) through incentive schemes**

DNSP must report the penalties or rewards of incentive schemes in this table. The penalties or rewards from the schemes applied by previous jurisdictional regulators that are equivalent to the service target performance incentive scheme (STPIS) or efficiency benefit sharing scheme (EBSS) must be reported against the line items for those schemes.

Revenues reported in table 2.3 must reflect the effect on revenues of incentive schemes in the year that the penalty or reward is applied (as opposed to when it was earned which depending on the scheme may be in earlier years). For instance, if DNSP is rewarded extra revenues for performance under the STPIS in 2009 and gains these revenues in 2011 these revenues must be reported in the 2011 year only.

## 3 Opex

This section applies to the worksheet entitled '3. Opex' in the Templates. Opex is a key input required for NSPs to deliver their services and hence is being requested for economic benchmarking purposes. Opex is requested by category to identify the drivers of change in the partial productivity of Opex for NSPs.

We require historical Opex for Standard Control Services and Alternative Control Services to reconcile to historical Opex as disclosed in the Regulatory Accounting Statements. Collecting this information will also allow for the costs of providing these services to be taken into account when conducting sensitivity analysis.

We also require Opex be reported for Network Services as these are the services that we intend to analyse in our economic benchmarking. Network Services are defined in chapter 9 and relate to the provision of a DNSP's shared network.

Opex is also required in accordance with both historical and current reporting arrangements such that the effect of any Material changes in reporting approach on efficiency measurement can be taken into account. A Material change would, for example, include a change in capitalisation policy that significantly shifts costs from Opex to capex or a change in the categories of Opex reported by an NSP in its Regulatory Accounting Statements.

Categorisations of Opex are also requested on a consistent basis over the Regulatory Years, such that the differences in the composition of regulated distribution services can be accounted for over time.

### 3.1 Instructions

For all tables, Opex must be split into Standard Control Services and Alternative Control Services in accordance with the definitions of these services provided in chapter 9. These definitions outline the services that fall within Standard Control Services and Alternative Control Services prior to when we made a determination on these services.

In addition, Opex must be split into the Variables as defined in Chapter 9 for Table 3.2.

Where DNSP does not incur Opex for a particular Variable a '0' must be entered into these cells. For example where DNSP does not provide a service as a part of Standard Control Services or Alternative Control Services, DNSP must enter '0' in the cells that correspond to that service.

Opex must be reported inclusive of margins and Opex for Dual Function Assets.

#### Table 3.1 Opex categories

DNSP must report Opex in accordance with the categories that they reported in in response to their Annual Reporting Requirements.

##### *Table 3.1.1 Current Opex categories and cost allocations*

DNSP is only required to complete this table if there has been a Material change (over the course of the back cast time series) in DNSP's:

- Cost Allocation Approach, or

- basis of preparation for its Regulatory Accounting Statements, or
- Annual Reporting Requirements.

If any of the above has Materially changed, the blue cells become compulsory input cells. Where there has not been a Material change in the Cost Allocation Approach, basis of preparation or Annual Reporting Requirements, the Opex reported in Table 3.1.1 will be consistent with the Opex reported in Table 3.1.2. Thus we are not requiring NSPs to report changes that are not Material.

Table 3.1.1 requires DNSP to report historical Opex categories in accordance with their most recent annual reporting RIN activities (eg. vegetation management, emergency response, network planning and development, etc). DNSP must add additional rows where necessary to report Opex activities.

**Box 2 Reporting framework – Table 3.1.1 Current Opex categories and allocations**

Opex must be prepared for all Regulatory Years in accordance with DNSP's Cost Allocation Approach and directions within the Annual Reporting Requirements for the most recent completed Regulatory Year. For the avoidance of doubt:

- The accounting principles and policies specified in the Annual Reporting Requirements applying to the Regulatory Financial Statements for the most recent completed Regulatory Year must be applied for all Regulatory Years.
- DNSP must report Opex line items in a manner that is consistent with the Regulatory Financial Statements. As a consequence, for years where the Cost Allocation Approach and Regulatory Accounting Statements are consistent with those that applied in the most recent completed Regulatory Year, total Opex should equal that reported in the Regulatory Accounting Statements.

When completing the templates for Regulatory Years subsequent to the 2013 Regulatory Year, if DNSP can provide Actual Information for Table 3.1.1 it must do so; otherwise DNSP must provide Estimated Information.

**Table 3.1.2 Historical Opex categories and allocations**

DNSP must report its historical Opex categories in accordance with the Opex activities (eg. vegetation management, emergency response Opex, etc) within the Annual Reporting Requirements that applied in the relevant Regulatory Year. These categories must align with the activities reported in response to the Annual Reporting Requirements for each Regulatory Year. DNSP must add additional rows where necessary to report Opex activities.

**Box 3 Reporting framework – Table 3.1.2 Historical Opex categories and allocations**

DNSP must report, for all Regulatory Years, Opex in accordance with the requirements of the Cost Allocation Approach and the Regulatory Accounting Statements that were in effect for the individual Regulatory Year. For the avoidance of doubt this means that:

- The accounting principles applied by the NSP to complete its Regulatory Financial Statements for each individual Regulatory Year must be applied when reporting Opex for that Regulatory Year.
- Opex reported must be prepared in a consistent manner to that of Opex reported in the Annual Reporting Requirements.
- Opex line items reported in table 3.1.2 should equal Opex line items reported in the Regulatory Accounting Statements for each Regulatory Year.

Table 3.1 provides an example of the reporting requirements where three sets of Opex categories have been used by a hypothetical DNSP. As the Opex categories have changed, DNSP is required to add rows to report the Opex as categorised in the relevant Regulatory Years.

**Table 3.1 Example of Opex category reporting requirements where Opex categories/ Cost Allocation Approach have changed over time**

	Regulatory year		2006	2007	2008	2009	2010	2011	2012	2013
Variable_Code	Variable	Unit								
<b>Table 3.1 Opex categories</b>										
<b>Table 3.1.1 Current opex categories and cost allocations</b>										
DOPEX0101	Vegetation management	\$'000	\$\$\$	\$\$\$	\$\$\$	\$\$\$	\$\$\$	\$\$\$	\$\$\$	\$\$\$
DOPEX0102	Maintenance	\$'000	\$\$\$	\$\$\$	<b>2013 cost allocation approach and accounting principles and policies</b>					\$\$\$
DOPEX0103	Emergency response	\$'000	\$\$\$	\$\$\$						\$\$\$
DOPEX0104	Overheads	\$'000	\$\$\$	\$\$\$						\$\$\$
DOPEX01	<b>Total opex</b>	\$'000	\$\$\$	\$\$\$	\$\$\$	\$\$\$	\$\$\$	\$\$\$	\$\$\$	\$\$\$
<b>3.1.2 Historical opex categories and cost allocations</b>										
DOPEX0101A	Vegetation management	\$'000						\$\$\$	\$\$\$	\$\$\$
DOPEX0102A	Maintenance	\$'000						\$\$\$	\$\$\$	\$\$\$
DOPEX0103A	Emergency response	\$'000			<b>New CAM approved by AER in 2011</b>				\$\$\$	\$\$\$
DOPEX0104A	Overheads	\$'000						\$\$\$	\$\$\$	\$\$\$
DOPEX01A	<b>Total opex</b>	\$'000						\$\$\$	\$\$\$	\$\$\$
DOPEX0101B	Vegetation management	\$'000				\$\$\$	\$\$\$			
DOPEX0102B	Maintenance	\$'000				\$\$\$	\$\$\$			
DOPEX0103B	Emergency response	\$'000				\$\$\$	\$\$\$			
DOPEX0104B	Overheads	\$'000				\$\$\$	\$\$\$			
DOPEX01B	<b>Total opex</b>	\$'000				\$\$\$	\$\$\$			
DOPEX0101C	Maintenance	\$'000	\$\$\$	\$\$\$	\$\$\$					
DOPEX0102C	Overheads	\$'000	\$\$\$	\$\$\$	\$\$\$					
DOPEX0103C	Other	\$'000	\$\$\$	\$\$\$	\$\$\$					
DOPEX01C	<b>Total opex</b>	\$'000	\$\$\$	\$\$\$	\$\$\$					

## Table 3.2 Opex consistency

Table 3.2 is intended to collect consistent Opex line items for economic benchmarking. Network Services Opex is requested as this is the core service which we intend to benchmark. Other services are collected so that their impact on productivity can be assessed and they can be incorporated or excluded from the services being benchmarked if necessary.

The Opex categories in this table are not intended to be mutually exclusive or collectively exhaustive. This means that the totals of Opex in this table may be greater or less than DNSP's actual Opex. Further, Opex may be double counted within the line items.

### **Table 3.2.1 Opex consistency - current Cost Allocation Approaches**

DNSP must report Opex for the Opex Variables in accordance with its current reporting arrangements (such as its Cost Allocation Approach). Our Opex Variables are defined in chapter 9.

DNSP is required to complete this table only if there has been a Material change (over the course of the back cast time series) in DNSP's:

- Cost Allocation Approach, or
- basis of preparation for its Regulatory Accounting Statements, or
- Annual Reporting Requirements.

If any of the above has Materially changed, the blue cells become compulsory input cells.

A Material change, in this context, is a change in Opex of greater than half of a per cent of total Standard Control Services in the year that the change occurred.

When completing the templates for Regulatory Years subsequent to the 2013 Regulatory Year, if DNSP can provide Actual Information in Table 3.2.1 it must do so; otherwise DNSP must provide Estimated Information.

#### **Box 4 Reporting framework – Table 3.2.1 Opex consistency – current Cost Allocation Approaches**

Opex must be prepared in accordance with DNSP's Cost Allocation Approach and directions within the Annual Reporting Requirements for the most recent completed Regulatory Year for all Regulatory Years. For the avoidance of doubt:

- The accounting principles and policies specified in the Annual Reporting Requirements applying to the Regulatory Financial Statements for the most recent completed Regulatory Year must be applied for all Regulatory Years.
- DNSP must prepare the Opex line items in a consistent manner to that of Opex reported in response to its most recent Annual Reporting Requirements.

### **Table 3.2.2 Opex consistency - historical Cost Allocation Approaches**

DNSP must report Opex in accordance with our Variables and the Cost Allocation Approaches and reporting framework applied in the relevant Regulatory Years. Our Opex Variables are defined in chapter 9.

**Box 5                    Reporting framework – Table 3.2.2 Opex consistency – historical Cost Allocation Approaches**

DNBP is required to report, for all Regulatory Years, Opex in accordance with the requirements of the Cost Allocation Approach and the Regulatory Accounting Statements that were in effect for the relevant Regulatory Year. For the avoidance of doubt this means that:

- The accounting principles applied by the NSP in completing its Regulatory Financial Statements for each individual Regulatory Year must be applied when reporting Opex for that Regulatory Year.
- Opex reported must be prepared in a consistent manner to that of Opex reported in the Annual Reporting Requirements.

**Table 3.3 Provisions**

DNBP must report, for all Regulatory Years, financial information on provisions for Standard Control Services in accordance with the requirements of the Cost Allocation Approach and the Regulatory Accounting Statements that were in effect for the relevant Regulatory Year.

DNBP must report financial information for each of its individual provisions. A provision is an account which records a specific present liability of an entity to another entity. Examples of provision accounts include employee entitlements, doubtful debts and uninsured losses. DNBP must complete the table for each individual provision and must add rows as necessary to the template for this purpose.

For each additional provision specify the name of the provision and add Variable codes for line items. A letter or letters must be added to the end of each Variable code link it to the provision. For example, the Variable codes for the first additional provision would be DOPEX0301A to DOPEX0312A, Variable codes for the second would be DOPEX0301B to DOPEX0312B and the Variable codes for the 28th provision would be DOPEX0301AA to DOPEX0312AA.

**Box 6                    Reporting framework for provisions**

Provisions must be reported in accordance with the principles and policies within the Annual Reporting Requirements for each Regulatory Year.

Financial information on provisions should reconcile to the reported amounts for provisions the Regulatory Accounting Statements for each Regulatory Year.

**Table 3.4 Opex for distribution transformers owned by high voltage customers**

DNBP must report the amount of Opex that it would have incurred had it been responsible for operating and maintaining the electricity Distribution Transformers that are owned by its high voltage customers.

Where Actual Information is unavailable, this must be estimated based on the Opex DNBP incurs for operating similar MVA capacity Distribution Transformers within its own network. Where the MVA capacity of high voltage customer-owned Distribution Transformers is not known, it must be approximated by the observed Maximum Demand for that customer.

The data in this table will not reconcile to amounts reported in the Regulatory Accounting Statements as it does not relate to services provided by DNSP.

When completing the templates for Regulatory Years subsequent to the 2013 Regulatory Year, if DNSP can provide Actual Information for the Variables in Table 3.4 it must do so; otherwise DNSP must provide Estimated Information.

## 4 Assets (RAB)

This section applies to the worksheet entitled '4. Assets (RAB)' in the Templates. Economic benchmarking of NSPs requires data on the price, quantity and value for each output and input, together with data in relation to key operating environment conditions. The model specification recommended by Economic Insights provides for three aggregated categories of capital inputs, which are overhead lines, underground cables, and transformers and other capital.<sup>3</sup>

The relative weighting of each category of capital and the 'value' of capital inputs relies on measures of financial capital in each NSP's RAB. The value of each capital input is the 'Annual User Cost of Capital' (AUCC). Calculating the AUCC requires data in relation to the opening value of the asset, depreciation, the opportunity cost of funds used to purchase the asset and capital gains. In the context of the 'building blocks' framework, the AUCC is consistent with measures of the 'return-on' and the 'return-of' capital.

The relative weight of each category of capital is derived using:

- the value of capital input (again the AUCC), and
- the quantity of capital measured by a physical proxy of capital.

For example, a physical proxy of capital is the lines of capital input quantity measured in Megavolt ampere-kilometres (MVA-kms) derived using the sum of kilometres of line by voltage class, multiplied by the weighted average MVA rating for each class. Therefore, the data to calculate the AUCC is required for each capital input category employed in the economic benchmarking model. This requires allocation of the RAB into the specified capital input categories.

In the '4. Assets (RAB)' worksheet we are requiring RAB Assets be reported in line with our asset input categories for economic benchmarking. Further we are requiring that the RAB Assets be separated for the Network Services component of Standard Control Services to align with the services that we are benchmarking. We are also requesting RAB data for other services so that there is flexibility regarding the services that must be benchmarked and the effect of changing the classification of services can be taken into account.

### 4.1 Instructions

DNSP must report RAB values in accordance with the standard approach in section 4.1.1 and the Assets (RAB) Financial Reporting Framework in Box 7 below. This is a standard approach that must be used for RAB disaggregation to be followed by all Distribution Network Service Providers (DNSPs) (the Standard Approach).

Where DNSP believes it has sufficient information to provide a consistent RAB disaggregation into the *RAB Assets* in the Assets (RAB) worksheet that better reflects the values of those assets (the Optional Additional Approach), they may also provide this in a separate Excel worksheet.

In both cases we will require the provision of the Basis of Preparation for the allocated RAB values detailing the calculations undertaken. The disaggregated RAB values developed using the Optional

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<sup>3</sup> For further information see: Economic Insights, *Economic benchmarking of electricity network service providers*, 25 June 2013

Additional Approach must be reported in accordance with tables 4.2 and 4.3. In both cases DNSP must provide a supporting worksheet detailing the calculations undertaken.

Substation land must be included in the 'substation asset' category. Separate values for substation land may be provided in accompanying documentation to the RIN response.

For Alternative Control Services DNSP must report the RAB values for its services where the AER has approved a RAB or RAB equivalent for these services. If the AER has not developed a RAB for these services DNSP must report '0' in the cells.

Where the RAB includes capital contributions, capital contributions must be reported in the '4. Assets (RAB)' sheet. This data must be provided as a separate entry at DRAB13.

RAB Assets must be reported inclusive of Dual Function Assets that provide Standard Control Services.

### **Box 7            Assets (RAB) Financial Reporting Framework**

Standard Control Services, RAB Financial Information must reconcile to:

- For years prior to any AER determination of RAB values, determinations in relation to RAB values made by the previous jurisdictional regulator unless the DNSP has had the RAB 'revalued' in the back cast period. In this case Standard Control Services, RAB Financial Information must reconcile to RAB values of a "rolled back" RAB prepared in accordance with the RAB Framework; or
- Any decision that the AER has made in relation to RAB values unless that decision incorporates forecasts (for example, additions for the last year of the previous regulatory period) in which case those forecast values should be replaced with actual values where possible. Actual values must reconcile to amounts reported in the Annual Reporting Requirements; or
- For years where the AER has not made a decision on values for the RAB, RAB values must be prepared in accordance with the RAB Framework. In this circumstance, actual additions (recognised in the RAB) and disposals must reconcile to amounts reported in the Annual Financial Statements; or

This means that, for years prior to when the RAB was revalued, the financial data must reconcile to an estimate of the RAB values that has been calculated by rolling back the RAB from the date of its revaluation in accordance with the RAB Framework. Rolling back the RAB is the opposite of rolling the RAB forward in accordance with the RAB Framework – so additions and inflation are subtracted from the RAB and depreciation is added to the RAB.

#### **4.1.1 Standard Approach**

##### **Direct attribution to the AER's economic benchmarking RAB Asset classes**

Where RAB Financial Information that can be Directly Allocated to the RAB Assets (as per the definitions in chapter 9) it must be Directly Allocated to those RAB Assets. Financial information can be Directly Allocated to a RAB Asset class where that financial information relates to assets that

wholly fall within the definition of that RAB Asset class. For example, financial data associated with poles can be Directly Allocated to Overhead Distribution Assets (Wires And Poles).

## Where direct attribution to the economic benchmarking asset classes is not possible

RAB Financial Information that cannot be Directly Allocated to a single asset category should be allocated in accordance with the RAB allocation approach.

### *RAB allocation approach*

- (a) RAB Financial Information that can be Directly Allocated to a group of RAB Assets, but cannot be Directly Allocated to an individual RAB Asset category, should be Directly Allocated to that group of RAB Assets, and then allocated across the individual categories in the group in accordance with this RAB allocation approach.
- (b) To allocate RAB Financial Information across the RAB Assets, the RAB Financial Information must be allocated in direct proportion to the relevant RAB Asset category's share of the total estimated depreciated replacement cost for that year (estimated in accordance with (c) and (d)).

In the event that the sum of the estimated disaggregated asset values for the RAB Assets for each year that are formed using (c) and (d) do not equal the total value of the RAB for that year, the disaggregated RAB series must be calculated by multiplying the total value of the RAB by each RAB asset's share of the sum of all asset values for that year formed using (c) and (d).

- (c) DNSP must estimate the depreciated replacement cost of their assets for each of the RAB Assets for which RAB Financial Information cannot be Directly Allocated. This estimation must be made for the most recent year for which the RAB Financial Information cannot be Directly Allocated. Where disaggregation is required for the whole period then this will be the 2013 Regulatory Year.
  - This depreciated replacement cost estimate should be based on the physical asset data provided for lines, cables and transformers in the '6. *Physical Assets*' worksheet of the templates<sup>4</sup> (for the relevant RAB Asset category); unit rate replacement costs applicable to DNSP for each of the physical RAB Assets and the weighted average asset age relative to the corresponding weighted average service life.
  - Estimation of the depreciated replacement costs can be undertaken for aggregate asset categories using best endeavours rather than a very detailed exercise. All assumptions, however, should be made clear.
  - Book values may be used for Easements, other long life assets and other short life assets.
- (d) To estimate the depreciated replacement cost for years prior to the estimated depreciated replacement cost developed under (c), the depreciated replacement cost estimate

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<sup>4</sup> or, in the case of meters for DNSPs, the number of customers in the operational data worksheet.

developed under (c) must be rolled back to 2006<sup>5</sup> using disaggregated capex data and depreciation in accordance with the RAB Framework.

The allocated values for the 2013 Regulatory Year are to be used as the basis for rolling forward the RAB for Regulatory Years subsequent to the 2013 Regulatory Year.

#### 4.1.2 Optional Additional Approach

Where DNSP believes they have sufficient information to provide a consistent RAB disaggregation into the categories in the '4. Assets (RAB)' worksheet that better reflects the values of those assets in the addition to the specified standard approach, this must be provided in a separate Excel worksheet, together with details of the calculations undertaken. For clarity, DNSP must still provide disaggregated RAB values using the standard approach if it chooses to also provide optional additional approach values.

The optional additional approach must be prepared in accordance with the Assets (RAB) Financial Reporting Framework. Further, DNSP must have the optional additional approach audited.

#### Table 4.1 Regulatory Asset Base Values

DNSP must report totals for RAB Financial Information for all years in this table. The total for the RAB Financial Information will reconcile with the RAB Financial Information provided in Table 4.2.

#### Table 4.2 Asset value roll forward

DNSP must report RAB Asset Financial Information broken down in accordance with the RAB Assets as per the definitions of these categories provided in Chapter 9.

Where DNSPs have previously reported and/or recorded values for Easements, these values must be provided separately in the '4. Assets (RAB)' worksheet. Otherwise, this should be included in the remaining categories. Where relevant, data that includes Easements should be identified.

When completing the templates for Regulatory Years subsequent to the 2013 Regulatory Year, if DNSP can provide Actual Information for the variables within Table 4.2 it must do so; otherwise DNSP must provide Estimated Information.

#### Table 4.3 Total disaggregated RAB asset values

DNSP must report average RAB Asset values that have been disaggregated into the categories identified in this table. These must be calculated as the average of the opening and closing RAB values for the relevant Regulatory Year for each of the RAB Assets and should be directly reconcilable to the opening and closing values in Table 4.2 for the relevant categories.

When completing the templates for Regulatory Years subsequent to the 2013 Regulatory Year, if DNSP can provide Actual Information for the variables in Table 4.3 it must do so; otherwise DNSP must provide Estimated Information.

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<sup>5</sup> Or 2005 in the case of Aurora

## Table 4.4 Asset lives

In relation to Table 4.4.1 'Asset Lives – estimated service life of new assets' and Table 4.4.2 'Asset lives – estimated residual service life', DNSP must report asset lives for all RAB Assets in accordance with the category definitions provided in chapter 9.

Where the categories comprise of a number of assets, asset lives for the whole category must be calculated by weighting the lives of individual assets within that category. Weightings must be calculated in order of preference:

1. On the basis of the asset's share of the RAB for the category and expected asset lives;
2. If 1 is not available, on the basis of replacement costs and expected asset lives;
3. If 1 and 2 cannot be applied, in accordance with the asset's contribution to the category's capacity (ie MVA-kms for lines and for cables and MVA for transformers).
4. The weighted average asset life of each category is as set out in Equation 1.

### Equation 1 Weighted average asset life calculation

Weighted average asset life for assets in category  $j = \sum_{i=1}^n \frac{x_{i,j}}{RC_j} \cdot EL_{i,j}$

Where:

$n$  is the number of assets in category  $j$

$x_{i,j}$  is the value of asset  $i$  in category  $j$

$EL_{i,j}$  is the expected life of asset  $i$  in category  $j$

$RC_j$  is the sum of the value of all assets in category  $j$

For example, where the weightings are based on RAB shares or replacement costs, the weighted average asset life of each category must be calculated according to the following formula: If Category 1 contains 2 assets; Asset 1 has an expected life of 50 years and a value of \$3 million; and Asset 2 has an expected life of 20 years and a value of \$2 million, then the weighted average asset life of assets in this category is 38 years:  $[(3/5) \times 50] + [(2/5) \times 20] = 38$ .

RAB is our preferred asset value measure for weighting but replacement cost is an acceptable proxy if disaggregation of the RAB to the relevant level is not possible (and capacity shares are then a further proxy to replacement cost shares).

When completing the templates for Regulatory Years subsequent to the 2013 Regulatory Year, if DNSP can provide Actual Information for asset lives it must do so; otherwise DNSP must provide Estimated Information.

### Table 4.4.1 Asset Lives – estimated service life of new assets

DNSP must report the current expected service life of new assets in this table. New assets are assets installed in the most recent regulatory reporting year. The expected service life of new assets is the estimated period after installation of a new asset during which the asset will be capable of delivering the same effective service as it could at its installation date.

This may not align with the asset's financial or tax life.

When completing the templates for Regulatory Years subsequent to the 2013 Regulatory Year, if DNSP can provide Actual Information for the life of new assets it must do so; otherwise DNSP must provide Estimated Information.

***Table 4.4.2 Asset Lives – estimated residual service life***

DNSP must report a current estimation of the weighted average remaining time expected that an asset class (as per DRAB1401 to DRAB1409) will deliver the same effective service as that asset class did at its installation date.

When completing the templates for Regulatory Years subsequent to the 2013 Regulatory Year, if DNSP can provide Actual Information for the residual service life variables it must do so; otherwise DNSP must provide Estimated Information.

## 5 Operational data

This section applies to the worksheet entitled '5. *Operational data*' in the Templates. Economic benchmarking examines the efficiency with which NSPs transform inputs into outputs. The data in this worksheet is required to form our output measures. These may include Energy Delivery, customers numbers and Maximum Demand.

### 5.1 Instructions

#### Table 5.1 Energy Delivery

Energy delivered is the amount of electricity transported out of DNSP's network in the relevant Regulatory Year (measured in GWh). It must be the energy metered or estimated at the customer charging location rather than the import location from the TNSP. Energy delivered must be actual energy delivered data, unless this is unavailable. Where Actual Information is not available for the most recent reporting period, Energy Delivery data for that period may be reported on an accrual basis.

Peak, shoulder and off-peak periods relate to DNSP's own charging periods.

##### ***Table 5.1.1 Energy grouping - delivery by chargeable quantity***

DNSP must report energy delivered in accordance with the category breakdowns as per the definitions provided in chapter 9.

DNSP must only report 'Energy Delivery where time of use is not a determinant' (DOPED0201) for Energy Delivery that was not charged for peak, shoulder or off-peak periods.

##### ***Table 5.1.2 Energy - received from TNSP and other DNSPs by time of receipt***

DNSP must report energy input into its network as measured at supply points from the TNSP and other DNSPs in accordance with the definitions provided in chapter 9.

DNSP must only report energy against 'Energy received from TNSP and other DNSPs not included in the above categories' (DOPED0304) where it is not possible to allocate the energy received into on-peak, shoulder and off-peak times.

##### ***Table 5.1.3 Energy - received into DNSP system from Embedded Generation by time of receipt***

Energy delivered must be reported in accordance with the category breakdown as per the definitions provided in chapter 9.

DNSP is required to report energy received from Non-residential Embedded Generation by time of receipt. DNSP is required to report back cast energy received from Residential Embedded Generation only if it records data for these variables (DOPED0405–DOPED0408), however DNSP is required to provide this data for future Regulatory Years.

'Energy received from Embedded Generation not included in above categories' (DOPED0404 and DOPED0408) includes energy received from Embedded Generation on an accumulation basis and not measured by the time of receipt. DNSP must only report energy received in DOPED0404 where it is not possible to allocate the energy received into on-peak, shoulder and off-peak times (DOPED0401–DOPED0403 and DOPED0405–DOPED0407).

When completing the templates for Regulatory Years subsequent to the 2013 Regulatory Year, if DNSP can provide Actual Information for the Residential Embedded Generation variables (DOPED0405–DOPED0408) it must do so; otherwise DNSP must provide Estimated Information.

#### ***Table 5.1.4 Energy grouping - customer type or class***

DNSP must report energy delivered in accordance with the category breakdown as per the definitions provided in chapter 9. The category breakdown must be consistent with the customer types reported in table 5.2.1.

### **Table 5.2 Customer Numbers**

Distribution Customers for a Regulatory Year are the average number of active National Meter Identifiers (NMIs) in DNSP's network in that year (except for Unmetered Customer Numbers). Each NMI is counted as a separate customer. The average is calculated as the average of the number of NMIs on the first day of the Regulatory Year and on the last day of the Regulatory Year. Both energised and de-energised NMIs must be counted. Extinct NMIs must not be counted.

For unmetered customers, the Customer Numbers are the sum of connections (excluding public lighting connections) in DNSP's network that do not have a NMI and the energy usage for billing purposes is calculated using an assumed load profile (examples include bus shelters, security lighting and traffic signals where not metered). Public lighting connections must not be counted as unmetered customers.

#### ***Table 5.2.1 Distribution Customer Numbers by customer type or class***

DNSP must report Customer Numbers in accordance with the categorisation as per the definitions provided in chapter 9.

DNSP must report customers against 'Other Customer Numbers' (DOPCN0106) only when customers cannot be allocated to the other customer classes (DOPCN0101–DOPCN0105).

#### ***Table 5.2.2 Distribution Customer Numbers by location on the network***

DNSP must report Customer Numbers in accordance with the category definitions provided in chapter 9. The locations are: CBD, urban, short rural and long rural.

### **Table 5.3 System demand**

Tables 5.3.1 to 5.3.4 must be completed in accordance with the definitions in chapter 9. DNSP must provide inputs for these cells if it has calculated historical Weather Adjusted Maximum Demand.

Where DNSP does not calculate Weather Adjusted Maximum Demands it may estimate the historical Weather Adjusted data or shade the cells black. For subsequent Regulatory Years DNSP will be required to provide Weather Adjusted Maximum Demand on an ongoing basis in accordance with best regulatory practice weather adjustment methodologies.

#### ***Table 5.3.1 Annual system Maximum Demand characteristics at the zone substation level – MW measure***

Coincident and non-coincident Maximum Demands must be reported raw (or unadjusted) and Weather Adjusted at the 10% and 50% Probability of Exceedance (POE) levels.

***Table 5.3.2 Annual system Maximum Demand characteristics at the transmission connection point level – MW measure***

Coincident and non-coincident Maximum Demands must be reported raw (or unadjusted) and Weather Adjusted at the 10% and 50% POE levels.

***Table 5.3.3 Annual system Maximum Demand characteristics at the zone substation level – MVA measure***

Coincident and non-coincident Maximum Demands must be reported raw (or unadjusted) and Weather Adjusted at the 10% and 50% POE levels.

***Table 5.3.4 Annual system Maximum Demand characteristics at the transmission connection point – MVA measure***

Coincident and non-coincident Maximum Demands must be reported raw (or unadjusted) and Weather Adjusted at the 10% and 50% POE levels.

***Table 5.3.5 Power factor conversion between MVA and MW***

DNSP must report the power factor to allow for conversion between MVA and MW measures for each voltage. If both MVA and MW throughput for a network are available then the power factor is the total MW divided by the total MVA. DNSP must provide a power factor for each voltage level and for the network as a whole. The average overall power factor conversion (DOPSD0301) is the total MW divided by the total MVA.

If either the MW or MVA measure is unavailable the average power factor conversion can be calculated as an approximation based on best engineering estimates.

When completing the templates for Regulatory Years subsequent to the 2013 Regulatory Year, if DNSP can provide Actual Information for power factor conversion variables it must do so; otherwise DNSP must provide Estimated Information.

***Table 5.3.6 Demand supplied (for customers charged on this basis) – MW measure***

DNSP is only required to complete this table if it charges customers for Maximum Demand supplied. If DNSP does not charge customers on this basis then DNSP should enter '0'.

DNSP must report Maximum Demand amounts for customers that are charged based upon their Maximum Demand as measured in MW. Where DNSP cannot distinguish between contracted and measured Maximum Demand, demand supplied must be allocated to contracted Maximum Demand.

***Table 5.3.7 Demand supplied (for customers charged on this basis) – MVA measure***

DNSP is only required to complete this table if it charges customers for demand supplied. If DNSP does not charge customers on this basis then DNSP must enter '0'.

DNSP must report Maximum Demand amounts for customers that are charged based upon their Maximum Demand as measured in MVA. Where DNSP cannot distinguish between contracted and measured Maximum Demand, demand supplied must be allocated to contracted Maximum Demand.

## 6 Physical assets

This section applies to the worksheet entitled '6. Physical Assets' in the Templates. Economic benchmarking requires a quantity measure of the capital service flow used by the NSP into the production process. However, this cannot be directly observed. Only the quantity of the stock of capital can be observed at any point in time. Therefore, it is necessary to use proxy measures of capital service flow.

The recommended specification provided by Economic Insights provides physical measures of capital to be used as a proxy for capital service flow from assets. The capital service flow is assumed to be proportional to the capital stock and assumes a one-hoss shay physical depreciation profile.

We require data be reported on on the quantities and capacities of physical assets. Capacities are measured in MVA-kms for lines and cables and in MVA for transformers to be used as a measure of the capital service flow.

### 6.1 Instructions

#### Table 6.1 Network Capacities Variables

DNSP must report against the capacity variables for its whole network. In this context the network includes overhead power lines and towers, underground cables and pilot cables that transfer electricity from the regional bulk supply points supplying areas of consumption to individual zone substations, to distribution substations and to customers. Network also includes distribution feeders and the low voltage distribution system but excludes the final connection from the mains to the customer and also wires or cables for public lighting, communication, protection or control and for connection to unmetered loads.

For 'Other overhead voltages' and 'Other underground voltages' DNSP must add additional rows for voltages other than:

- low voltage distribution
- 11 kV
- SWER (single wire earth return) (applicable to overhead only)
- 22 kV
- 33 kV
- 66 kV
- 132 kV

DNSP must specify the voltage for each 'other' voltage level.

#### *Circuit length*

In relation to Table 6.1.1 'Overhead network length of circuit at each voltage' and Table 6.1.2 'Underground network circuit length at each voltage', circuit length is calculated from the Route length (measured in kilometres) of lines in service (the total length of feeders including all spurs), where each SWER line, single-phase line, and three-phase line counts as one line. A double circuit line counts as two lines. The length does not take into account vertical components such as sag.

## **Circuit Capacity MVA**

In relation to Table 6.1.3 'Estimated overhead network weighted average MVA capacity by voltage class' and Table 6.1.4 'Estimated underground network weighted average MVA capacity by voltage class', DNSP must provide estimated typical or weighted average capacities for each of the listed voltage classes under normal circumstances taking account of limits imposed by thermal or by voltage drop considerations as relevant.

This information will be used to calculate an overall MVA x km 'carrying capacity' for each voltage class under normal circumstances. DNSPs are required to provide summer Maximum Demands for summer peaking assets and winter Maximum Demands for winter peaking assets. If DNSP's peak has changed from winter to summer (or vice versa) over the time period, winter ratings should be applied for those years where there was a winter peak and summer ratings for those years where there was a summer peak.

Where circuits travel both overhead and underground and the capacity of the overhead and underground components is not available separately, DNSP may split the circuit capacity by the ratio of the network that is overhead and underground to form estimates of the overhead capacity and underground capacity components.

From the 2015 Regulatory Year onwards DNSP is required to report actual overhead and underground capacity.

## **Table 6.2 Transformer Capacities Variables**

### **Table 6.2.1 Distribution Transformer total installed capacity**

DNSP must report total installed Distribution Transformer capacity in this table. The total installed Distribution Transformer capacity is the transformer capacity involved in the final level of transformation, stepping down the voltage used in the distribution lines to the level used by the customer. It does not include intermediate transformation capacity (eg 132 kV or 66 kV to the 22 kV or 11 kV distribution level). The capacity measure is the normal nameplate continuous capacity / rating (including forced cooling and other factors used to improve capacity).

This measure includes Cold Spare Capacity of Distribution Transformers and excludes the capacity of all zone substation transformers, voltage transformers (potential transformers) and current transformers.

#### ***Distribution Transformer capacity owned by utility***

Report transformer capacity owned by DNSP; give nameplate continuous rating including forced cooling.

#### ***Distribution Transformer capacity owned by High Voltage Customers***

Report the transformation capacity from high voltage to customer utilisation voltage that is owned by customers connected at high voltage.

If the transformer capacity owned by customers connected at high voltage is not available, report summation of individual Maximum Demands of high voltage customers whenever they occur (ie the summation of single annual Maximum Demand for each customer) as a proxy for delivery capacity within the high voltage customers.

When completing the templates for Regulatory Years subsequent to the 2013 Regulatory Year, if DNSP can provide Actual Information for Distribution Transformer capacity owned by High Voltage Customers it must do so; otherwise DNSP must provide Estimated Information.

### ***Cold Spare Capacity included in DPA0501***

Report the total capacity of spare transformers owned by DNSP but not currently in use.

### ***Table 6.2.2 Zone substation transformer capacity***

Report transformer capacity used for intermediate level transformation capacity in either one or two steps. For example, high voltages such as 132 kV, 66 kV or 33kV at the zone substation level to the distribution level of 22 kV, 11 kV or 6kV.

These measures must be the summation of normal assigned continuous capacity / rating (with forced cooling or other capacity improving factors included) and include both energised transformers and Cold Spare Capacity. Assigned rating must be, if available the rating determined from results of temperature rise calculations from testing. Otherwise report the nameplate rating. For those zone substations where the thermal capacity of exit feeders is a constraint, thermal capacity of exit feeders should be reported instead of transformer capacity.

### ***Total installed capacity for first step transformation where there are two steps to reach distribution voltage***

"Total installed capacity for first step transformation where there are two steps to reach distribution voltage" (DPA0601) includes, for example, 66 kV or 33 kV to 22 kV or 11 kV where there will be a second step transformation before reaching the distribution voltage. This variable is only relevant where DNSP has more than one step of transformation, if this is not the case DNSP must enter '0' for this variable.

### ***Total installed capacity for second step transformation where there are two steps to reach distribution voltage***

For "Total installed capacity for second step transformation where there are two steps to reach distribution voltage" (DPA0602) report total installed capacity where a second step transformation is applied before reaching the distribution voltage. For example 66 kV or 33 kV to 22 kV or 11 kV where there has already been a step of transformation above this at higher voltages within DNSP's system. This variable is only relevant where DNSP has more than one step of transformation, if this is not the case DNSP must enter '0' for this variable.

### ***Total zone substation transformer capacity where there is only a single transformation to reach distribution voltage***

For "Total zone substation transformer capacity where there is only a single transformation to reach distribution voltage" (DPA0603) report total installed capacity where only a single step of transformation is applied before reaching the distribution voltage. This variable is only relevant where there is only a single step of transformation to reach distribution voltage. If there is more than one step of transformation to reach distribution voltage, the relevant capacities must be reported in DPA0601 and DPA0602.

### ***Total zone substation transformer capacity***

For 'Total zone substation transformer capacity' (DPA0604) report the overall total zone substation capacity regardless of whether one or two steps are used to reach the distribution voltage (for example DPA0604 will be the sum of DPA0601, DPA0602, DPA0603 and DPA0605).

### ***Cold Spare Capacity of zone substation transformers included in total zone substation transformer capacity***

For 'Cold Spare Capacity of zone substation transformers included in DPA0604' (DPA0605), report total Cold Spare Capacity included in total zone substation transformer capacity.

## **6.3 Public lighting**

Report the number of public lighting luminaires and public lighting poles. For both Variables report numbers that include both assets owned by DNSP and assets operated and maintained by DNSP but not owned by DNSP. Count only poles that are used exclusively for public lighting.

## 7 Quality of services

This section applies to the worksheet entitled '7. *Quality of services*' in the Templates. The quality of a NSP's services is an important dimension of the services it provides. Hence for economic benchmarking it is important to consider service quality, particularly because increases in measured efficiency may otherwise be achieved at the expense of service quality in either the short-term or the longer term. For this reason, we require DNSP to report information on the quality of its services in the Templates.

### 7.1 Instructions

Reliability data must be reported in accordance with the definitions provided in the AER's Service Target Performance Incentive Scheme (STPIS)<sup>6</sup> unless otherwise specified.

For the purposes of calculating reliability, an interruption is any loss of electricity supply to a customer associated with an outage of any part of the electricity supply network, including generation facilities and transmission networks, of more than 0.5 seconds, including outages affecting a single premises. The customer interruption starts when recorded by equipment such as SCADA or, where such equipment does not exist, at the time of the first customer call relating to the network outage. An interruption may be planned or unplanned, momentary or sustained. Subsequent interruptions caused by network switching during fault finding are not to be included. An interruption ends when supply is again generally available to the customer.

An unplanned interruption is an interruption due to an unplanned event. An unplanned event is an event that causes an interruption where the customer has not been given the required Notice for the interruption or where the customer has not requested the outage.

Excluded Outages are defined in chapter 9.

#### Table 7.1 Reliability

Reliability information in tables 7.1.1 and 7.1.2 is only to be reported for unplanned interruptions. Unplanned interruptions are as defined in the STPIS.

Whole of network SAIDI and SAIFI is the system wide SAIDI and SAIFI. We do not require SAIDI and SAIFI for individual feeder categories within DNSP's network.

##### Table 7.1.1 Inclusive of MEDs

Report SAIDI and SAIFI in accordance with the definitions provided in chapter 9.

##### Table 7.1.2 Exclusive of MEDs

Report SAIDI and SAIFI in accordance with the definitions provided in chapter 9.

The MED threshold must be calculated for the 2013 Regulatory Year in accordance with the requirements in the STPIS. The MED threshold calculated for 2013 must then be applied as the MED threshold for Regulatory Years prior to 2013 for the purpose of calculating SAIDI and SAIFI exclusive of MEDs as per the STPIS.

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<sup>6</sup> AER, *Electricity distribution network service providers Service target performance incentive scheme*, November 2009

### **Table 7.2 Energy not supplied**

Energy not supplied is an estimate of the energy that was not supplied as a result of customer interruptions.

DNSP must estimate the raw (not normalized) energy not supplied due to unplanned customer interruptions based on average customer demand (multiplied by the number of customers interrupted and the duration of the interruption). Average customer demand must be determined from (in order of preference):

1. average consumption of the customers interrupted based on their billing history;
2. feeder demand at the time of the interruption divided by the number of customers on the feeder;
3. average consumption of customers on the feeder based on their billing history;
4. average feeder demand derived from feeder Maximum Demand and estimated load factor, divided by the number of customers on the feeder.

Energy not supplied should be reported exclusive of the effect of Excluded Outages as defined in chapter 9.

When completing the templates for Regulatory Years subsequent to the 2013 Regulatory Year, if DNSP can provide Actual Information for energy not supplied it must do so; otherwise DNSP must provide Estimated Information.

### **Table 7.3 System losses**

System losses is the proportion of energy that is lost in distribution of electricity from the transmission network to DNSP customers.

DNSP must report distribution losses calculated as per Equation 2.

#### **Equation 2 Calculation of system losses**

$$\text{system losses} = \frac{\text{electricity imported} - \text{electricity delivered}}{\text{electricity imported}} \times 100$$

Where:

Electricity imported is the total electricity inflow into DNSP's distribution network (including from Embedded Generation) minus the total electricity outflow into the networks of the adjacent connected distribution network service providers or the transmission network(s).

Electricity delivered is the amount of electricity transported out of DNSP's network to its customers as metered (or otherwise calculated) at the customer's connection.

This is a system wide figure not a feeder level figure.

### **Table 7.4 Capacity utilisation**

Capacity utilisation is a measure of the capacity of zone substation transformers that is utilized each year.

DNSP must report the sum of non-coincident Maximum Demand at the zone substation level divided by summation of zone substation thermal capacity.

For the purpose of this measure, thermal capacity is the rated continuous load capacity of the zone substation (with forced cooling or other capacity improving factors included if relevant). This must be the lowest of either the transformer capacity or feeder exit capacity of the zone substation. Feeder exit capacity should similarly be the continuous rating.

## 8 Operating environment

This section applies to the worksheet entitled '8. *Operating environment*' in the Templates. We are collecting operating environment factors to account for exogenous circumstances that may cause differences in productivity across networks. The variables we are collecting in '8. *Operating environment*' in the Templates relates to:

- density factors
- terrain factors for difficult terrain and vegetation encroachment
- weather stations which are required to analyse weather data from the Bureau of Meteorology.

### 8.1 Instructions

#### Table 8.1 Density factors

Complete the table in accordance with the definitions provided in chapter 9.

'Customer density' (DOEF0101) is the total number of customers divided by the *route Line Length of the network*.

'Energy Density' (DOEF0102) is the total MWh divided by the total number of customers *of the network*.

'Demand Density' (DOEF0103) is the kVA non-coincident Maximum Demand (at zone substation level) divided by the total number of customers *of the network*.

#### Table 8.2 Terrain factors

Complete Table 8.2 in accordance with the definitions provided in chapter 9.

If DNSP records poles rather than spans, the number of spans is the number of poles less one.

We require five years of back cast data for the terrain factors and the following variables have the most recent Regulatory Year shaded yellow and the remaining four years shaded orange:

- number of vegetation Maintenance Spans (DOEF0202, DOEF0203 and DOEF0204)
- Average Number Of Trees Per Maintenance Span (DOEF0208 and DOEF0209)
- average number of Defects per vegetation Maintenance Span (DOEF0210 and DOEF0211)
- tropical proportion (DOEF0212)
- Standard Vehicle Access (DOEF0213)
- bushfire risk (DOEF0214)

If DNSP has Actual Information, DNSP must report all years of available data. If DNSP does not have Actual Information on these variables, then it must estimate data for the most recent Regulatory Year.

If there is no available data for the 'average vegetation Maintenance Span Cycle' Variables (DOEF0206 and DOEF0207), DNSP is nevertheless required to estimate five years of back cast data.

The average vegetation Maintenance Span Cycle can be calculated based on a simple average of all the Maintenance Span Cycles.

### ***Average number of trees per vegetation maintenance span***

DNSP must report the average number of trees per vegetation maintenance span. If DNSP does not have Actual Information for the Average number of trees per vegetation Maintenance Span it must, estimate this variable using one or a combination of the following data sources:

- Encroachment Defects (e.g. ground or aerial Inspections, LiDAR) and/or records of vegetation works scoping, or GIS vegetation density data;
- Field surveys using a sample of Maintenance Spans within each vegetation management zone to assess the number of mature trees within the maintenance corridor. Sampling must provide a reasonable estimate and consider the nature of Maintenance Spans in urban versus rural environments in determining reasonable sample sizes.
- Vegetation data such as:
  - the Normalised Difference Vegetation Index (NDVI) grids and maps available from the Bureau of Meteorology (BOM);
  - data from the National Vegetation Information System (VIS data) overlaid on network GIS data to assess the density of vegetation in the direct vicinity of the Maintenance Spans; or
  - similar data from other sources such as Geoscience Australia or commercial suppliers of satellite imagery overlaid on network GIS data records.
- Any other data source based on expert advice.

DNSP must outline its estimation approach for the Average Number of Trees per Vegetation Maintenance Span in its Basis of Preparation.

When completing the templates for Regulatory Years subsequent to the 2013 Regulatory Year, if DNSP can provide Actual Information for the average number of trees per vegetation management span it must do so; otherwise DNSP must provide Estimated Information.

### ***Average number of Defects per vegetation maintenance span***

DNSP must report the average number of vegetation related Defects that are recorded per Maintenance Span in the relevant year.

In its basis of preparation, DNSP must specify whether it records the total number of Defects for each vegetation Maintenance Span, or whether it records Defects on a vegetation Maintenance Span as one, regardless of the number of Defects on the span.

When completing the templates for Regulatory Years subsequent to the 2013 Regulatory Year, if DNSP can provide Actual Information for the average number of Defects per vegetation maintenance span it must do so; otherwise DNSP must provide Estimated Information.

### **Tropical spans**

The tropical proportion is the approximate total number of urban and Rural Maintenance Spans in the Hot Humid Summer and Warm Humid Summer regions as defined by the Australian Bureau of Meteorology Australian Climatic Zones map (based on temperature and humidity).

When completing the templates for Regulatory Years subsequent to the 2013 Regulatory Year, if DNSP can provide Actual Information for the number of spans in tropical areas it must do so; otherwise DNSP must provide Estimated Information.

### **Bushfire risk**

The bushfire risk variable is the number of Maintenance Spans in high bushfire risk areas as classified by a person or organisation with appropriate expertise on fire risk. This includes but is not limited to:

- DNSP's jurisdictional fire authority
- local councils
- insurance companies
- DNSP's consultants
- Local fire experts

When completing the templates for Regulatory Years subsequent to the 2013 Regulatory Year, if DNSP can provide Actual Information for the asset value roll forward variables it must do so; otherwise DNSP must provide Estimated Information.

### **Table 8.3 Service area factors**

DNSP must input the route Line Length of lines for *DNSP's network*. This is based on the distance between line segments and does not include vertical components such as line sag. The route Line Length does not necessarily equate to the circuit length as the circuit length may include multiple circuits.

### **Table 8.4 Weather stations**

DNSP must input the weather station number, post code, suburb/locality for all weather stations in its service area. The weather station details are available from the BOM.

Where DNSP considers weather data from a weather station is not relevant to the management of its network, DNSP must input a 'no' in the 'Materiality' column and provide supporting evidence (in its Basis of Preparation) as to why the weather station is not relevant. For all other weather stations DNSP must input a 'yes' in the 'Materiality' column.

DNSP must also input a variable code for each weather station (for example, DEF03001 for the first weather station).

DNSP must add (or remove) rows from table 8.4 such that all weather stations within its network will be included.

## 9 Definitions

Term	Definition
<b>Reporting framework</b>	
	Information presented in response to the Notice whose presentation is Materially dependent on information recorded in DNSP's historical accounting records or other records used in the normal course of business, and whose presentation for the purposes of the Notice is not contingent on judgments and assumptions for which there are valid alternatives, which could lead to a Materially different presentation in the response to the Notice.
Actual Information	'Accounting records' include trial balances, the general ledger, subsidiary accounting ledgers, journal entries and documentation to support journal entries. Actual financial information may include accounting estimates, such as accruals and provisions, and any adjustments made to the accounting records to populate DNSP's regulatory accounts and responses to the Notice. 'Records used in the normal course of business', for the purposes of non-financial information, includes asset registers, geographical information systems, outage analysis systems, and so on.
Annual Reporting Requirements	<p>The Annual Reporting Requirements are the AER's Annual Reporting RINs and the annual regulatory information requirements of previous jurisdictional regulators. These include:</p> <ul style="list-style-type: none"> <li>▪ The Essential Services Commission of Victoria's Electricity Industry Guideline No.3 Regulatory Information Requirements</li> <li>▪ The Essential Services Commission of South Australia's Electricity Regulatory Information Requirements – Distribution</li> <li>▪ The Office of the Tasmanian Energy Regulator's Electricity Distribution and Retail Accounting Ring fencing Guidelines Electricity Industry Guideline No. 2.2</li> <li>▪ The Queensland Competition Authorities Electricity Distribution: Regulatory Reporting Guidelines</li> <li>▪ The Independent Pricing and Regulatory Tribunal's Regulatory Information Reporting Requirements and Guidelines for Electricity Distributors in New South Wales</li> </ul> <p>Australian Capital Territory, Independent Competition and Regulatory Commission, Licensed Utility Annual Reporting Requirements for electricity distributors</p>
Annual Reporting RINs	RINs the AER has issued requesting financial and operational data from NSPs annually.
Cost Allocation Approach	This is the cost allocation method in effect for the Regulatory Years where an AER approved cost allocation method is in effect. Otherwise this is the approach applied by DNSP to allocate costs in compliance with DNSP's Annual Reporting Requirements.
Directly Allocated (for RAB Financial Information)	Financial information can be Directly Allocated to a RAB Asset class where that financial information relates to assets that wholly fall within the definition of that RAB Asset class. For example, financial data associated with poles can be Directly Allocated to Overhead Distribution Assets (Wires And Poles).
Dual Function Assets	Dual Function Assets are as defined in the NER.
Estimated Information	Information presented in response to the Notice whose presentation is not Materially dependent on information recorded in DNSP's historical accounting records or other records used in the normal course of business, and whose presentation for the purposes of the Notice is contingent on judgments and assumptions for which there are valid alternatives,

	which could lead to a Materially different presentation in the response to the Notice.
Financial Performance Statement	The Regulatory Accounting Statement for which the originating account is the Financial Performance Statement (or its predecessors such as the income statement or profit and loss statement).
Financial Reporting Framework	The Financial Reporting Framework is the principles and policies that DNSP must adhere to when providing information in accordance with this RIN. This differs depending on the financial information. The Financial Reporting Framework for financial information is individually specified within these instructions and definitions.
Material	<p>Information is Material if its omission, misstatement or non-disclosure has the potential, individually or collectively to influence the economic decisions of users (including the AER) taken on the basis of the information provided in accordance with the Notice.</p> <p>This definition is based on the definition of materiality in the accounting standard AASB 1031. This accounting standard provides context for the interpretation of this definition of materiality.</p>
<b>The Notice</b>	The regulatory information notice to which this document is an appendix.
RAB Framework	The RAB Framework is the method for calculating RAB financial values as set out in "AER, Electricity distribution network service providers Roll forward model handbook, June 2008" and "AER, Electricity Distribution Network Service Providers Roll Forward Model, Version: 01, 26 June 2008" including any subsequent revisions of these documents.
RAB Financial Information	For the purposes of the Assets (RAB) spread sheet, RAB Financial Information includes data in relation to financial measures of the following categories: the RAB opening value, inflation addition, straight line depreciation, regulatory depreciation, actual additions (recognised in RAB), disposals, closing value for asset value.
Regulatory Accounting Statements	Regulatory Accounting Statements are financial reports revealing the performance and financial situation of DNSP. They show the originating statutory account amount, its translation into a regulatory account amount and its disaggregation between the different categories of distribution services that it provides.
<b>Categories of services</b>	
Alternative Control Services	<p>Alternative Control Services are defined in the NER. By way of context, Alternative Control Services are intended to capture distribution services provided at the request of, or for the benefit of, specific customers with regulatory oversight of prices.</p> <p>Where an AER determination was not in effect at the time Alternative Control Services are:</p> <ul style="list-style-type: none"> <li>▪ For DNSPs located within the ACT, excluded distribution services as set out under NER chapter 11 appendix 1 6.2.3C</li> <li>▪ For DNSPs located within New South Wales, excluded distribution services as per chapter 11 appendix 1 6.2.3B</li> <li>▪ For DNSPs located in Queensland, excluded distribution services as determined by the Queensland Competition Authority</li> <li>▪ For DNSPs located within Victoria, excluded distribution services as determined by the Essential Services Commission of Victoria</li> <li>▪ For DNSPs located within Tasmania, special services as declared by the Office of The Tasmanian Economic Regulator</li> <li>▪ For DNSPs located within South Australia, excluded services as determined by the Essential Services Commission of South Australia</li> </ul>

Connection Services	<p>As defined in the AER's Connection charge guidelines for electricity retail customers, June 2012, a Connection Service—means either or both of the following:</p> <p>(a) a service relating to a new connection for premises;</p> <p>(b) a service relating to a connection alteration for premises.</p>
Direct Control Services	<p>For the Regulatory Years upon which the AER has made a distribution determination for DNSP Direct Control Services are as defined in the National Electricity Rules.</p> <p>For Regulatory Years in which the AER has not made a distribution determination for DNSP Direct Control Services comprise of the <i>Standard Control</i> and <i>Alternative Control Services</i> provided by DNSP.</p>
Fee Based Services	<p>Fee Based Services are provided for the benefit of an individual customer rather than uniformly supplied to all network customers. Services of this type are generally homogenous in nature and scope. This means that these services are provided on a fixed fee basis. Fee Based Services may include: deenergisation and reenergisation, temporary supply connections and renewable energy connections.</p> <p>These services may, in some jurisdictions, be classified as ancillary network services charged on a fixed fee basis.</p>
Metering Services	<p>Type 5-7 Metering Services as defined in the National Electricity Rules. Metering Services includes the installation, replacement, operation and maintenance (including meter reading) of type 5 to 7 Meters.</p>
Network Services	<p><i>Network Services</i> relate to services provided over the shared network used to service all network users connected to it. Such services may include the construction, maintenance, operation, planning and design of the shared network. Network Services are delivered through the provision and operation of apparatus, equipment, plant and/or buildings (excluding connection assets) used to convey, and control the conveyance of, electricity to customers. Network Services also include the provision of emergency response and administrative support for other Network Services. Network Services are a subset of Standard Control Services that excludes Connection Services, Metering services, <i>Fee Based</i> and <i>Quoted Services</i> and <i>Public Lighting Services</i>.</p> <p>The Opex and capex of connection assets that become part of the shared network are part of Network Services. This only applies to the Opex and capex for connection assets subsequent to their installation and excludes Opex and capex associated with the provision of Connection Services.</p> <p>For the avoidance of doubt, Network Services includes the construction, maintenance, operation, planning and design of Dual Function Assets where these assets are part of the shared network.</p>
Public Lighting Services	<p>Public Lighting Services are the repair, replacement and maintenance of public lighting whether owned by DNSP or by another party. This includes alteration and relocation of existing public lighting assets and the provision of new public lighting assets. Public lighting assets include luminaires, brackets, lamps and dedicated public lighting poles (not poles that deliver <i>Network Services</i>).</p>
Quoted Services	<p>Quoted Services are services for which costs are recovered through quoted prices as the nature and scope of these services are specific to individual customers' needs and vary from customer to customer.</p> <p>These services may, in some jurisdictions, be classified as ancillary network services charged on a quoted basis.</p>
Standard Control Services	<p>For the Regulatory Years upon which the AER has made a distribution determination for DNSP Standard Control Services are as defined in the National Electricity Rules.</p> <p>For clarity, Standard Control Services are intended to capture services only available through DNSP's network typically provided to all customers or a broad class of customers recovered through general network tariffs.</p> <p>Where an AER determination was not in effect at the time Standard Control Services are:</p>

- For DNSPs located within the ACT prescribed services as set out under NER chapter 11 appendix 1 6.2.3C
- For DNSPs located within New South Wales prescribed services as per chapter 11 appendix 1 6.2.3B
- For DNSPs located in Queensland, prescribed services as determined by the Queensland Competition Authority
- For DNSPs located within Victoria, prescribed services and prescribed Metering Services as determined by the Essential Services Commission of Victoria
- For DNSPs located within Tasmania, network or Metering Services as declared by the Tasmanian Economic Regulator
- For DNSPs located within South Australia, prescribed services as determined by the Essential Services Commission of South Australia

Where dual function assets were not classified as part of *Standard Control Services* prior to Regulatory Years for which the AER has made a distribution determination these must be included in *Standard Control Services*.

<b>Charges</b>	
Contracted Maximum Demand Charges	Charges for contracted Maximum Demand that come into effect when a set level of demand is reached.
Controlled Load Charges	Charges for controlled load energy deliveries. Controlled load energy deliveries are energy deliveries where the supply of electricity is controlled by DNSP.
Distribution Use Of System (DUOS)	Distribution Use Of System is as defined in the National Electricity Rules.
Energy Delivery Charges Where Time Of Use Is Not a Determinant	Metered supply charges which are not time dependent.
Fixed Customer Charges	Supply availability charges independent of usage.
Measured Maximum Demand Charges	Charges calculated based on measured Maximum Demands, whether reset on a monthly basis or ratcheted. These do not include Contracted Maximum Demand Charges.
Off-peak Energy Delivery Charges	Time of use charges for supplies at Off-peak Charging Periods.
On-peak Energy Delivery Charges	Time of use charges for supplies at On-peak Charging Periods.
Revenue From Unmetered Supplies	Energy Delivery charges which are "calculated" rather than "metered". This may include revenue from delivery of annual energy for traffic controls, phone or transport cubicles.
Shoulder Period Energy Delivery Charges	Time of use charges for supplies at Shoulder Charging Periods.
<b>Customer Types</b>	
Non-residential Customers Not On Demand Tariffs	All customers that are not Residential Customers and who do not pay demand-based tariffs. These customers will typically pay a fixed charge and a charge based on energy consumption.
Non-residential High Voltage Demand Tariff Customers	Non-residential Customers that pay a charge based on either their actual Maximum Demand or a contracted level of demand and who are connected at higher than 415 volts. These customers may also pay a fixed charge and a charge based on energy consumption

in addition to the demand charge.

Non-residential Low Voltage Demand Tariff Customers	Non-residential Customers that pay a charge based on either their actual Maximum Demand or a contracted level of demand and who are connected at 240 or 415 volts. These customers may also pay a fixed charge and a charge based on energy consumption in addition to the demand charge.
Residential Customers	Residential customer means a customer who purchases energy principally for personal, household or domestic use at premises.
Unmetered Supplies	Customers for which energy delivered is for uses which are “calculated” rather than “metered”. This may include supplies for the purposes of traffic controls, the energy component of street lighting, phone of public transport cubicles and other services where consumption is calculated rather than metered
<b>Year coverage</b>	
Regulatory Control Period	As defined in the NER.
Regulatory Year	Each consecutive period of 12 calendar months in a Regulatory Control Period (under the NER) or equivalent regulatory period under a preceding regulatory framework. The first such 12 month period commences at the beginning of the Regulatory Control Period (or equivalent regulatory period, as the case may be) and the final 12 month period ends at the end of the Regulatory Control Period (or equivalent regulatory period, as the case may be).
<b>Delivery time period definitions</b>	
Off-peak Charging Periods	Days and hours when charges to users are at Off-Peak time rates as set by DNSP.
On-peak Charging Periods	Days and hours when charges to users are at On-Peak time rates as set by DNSP.
Shoulder Charging Periods	Days and hours when charges to users are at Shoulder time rates as set by DNSP.
<b>3. Opex</b>	
Opex	The costs of operating and maintaining the network (excluding all capital costs and capital construction costs).
<b>4. Assets (RAB)</b>	
Distribution Substations Including Transformers	Overhead and underground distribution substations. This includes ground mounted substations and pole mounted substations. This does not include zone substations.
Easements	An electricity easement is the right held by DNSP to control the use of land near above-ground and underground power lines and substations. It holds this right to ensure the landowner’s safety and to allow staff access to work on the power lines at all times.
Metering Assets	Metering Assets are assets used to provide Metering Services.
Meters	An electricity meter is a device that measures the amount of electric energy consumed by a residence, business, or an electrically powered device
<b>RAB</b>	The Regulatory Asset Base as referred to in S6.2.1 of the NER.
<b>RAB Assets</b>	The RAB Assets are: <ul style="list-style-type: none"> <li>Overhead Distribution Assets (Wires And Poles)</li> </ul>

- Underground Distribution Assets (Cables)
- Distribution Substations Including Transformers
- Zone Substations And Transformers
- Easements
- Meters
- Other Asset Items With Long Lives
- Other Asset Items With Short Lives

Assets with expected asset lives greater than or equal to 10 years that are not:

Other Asset Items With Long Lives

- Overhead Distribution Assets (Wires And Poles)
- Underground Distribution Assets (Cables)
- Distribution Substations Including Transformers
- Zone Substations And Transformers
- Easements
- Meters

Other Asset Items With Short Lives

Assets with expected asset lives less than 10 years that are not:

- Overhead Distribution Assets (Wires And Poles)
- Underground Distribution Assets (Cables)
- Distribution Substations Including Transformers
- Zone Substations And Transformers
- Easements
- Meters

Overhead Distribution Assets (Wires And Poles)

Assets used to conduct electricity from one point to another above ground. These include poles, pole-top structures and overhead conductors. This does not include pole top substations and transformers.

Underground Distribution Assets (Cables)

Assets used to conduct electricity from one point to another below ground. This includes cables, cable joints and other assets used to connect the underground network to the overhead system. This does not include underground substations and transformers.

Zone Substations And Transformers

Sites housing transformers involved in transforming power from high voltage input supply - either directly from a TNSP or from DNSP's own higher voltage lines - to distribution level voltages (eg 66 kV to 22 kV). This transformation can involve one step or multiple steps.

## 5. Operational data

Coincident Raw System Annual Maximum Demand

This is the actual, unadjusted (i.e. not weather normalised) summation of actual raw demands for the requested asset level (either the zone substation or transmission connection point) at the time when this summation is greatest. The Maximum Demand does not include Embedded Generation.

Coincident Weather Adjusted System Annual Maximum Demand 10% POE

This is the summation of the Weather Adjusted annual Maximum Demands for the requested asset level (either the zone substation or transmission connection point) at the 10 per cent POE level at the time when this summation is greatest.

Coincident Weather Adjusted System Annual Maximum Demand 50% POE	This is the summation of the Weather Adjusted annual Maximum Demands for the requested asset level (either the zone substation or transmission connection point) at the 50 per cent POE level at the time when this summation is greatest.
Customer Numbers	<p>Distribution Customers are defined as the number of active National Meter Identifiers (NMIs) for all customers except for unmetered customers. Each NMI is counted as a separate customer. Only NMIs for active customers must be counted. Hence NMIs for deactivated accounts are not to be included.</p> <p>For unmetered customers, the Customer Numbers are the sum of connections (excluding public lighting connections) in DNSP's network that don't have a NMI and the energy usage for billing purposes is calculated using an assumed load profile (examples include bus shelters, security lighting and traffic signals where not metered). Public lighting connections are not to be counted as when calculating the number of unmetered customers.</p>
Customers on CBD Network	Customers of all types and classes connected to a CBD feeder, where a CBD feeder is a feeder supplying predominantly commercial or high-rise buildings, supplied by a predominantly underground distribution network containing significant interconnection and redundancy when compared to urban areas.
Customers on Long Rural Network	Customers of all types and classes connected to a long rural feeder. A long rural feeder is a feeder which is not a CBD or urban feeder with a total feeder route length greater than 200 km.
Customers on Short Rural Network	Customers of all types and classes connected to a short rural areas feeder. A short rural areas feeder is a feeder which is not a CBD or urban feeder with a total feeder route length less than 200 km.
Customers on Urban Network	Customers of all types and classes connected to an urban feeder. An urban feeder is a feeder, which is not a CBD feeder, with actual Maximum Demand over the reporting period per total feeder route length greater than 0.3 MVA/km.
Energy Delivery	The amount of electricity transported out of DNSP's network in the relevant Regulatory Year (measured in GWh). Metered or estimated at the customer charging location rather than the import location from the TNSP.
Maximum Demand	Maximum Demand is as defined in the NER.
Non-Coincident Raw System Annual Maximum Demand	This is the actual unadjusted (i.e. not weather normalised) summation of actual raw annual Maximum Demands for the requested asset level (either the zone substation or transmission connection points) irrespective of when they occur within the year. This Maximum Demand is not to be adjusted for Embedded Generation.
Non-Coincident Weather Adjusted System Annual Maximum Demand 10% POE	This is the summation of the Weather Adjusted annual Maximum Demands for the requested asset level (either the zone substation or transmission connection point) at the 10 per cent POE level irrespective of when they occur within the year.
Non-Coincident Weather Adjusted System Annual Maximum Demand 50% POE	This is the summation of Weather Adjusted annual Maximum Demands for the requested asset level (either the zone substation or transmission connection point) at the 50 per cent POE level irrespective of when they occur within the year.
Embedded Generation	A generator who owns, operates or controls a generating unit connected within a distribution network and not having direct access to the transmission network.
Non-residential Embedded Generation	Non-residential Embedded Generation includes only specific generation plant, where energy into DNSP's network would be metered and charged under a contract arrangement. It does not include domestic roof-top solar, but it does include solar farms and wind farms if connected to the network.
Probability of Exceedance (POE)	<p>The probability that the actual weather circumstances will be such that the actual Maximum Demand experienced will exceed the relevant maximum demand measure adjusted for weather correction.</p> <p>A 50% Probability of Exceedance means that the Maximum Demand measure adjusted for</p>

	weather correction is expected to be exceeded fifty out of every one hundred years.
Residential Embedded Generation	Residential Embedded Generation includes domestic roof-top solar.
Unmetered Customer Numbers	Customers where calculation is made for delivery of annual energy (ie. street lighting, traffic controls, phone or transport cubicles etc).
Weather Adjusted	The removal of the impact of temperature fluctuations so as to derive a maximum demand measure corrected to a POE, usually 50% and/or 10% POE.
<b>6. Physical Assets</b>	
<b>Circuit Line Length</b>	The length (measured in kilometres) of lines in service (the total length of feeders including all spurs) where each SWER line, single-phase line, and three-phase line counts as one line. A double circuit line counts as twice the length. Length does not take into account vertical components such as sag.
<i>Cold Spare Capacity</i>	The capacity of spare transformers owned by DNSP but not currently in use. Cold Spare Capacity incorporates both spare capacity and cold capacity. Cold capacity is equipment which is already on site, with connections already in place so that the device can be brought into service merely by switching operations but which is not normally load carrying. Spare capacity also includes spare assets, on site, or in the store, where physical movement and / or making of connections would require manual intervention at the site of use.
Distribution Transformer	A Distribution Transformer is a transformer that provides the final voltage transformation in the electricity distribution system, stepping down the voltage used in the distribution lines to the level used by the customer.
<b>7. Quality of services</b>	
Excluded Outages	<p>Excluded Outages are:</p> <ul style="list-style-type: none"> <li>▪ load shedding due to a generation shortfall</li> <li>▪ automatic load shedding due to the operation of under frequency relays following the occurrence of a power system under-frequency condition</li> <li>▪ load shedding at the direction of the Australian Energy Market Operator (AEMO) or a system operator</li> <li>▪ load interruptions caused by a failure of the shared transmission network</li> <li>▪ load interruptions caused by a failure of transmission connection assets except where the interruptions were due to inadequate planning of transmission connections and the DNSP is responsible for transmission connection planning</li> <li>▪ load interruptions caused by the exercise of any obligation, right or discretion imposed upon or provided for under jurisdictional electricity legislation or national electricity legislation applying to a DNSP.</li> </ul>
SAIDI	SAIDI (System Average Interruption Duration Index) is the sum of the duration of each unplanned sustained Customer interruption (in minutes) divided by the total number of Distribution Customers. SAIDI excludes momentary interruptions (interruptions of one minute or less).
SAIFI	SAIFI (System Average Interruption Frequency Index) is the total number of unplanned sustained Customer interruptions divided by the total number of Distribution Customers. Unplanned SAIFI excludes momentary interruptions (interruptions of one minute or less).
<b>8. Operating environment factors</b>	

Average Number Of Trees Per Maintenance Span	The estimated average of the number of trees within DNSP's vegetation Maintenance Spans. This includes only trees that require active vegetation management to meet its vegetation management obligations. This excludes trees that only require Inspections and no other vegetation management activities required to comply with DNSP's vegetation obligations.
CBD and Urban Maintenance Spans	Refers to CBD and urban areas that are subject to vegetation management practices in the relevant year. CBD and urban areas are consistent with CBD and urban customer classifications.
Customer Density	Customers / route Line Length (km).
Defect	A Defect is any recorded incidence of noncompliance with a NSP's vegetation clearance standard. This also includes vegetation outside a NSP's standard clearance zone that is recognised as hazardous vegetation and which would normally be reported as requiring management under the NSPs Inspection practices.
Demand Density	kVA non-coincident Maximum Demand (at zone substation level) / customer.
Energy Density	MWh / customer
Route Line Length	The aggregate length in kilometres of lines, measured as the length of each span between poles and/or towers, and where the length of each span is considered only once irrespective of how many circuits it contains. This is the distance between line segments and does not include vertical components such as line sag.
Inspection	Inspections only for the purpose of identifying trees or other vegetation that require trimming or removal. This includes vegetation scoping works, use of LiDAR and aerial Inspections.
Maintenance Span	A span in DNSP's network that is subject to active vegetation management practices in the relevant year. Active vegetation management practices do not include Inspection of vegetation Maintenance Spans.
Maintenance Span Cycle	The planned number of years (including fractions of years) between which cyclic vegetation maintenance is performed for the relevant area.
<i>Rural Maintenance Spans</i>	Spans in rural areas that are subject to vegetation management practices in the relevant year. Rural spans include spans in short rural and long rural feeders. Rural areas must be consistent with rural short and rural long feeders.
Rural Proportion	Distribution line route length classified as short rural or long rural in km / total network Line Length.
Standard Vehicle Access	Distribution route Line Length that does not have Standard Vehicle Access. Areas with Standard Vehicle Access are serviced through made roads, gravel roads and open paddocks (including gated and fenced paddocks). An area with no Standard Vehicle Access would not be accessible by a two wheel drive vehicle.
Total Number Of Maintenance Spans	The total count of spans in the network that are subject to vegetation management practices in the relevant year. If DNSP records poles rather than spans, the number of spans is the number of poles less one.