Draft
Demand Management Incentive Scheme

Electricity distribution network service providers

August 2017

Inquiries about this publication should be addressed to:

Australian Energy Regulator
GPO Box 520
Melbourne Vic 3001

Tel: (03) 9290 1444
Fax: (03) 9290 1457

Email: DM@aer.gov.au

AER reference: 58882

Contents

1 Nature and authority

1.1 Introduction

(1) In accordance with the requirements of clause 6.6.3 of the **NER**, this publication sets out the **AER's demand management incentive scheme** for **distribution network service providers**.

1.2 Authority

(1) Clause 6.6.3 of the **NER** requires the **AER** to develop a **scheme** in accordance with the **distribution consultation procedures**.

1.3 NER requirements

(1) Clause 6.6.3 of the **NER** requires the **AER** develop a **scheme** consistent with the **demand management incentive scheme objective**.

(2) The **demand management incentive scheme objective** is to provide **distributors** with an incentive to undertake efficient expenditure on relevant **non-network options** relating to **demand management** (the **scheme objective**).

(3) In developing, and applying, any **scheme**, the **AER** must take into account the following:

(a) the scheme should be applied in a manner that contributes to the achievement of the **scheme objective**;

(b) the scheme should reward **distributors** for implementing relevant **non-network options** that deliver net cost savings to **retail customers**;

(c) the scheme should balance the incentives between expenditure on **network options** and **non-network options** relating to **demand management**. In doing so, the **AER** may take into account the net economic benefits delivered to all those who produce, consume and transport electricity in the **market** associated with implementing relevant **non-network options**;

(d) the level of the incentive:

i. should be reasonable, considering the long term benefit to **retail customers**;

ii. should not include costs that are otherwise recoverable from any another source, including under a relevant distribution determination; and

iii. may vary by **distributor** and over time;

(e) penalties should not be imposed on **distributors** under any scheme;

(f) the incentives should not be limited by the length of a **regulatory control period**, if such limitations would not contribute to the achievement of the **scheme objective**; and

(g) the possible interaction between the scheme and:

i. any other incentives available to the **distributor** in relation to undertaking efficient expenditure on, or implementation of, relevant **non-network options**;

ii. particular control mechanisms and their effect on a **distributor's** available incentives referred to in sub-paragraph (i); and

iii. meeting any **regulatory obligation or requirement**.

(h) The **AER**:

i. must develop and **publish** the **scheme**; and

ii. may, from time to time, amend or replace the **scheme** developed and **published** under clause 6.6.3 of the **NER**,

in accordance with the **distribution consultation procedures**.

1.4 AER objectives

(1) The **AER's** objectives for this **scheme** are that it:

(a) contributes to the achievement of the **National Electricity Objective**.

(b) is consistent with the principles in clause 6.6.3 of the **NER**.

1.5 Confidentiality

(1) The **AER's** obligations regarding confidentiality and the disclosure of information provided to it by a **distributor** are governed by the **Competition and Consumer Act 2010,** the National Electricity Law and the **NER** including the **confidentiality guidelines**. The **confidentiality guidelines** are binding on the **AER** and each **distributor**.

1.6 Definitions and interpretation

(1) In this **scheme**, the words and phrases presented in bold have the meaning given to them in:

(a) the glossary, or

(b) if not defined in the glossary, the **NER**.

(2) Any example, figure, or explanatory box in this **scheme** is for guidance only.

1.7 Processes for revision

(1) The **AER** may amend or replace this **scheme** from time to time in accordance with clause 6.6.3 (d) of the **NER** and the **distribution consultation procedures**.

1.8 Version history and effective date

(1) A version number and an effective date of issue will identify every version of this **scheme**.

2 The demand management incentive scheme

(1) The steps involved in the operation of this **scheme** are the following:

(a) The **AER** will determine how this **scheme** will apply to a **distributor** in accordance with section 2.1.

(b) The **distributor** must identify **eligible projects** and must commit to those projects as **committed projects** in accordance with section 2.2.

(c) The **distributor** must determine the **project incentive** for **eligible projects** in accordance within section 2.3.

(d) The **distributor** must prepare and submit a **compliance report** in accordance with section 2.4

(e) The **AER** will determine the **total financial incentive** available to the **distributor** under this **scheme** for each **regulatory year** of a **regulatory control period** in accordance with sections 2.5 and 2.6.

(f) The **total financial incentive** determined by the **AER** for the **regulatory year** *t–2* will be **included** in the **distributor's annual revenue requirement** for **regulatory year** *t.*

Figure 1: Outline of scheme operation

Application of the scheme

AER's distribution determination specifies how the scheme applies to a distributor for the regulatory control period.

Identifying and committing eligible projects

Distributor identifies via RIT-D/minimum project evaluation requirements any preferred and non-network options relating to demand management. It commits to deliverables under each project.

Determining the incentive for eligible projects

Distributor determines the project incentive for an eligible project that delivers a net benefit to retail customers.

Compliance reporting

Distributor reports data on the past regulatory year, including the financial incentive it accrued, how it identified eligible projects and the costs, benefits and outputs of eligible projects.

AER use of compliance report to determine financial incentive

AER reviews the total financial incentive a distributor accrued and publishes a performance report on how distributors used the scheme.

Application of incenitve payment

The total financial incentive a distributor accrued in regulatory year $t-2$ is included in the distirbutor's annual revenue requirement for regulatory year t.

2.1 Application of the scheme

(1) The **AER** will determine how, if at all, this **scheme** will apply to a **distributor** for a **regulatory control period** through the following process:

(a) The **AER's framework and approach paper** for a **distributor** will set out whether the **AER** intends to apply this **scheme** to that **distributor's** forthcoming distribution determination under clause 6.8.1(b)(2)(vi) of the **NER**.

(b) The **distributor's regulatory proposal** must include a description, including relevant explanatory material, of how it proposes this **scheme** should apply for the relevant **regulatory control period**. The **distributor's regulatory proposal** must also detail how its proposed approach would satisfy the requirements of the **National Electricity Law** and **NER**.

(c) The **AER’s** distribution determination for the **distributor** will set out how, if at all, this **scheme** is to apply to the **distributor** in the relevant **regulatory control period** under **NER** cl. 6.12.1(9).

(2) Without otherwise limiting clause 2.1(1)(c), when the **AER** applies the **scheme** to a **distributor**, it must do so in that **distributor's** distribution determination. The distribution determination must provide that the **cost multiplier** applicable to any **eligible project** will be the **cost multiplier** specified in the version of this **scheme** that is in effect under clause 6.6.3 of the **NER** at the time at which an **eligible project** becomes a **committed project** (that is, d_v — the **cost multiplier** *d*, in version *v* of this **scheme**).

2.2 Identifying and committing eligible projects

(1) An eligible project is a project that a **distributor** has identified, in accordance with clause 2.2(4), as being an **efficient non-network option** relating to **demand management**, but that has not had expenditure committed to it by the **distributor** before the first application of this **scheme** to the **distributor** in a distribution determination.

(2) An 'efficient non-network option' is a **non-network option** that is a **credible option** to meet an **identified need** on the **distribution network**, where that **credible option** is the **preferred option**.

(3) To be an **eligible project**, the **NPV** of the project's net economic benefit to all those who produce, consume and transport electricity in the **relevant market** must be positive when assessed against a base case of:

(a) The network option with the highest net economic benefit to all those who produce, consume and transport electricity in the **relevant market**, where the project is for reliability corrective action.

(b) Doing nothing, where the project is not for reliability corrective action.

(4) A **distributor** must identify whether a project is an **efficient non-network option** by completing at least one of the following processes.

(a) the **AER's** regulatory investment test for distribution (**RIT–D**); or

(b) the **minimum project evaluation requirements**.

(5) In determining by means of the **minimum project evaluation requirements** whether a project is an **efficient non-network option**, including when estimating the **NPV** of the net economic benefit of a project as part of that process, the **distributor** must include:

(a) Costs and benefits of a kind that accrue to consumers via the distribution network.

(b) To the extent they exist and may affect the **distributor's** identification of the **preferred option**:

i. Costs and benefits of a kind that accrue to consumers via parts of the **relevant market** other than the **distribution network**; and

ii. Benefits that consist of option value.

2.2.1 Minimum project evaluation requirements

(1) This clause 2.2.1 sets out the **minimum project evaluation requirements** for the purposes of clause 2.2(4)(b) of this **scheme**.

(2) Where an **identified need** on its **distribution network** could be fully or partly addressed by a **demand management** solution, a **distributor** must issue a **request for demand management solutions** to the following parties:

(a) Persons registered on its **demand side engagement register**.

(b) Any other parties the **distributor** may identify as having or potentially having the capabilities to provide a **demand management** product, service or solution to either fully or partly form a **credible option** to address the **identified need** on the **distribution network**.

(3) A **request for demand management solutions** may include, but need not include, a request for a quote.

(4) As part of the **request for demand management solutions**, the **distributor** must provide the following information:

(a) A description of the **identified need** that the **distributor** is seeking to address.

(b) Technical information about the **identified need**, including the load at risk, energy at risk, duration and load curves, and the annual probability and frequency of relevant events.

(c) The location of the **identified need** and a description of the affected classes of customers and network area.

(d) A description of the project it has identified as its **preferred option** to meet the **identified need** on the **distribution network**.

(e) Other information that is sufficient to enable the parties receiving the **request for demand management solutions** to provide an informed response in presenting an alternative potential **credible option**, including, to the extent relevant, the information that a distributor is required under the **NER** to provide in a **non-network options report**.

(5) A **request for demand management solutions** must require the provision of the following information:

(a) A description of the proposed **demand management** product, service or solution that is put forward as a **credible option**, or as part of a **credible option**, to address the **identified need** on the **distribution network**.

(b) Where the proposed **demand management** product, service or solution is put forward as part of a **credible option** (but not as the whole of a **credible option**), a description of the other elements of the **credible option**.

(c) A reasonable estimate of:

i. The proposed product, service or solution's expected outputs, including the amount of network demand (based on a specified **kVA** per year) that the party responding to the **request for demand management solutions** expects to be able to manage (either at its request or at its control).

ii. The expected payments that the **distributor** would be required to make to the responding party if the **distributor** were to enter into a contract with the responding party for the responding party to provide that product, service or solution to the **distributor**.

(d) Any other information relevant to determining where the proposed product, service or solution would be a **credible option**, or part of a **credible option**, to address the **identified need** on the **distribution network**

2.2.2 Committed projects

(1) **Project incentives** under this **scheme** are only available for **committed projects**. An **eligible project** becomes a **committed project** where the requirements of this clause 2.2.2 are satisfied and if:

(a) the **distributor** enters into a **demand management contract** with another legal entity to procure the **demand management** required to deliver that **preferred option**; or

(b) An officer or employee of the **distributor** delegated by the chief executive officer of the **distributor**, and who has responsibility for network planning by the **distributor**, approves a **demand management proposal** for the **distributor** to provide to itself the **demand management** required to deliver that **preferred option**. This approval must include a declaration by the delegate of the chief executive officer that he or she has a reasonable basis for being of the view that the estimated costs of providing that **demand management** set out in the **demand management proposal** are reasonable and were estimated in accordance with an approach commonly used by the **distributor**, as at the date of the approval, for estimating costs of that kind.

(2) A **demand management contract** is a contract under which the **distributor** agrees to make payments to another legal entity in return for the other legal entity agreeing to ensure that, by means of the relevant **eligible project,** network demand can be managed, at the **distributor's** or other legal entity's request or control by an amount that is based on a specified **kVA** per year.

(3) A **demand management proposal** is a proposal that, when implemented, will ensure that, by means of the relevant **eligible project,** network demand can be managed, at the **distributor's** request or control, by an amount that is based on a specified **kVA** per year, and that sets out the costs that the **distributor** expects to incur in managing, or having the capacity to manage, the **distributor's** network demand in this manner.

2.3 Determining project incentives

(1) For each **committed project**, the **distributor** must calculate the **project incentive** that the **committed project** (referred to in this clause 2.3 as 'project *i*') can receive.

(2) The **distributor** must calculate project *i*'s **project incentive** in accordance with equation 1, which sets this cap to the lower of the following two values:

(a) The expected present value at time *t* of project *i*'s **demand management** costs, multiplied by the cost multiplier.

(b) The expected present value at time *t* of the net benefit to all those who produce, consume and transport electricity in the **relevant market** under project *i*.

(3) In this **scheme** (version, $v = 1$), the cost multiplier $d_v = d_1 = 50\%$.

Equation 1: Project incentive calculation

$$PV\ incentive_i = d_v \times E[PV\ DMcost_i]$$

Subject to the constraint:

$$d_v \times E[PV\ DMcost_i] \ \leq \ E[NPV_i]$$

Where:

- Subscript *i* means the parameter concerns **eligible project** *i*.
- PV is the present value at time t . A parameter following PV is in real dollars at time t.
- $incentive_i$ is the **project incentive** for each project *i*
- $E[.]$ denotes an expected value.
- $DMcost_i$ is project *i*'s **demand management** costs
- NPV_i is the net present value of option *i* to all those who produce, consume and transport electricity in the **relevant market**.

(4) The expected value of project *i*'s **demand management** costs used for the purposes of clause 2.3(2)(a) and equation 1 must be consistent with:

(a) The payments, or potential payments for the **demand management** solution under the **demand management contract** or in the **demand management proposal** (as relevant); and

(b) The **distributor's** reasonable expectation of the frequency and duration on which it will call on or utilise the capability to control network demand under the **demand management proposal** or the **demand management contract** (as relevant). In order to determine this expectation, the **distributor** must probabilistically determine the amount of network demand that it expects to control.

(5) A **distributor** must calculate the expected present value of project *i*'s net benefit to all those who produce, consume and transport electricity in the **relevant market** referred to in clause 2.3(2)(b) and equation 1 in accordance with the requirements for carrying out cost–benefit analysis that are set out in the **RIT–D**. This includes the requirement that the **distributor** estimate project *i*'s net benefit relative to 'the base case', being:

(a) where **distributor** does not implement a **credible option** to address the **identified need**; or

(b) if the **identified need** is for reliability corrective action, where the **distributor** implements its preferred **network option**.

2.4 Compliance reporting

(1) For each **regulatory year**, a **distributor** must submit a **demand management compliance report** to the **AER** no later than 4 months after the end of that **regulatory year** to which the reported data pertains.

(2) The **compliance report** must be reviewed in accordance with the assurance requirements set out in the annual reporting **regulatory information notice** applicable to the **distributor**, at the **distributor's** expense and by a person permitted to conduct such a review under that **regulatory information notice**.

(3) Each **compliance report** must include two parts—Part A and Part B. Part A includes information on **committed projects** and Part B contains information on projects that the **distributo**r has identified as **eligible projects**.

(4) Each **compliance report** must include the following information in Part A:

(a) A description of the **eligible projects** that became **committed projects** in that **regulatory year**, for which the **distributor** is claiming a **project incentive** for in that **regulatory year**.

(b) The volume of **demand management** delivered by **committed projects** in that **regulatory year** (that is, the **kVA** per year of demand that a **distributor** controlled (either directly or indirectly) by means of **committed projects** in that **regulatory year**).

(c) The **distributor's** estimate of the benefits realised from the **demand management** delivered by **committed projects** in that **regulatory year**.

(d) The **total financial incentive** that the **distributor** has assessed that it able to claim in accordance with clauses 2.2, 2.3 and 2.5 of this **scheme,** for that **regulatory year**.

(5) For each **eligible project** that a **distributor** identifies as a **preferred option** in a **regulatory year**, Part B of the **compliance report** relating to that **regulatory year** must include the following information about that **eligible project**:

(a) In present value terms, the expected costs and benefits that the **distributor** determined, in accordance with clause 2.2, that the **eligible project** would deliver to electricity consumers.

(b) A description of the responses that the **distributor** received to either its **RIT–D** or its **request for demand management solutions** under the **minimum project evaluation requirements** (as relevant) including, for each response:

i. a short description of the proposed project;

ii. the proposed costs and deliverables put forward in the response to the **request for demand management solutions**; and

iii. for any response that proposed a potential **credible option**, the **distributor's** estimate of that project's net economic benefit to all those who produce, consume and transport electricity in the **relevant market**.

(c) Identify whether, if the **distributor** decides (or has decided) to proceed with the project as a **committed project**, it is likely that this will occur via a **demand management contract,** or whether this is likely to occur via a **demand management proposal**. If the former, the **compliance report** must also identify the proposed party or parties to the **demand management contract**.

(d) The expected costs of delivering **demand management,** by means of the **eligible project**, that the **distributor** used as an input into its assessment, under clause 2.2, that the project is an **efficient non-network option** in relation to **demand management**.

(e) the **kVA** per year of network demand that the **distributor**:

i. would be able to call upon, dispatch or control if the project is implemented (that is, the **kVA** per year of **demand management** capacity); and

ii. expects to call upon, dispatch or control, based on its probabilistic assessment of future demand, if the project is implemented

(6) Where a **distributor** decides, in a **regulatory year**, to defer or not proceed with an **eligible project** that it has previously decided (either in that **regulatory year** or in a previous **regulatory year**) to proceed with as a **committed project**, the **distributor** must identify that decision and project in its **compliance report** for that **regulatory year**.

(7) Where a **distributor** decides, in a **regulatory year**, to proceed with a **network option** to meet an **identified need** that it had previously decided to meet by means of a project that was a **committed project**, the **distributor** must identify that **network option** and **committed project** in its **compliance report** for that **regulatory year**.

(8) The **confidentiality guidelines** apply to the information contained in **compliance reports**. If the **distributor's compliance report** contains confidential information, the **distributor** must also provide a non-confidential version of the report in a form suitable for **publication**. The **AER** may publish the **compliance report** (or the non-confidential version of the **compliance report**, if applicable) on its website.

2.5 Accruing of project incentives

(1) A **project incentive** accrues to a **distributor** when its **eligible project** becomes a **committed project**.

(2) The **total financial incentive** that a **distributor** can accrue across all **committed projects** under this **scheme** in year *t* is limited to 1.0 per cent of the annual smoothed revenue requirement (**AR**) for year *t*.

(3) The **total financial incentive** that a **distributor** can include in the **distributor's annual revenue requirement** in **regulatory year** *t* is the **total financial incentive**

accrued by the **distributor** in **regulatory year** *t-2*. That is, the **total financial incentive** that can be included in a **distributor's annual revenue requirement** in year *t* is calculated as $\text{Total financial incentive}_t$ in equation 2.

Equation 2: Total financial incentive paid in year *t* under the scheme

$$\text{Total financial incentive}_t = \sum_{i=1}^{N} incentive_{i,t-2}$$

Subject to the constraint:

$$\text{Total financial incentive}_t \leq AR_{t-2} \times 1\%$$

Where:

- $\text{Total financial incentive}_t$ is the **total financial incentive** paid in year *t*.
- $\sum_{i=1}^{N} incentive_{i,t-2}$ is the summation of the **project incentives** accrued to N number of projects, *i* in year *t–2*.
- AR_{t-2} is a **distributor's** annual smoothed revenue requirement for year *t–2*.

Explanatory box for equation 2:

Equation 2 calculates the **total financial incentive** that a **distributor** can include in its **annual revenue requirement** for the **regulatory year** *t* ('incentive paid in year *t*').

The incentive paid in year *t* to a **distributor** equals the summation of all **project incentives** that a **distributor** accrued in year *t–2* to **eligible projects** under this **scheme**.

The incentive paid in year *t* to a **distributor** must not exceed 1.0 per cent of its annual smoothed revenue requirement in year *t–2*.

Example: Calculating the total financial incentive

(4)

(5)

(6) Table 1 provides an illustrative example of how to apply clauses 2.5(1)–(3). In this example, the constraint in equation 2 does not bind for the **committed projects** in year 1, but binds for the **committed projects** in year 2. The numbers in table 1 are real figures and are in year 1 dollars.

(7) In this example, a hypothetical **distributor** is undertaking three **eligible projects**. These projects have the following **project incentives**:

- $PV\ incentive_1$ = $2 million that accrues when project 1 becomes a **committed project** in year 1.
- $PV\ incentive_2$ = $3 million that accrues when project 2 becomes a **committed project** in year 2.

- $PV\ incentive_3$ = $1.5 million that accrues when project 3 becomes a **committed project** in year 2.

Table 1: Illustrative example of incentive calculation ($ million, year 1)

Time	1	2	3	4
Incentive accrued to project 1	2.0			
Incentive accrued to project 2		3.0		
Incentive accrued to project 3		1.5		
Total incentive accrued to projects	2.0	4.5		
1% AR incentive (assumption)	3.1	3.2		
Total incentive accrued (up to cap)	2.0	3.2		
Incentive paid (total accrued with 2 year lag)			2.0	3.2

2.6 Application of the total financial incentive

(1) Within 5 months of receiving the distributor's **demand management compliance report** as required by clause 2.4(1), the **AER** will determine, and inform the distributor of, the **distributor's total financial incentive** for the **regulatory year** $t-2$ to be included in the **distributor's annual revenue requirement** for the **regulatory year** t. The **AER** will make this determination by either:

(a) Approving the amount of the **total financial incentive** that the **distributor** submitted in its **compliance report**, if the **distributor**:

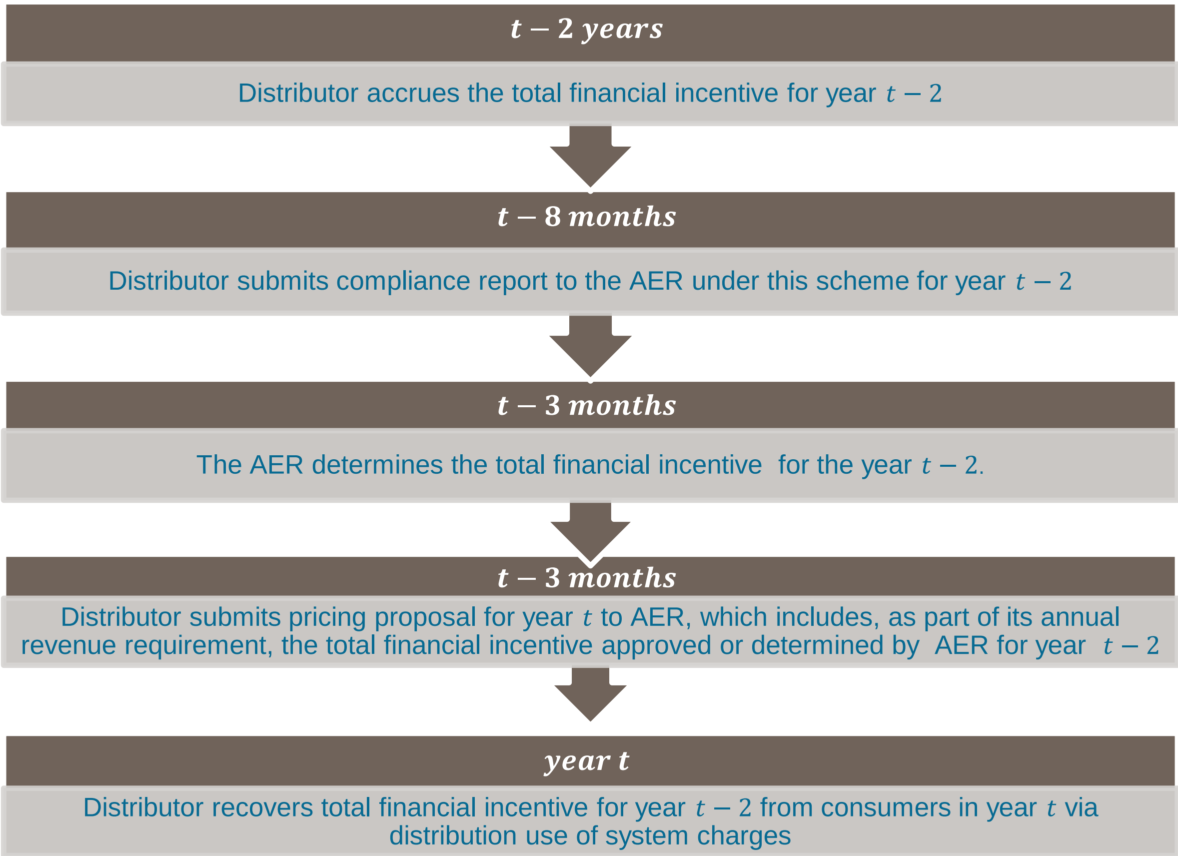
i. calculated that **total financial incentive** in accordance with section 2.5 of this **scheme**; and

ii. complied with this **scheme** in accruing **project incentives** in year $t-2$; or

(b) If the **AER** identifies a calculation or compliance error by the **distributor**, determining a revised **total financial incentive**.

(2) The **distributor** may include the **total financial incentive** determined or approved by the **AER** under clause 2.6(1) for the **regulatory year** $t-2$ in the **distributor's annual revenue requirement** for the **regulatory year** t.

Figure 2: Process for passing through total financial incentive in regulatory year t



A Glossary

Shortened form or term	Extended form or definition
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
allowance mechanism	Demand Management Innovation Allowance Mechanism
AR	annual smoothed revenue requirement
committed project	has the meaning given in clause 2.2.2(1)
compliance report	the demand management compliance report required under clause 2.4(1)
confidentiality guidelines	the document published by the AER entitled "Confidentiality Guideline, November 2013", as amended or replaced by the AER from time to time.
credible option	has the meaning given in clause 5.15.2(a) of the NER
demand management	for the purpose of this scheme, this relates to network demand management. This is the act of modifying the drivers of network demand to remove a network constraint.
demand management contract	has the meaning given in clause 2.2.2(2)
demand management proposal	has the meaning given in clause 2.2.2(3)
distributor	Distribution Network Service Provider
efficient non-network option	has the meaning given in clause 2.2(2)
eligible project	has the meaning given in clause 2.2(1)
EBSS	Efficiency Benefit Sharing Scheme
kVA	A kilovolt -ampere or 1,000 volt-amperes
minimum project evaluation requirements	has the meaning given in clause 2.2.1
MWh	Megawatt hour
NEO	National Electricity Objective
NER	National Electricity Rules
non-network option	has the meaning given in chapter 10 of the NER
NPV	Net present value
preferred option	the credible option that maximises the present value of the net economic benefit to all those who produce, consume and transport electricity in the relevant market, where the credible option and the relevant market are defined in this glossary

Shortened form or term	Extended form or definition
project incentive	the financial incentive that a project can accrue, as determined in accordance with equation 1 with respect to a project, i.
relevant market	The National Electricity Market, where the distributor is a part of that market. Otherwise, the relevant electricity market in which the distributor transports electricity.
request for demand management solutions	means a request issued under clause 2.2.1
RIT-D	Regulatory Investment Test for Distribution
scheme	Demand Management Incentive Scheme
total financial incentive	means the sum of all project incentives accrued by a distributor in a particular regulator year, capped (where applicable) at the amount set out in clause 2.5(2)