Electricity distribution network service providers

Efficiency benefit sharing scheme

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AUSTRALIAN ENERGY REGULATOR

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Shortened forms

AER	Australian Energy Regulator
capex	capital expenditure
CPI	consumer price index
DNSP	distribution network service provider
NER	National Electricity Rules
NPV	net present value
opex	operating expenditure
PV	present value
WACC	weighted average cost of capital

1 Nature and authority

1.1 Introduction

This document sets out the Australian Energy Regulator's (AER) efficiency benefit sharing scheme (EBSS) for electricity distribution network service providers (DNSPs).

The EBSS has been developed in accordance with the requirements of clause 6.5.8 and the distribution consultation procedures in rule 6.16 of the National Electricity Rules (NER).

1.2 Authority

Clause 6.5.8(a) of the NER requires the AER to develop and publish this EBSS.

1.3 Role of the scheme

The purpose of the EBSS is to share efficiency gains and losses between DNSPs and distribution network users.

The EBSS allows a DNSP to retain the benefits of an efficiency gain for the length of the carryover period irrespective of the regulatory year of the regulatory control period in which the gain was initiated. After the carryover period the benefits of an efficiency gain are 'shared' with distribution network users through a reduction in the DNSP's forecast opex.

The EBSS provides a DNSP with a continuous incentive to improve the efficiency of its operating expenditure (opex) and in doing so to reveal its efficient level of opex.

In the absence of an EBSS, the share of efficiency gains and losses received by a DNSP declines as the regulatory control period progresses and, consequently, the incentive for the DNSP to improve the efficiency of its opex declines as well.

1.4 Confidentiality

The AER's obligations regarding confidentiality and the disclosure of information provided to it by a DNSP are governed by the *Trade Practices Act 1974* (Cth), the National Electricity Law and the NER.

1.5 Processes for revision

The AER may amend or replace the EBSS from time to time in accordance with clause 6.5.8(d) of the NER and the distribution consultation procedures in rule 6.16 of the NER.

1.6 Version history and effective date

A version number and an effective date of issue will identify each version of this scheme.

2 Efficiency benefit sharing scheme for operating expenditure

This chapter sets out the AER's approach to providing incentives for a DNSP to improve the efficiency of its opex and share any resulting efficiency gains or losses with distribution network users.

The incentive for a DNSP to improve the efficiency of its opex arises from three different factors:

1. The AER will not claw back any differences between forecast and actual opex that arise during the regulatory control period.
2. The AER will use historical opex information when determining whether the forecast opex proposed by a DNSP for the next regulatory control period is efficient.
3. The EBSS.

For the purposes of this EBSS, a reference to:

- the current regulatory control period means the regulatory control period during which the EBSS is applied
- the following regulatory control period means the regulatory control period immediately following the current regulatory control period.

2.1 Objectives

In accordance with clause 6.5.8 of the NER, the AER has developed and published this EBSS which provides for a fair sharing of opex efficiency gains and losses between DNSPs and distribution network users.

Clause 6.5.8(c) of the NER requires that the AER, in developing and implementing an EBSS, must have regard to:

- the need to ensure that benefits to consumers likely to result from the scheme are sufficient to warrant any reward or penalty under the scheme for DNSPs
- the need to provide DNSPs with a continuous incentive, so far as is consistent with economic efficiency, to reduce opex and, if the scheme extends to capital expenditure, capital expenditure
- the desirability of both rewarding DNSPs for efficiency gains and penalising DNSPs for efficiency losses
- any incentives that DNSPs may have to capitalise expenditure
- the possible effects of the scheme on incentives for the implementation of non-network alternatives.

The EBSS rewards sustained efficiency gains through the operation of a symmetrical carryover mechanism that allows a DNSP to retain the benefits of an efficiency gain for the duration of the carryover period irrespective of the regulatory year of the regulatory control period in which the gain was initiated.

The EBSS is designed to ensure a DNSP facing a potential efficiency gain does not perceive a material advantage in either deferring or advancing an efficiency gain or loss, but rather that it faces an essentially constant benefit or cost from implementing a gain or loss as it arises. The measurement of gains and losses should not be artificially affected by, for example, shifting costs between years. Rather, it should represent genuine business outcomes that have arisen in the ordinary course of conducting the business in a prudent and diligent manner.

2.2 The expenditure allowance for the following regulatory control period

The AER considers that it is not appropriate, when determining the efficient opex allowance for future regulatory control periods, to relate future targets to past outcomes on a purely mechanistic basis. That is, the AER will not require forecast opex for the following regulatory control period to be equal to actual opex in a single year of the current regulatory control period during which the EBSS is applied. In this EBSS a single regulatory year in the current regulatory control period used as a basis for forecasts in the following regulatory control period is referred to as the base year.

Clause 6.5.6 of the NER sets out the matters a DNSP must address when it proposes to the AER the level of efficient forecast opex as part of its regulatory proposal for the following regulatory control period. The AER will assess a DNSP's forecast opex proposal against the operating expenditure objectives, having regard to the operating expenditure criteria and the operating expenditure factors, as set out in clause 6.5.6 of the NER.

In assessing the forecasts the AER will place significant weight on the actual opex in the base year of the current regulatory control period.

Since the EBSS is designed to provide incentives for DNSPs to reveal their efficient level of opex, the AER considers it is reasonable to expect the actual opex in the base year of a regulatory control period to be the best indicator of the efficient level of opex available when determining forecast opex for the following regulatory control period.

2.3 The efficiency benefit sharing scheme

This section describes how the EBSS calculates efficiency gains or efficiency losses, and the method by which gains or losses are shared between DNSPs and distribution network users.

The EBSS calculates an efficiency gain or efficiency loss in the first regulatory year of the following regulatory control period as follows:

$$E_1 = (F_1 - A_1)$$

where:

A_1 is the actual opex incurred by the DNSP during regulatory year 1 of the regulatory control period

F_1 is the forecast opex accepted or substituted by the AER for regulatory year 1 in the DNSP's revenue determination.

The EBSS calculates efficiency gains or efficiency losses that arise in the second and subsequent regulatory years of the following regulatory control period as:

$$E_t = (F_t - A_t) - (F_{t-1} - A_{t-1})$$

where:

E_t is the efficiency benefit/loss in year t

A_t and A_{t-1} are the actual (or adjusted actual as appropriate) opex incurred in regulatory years t and $t-1$ respectively,

F_t and F_{t-1} are the forecast, or adjusted forecast, opex accepted or substituted by the AER as provided for in the DNSP's revenue determination for the years t and $t-1$ respectively.

The sample calculations contained at appendix A illustrate the calculation process that underpins the EBSS and is based on unadjusted amounts. The adjusted efficiency benefit/loss for each regulatory year will be retained by the DNSP for the duration of the carryover period following the regulatory year in which it was incurred, after which the total value of the efficiency gain or efficiency loss is removed from the DNSP's opex forecast and notionally 'shared' with distribution network users. Because of the forward-looking nature of the EBSS, the sharing of efficiency gains or losses will not occur until the regulatory control period immediately following the regulatory control period which implemented the EBSS.

The efficiency benefit sharing calculation accounts for inflation to ensure it does not erode the value of any efficiency gains or losses to be retained by the DNSP. Price indices used in the calculation must be consistent with those used in the DNSP's revenue determination applicable to the same regulatory control period.

2.3.1 Final regulatory year adjustment

As a DNSP's revenue determination for the following regulatory control period will be finalised prior to the end of the regulatory control period during which the EBSS is applied, the AER will estimate the actual opex required to calculate the efficiency gains or losses for the final regulatory year.

The EBSS calculates this estimate, A_5^*, as follows:

$$A_5^* = F_5 - \left(F_f - A_f\right)$$

where:

F_f and A_f are the forecast and actual opex figures respectively in the base year (for example, if forecasts for the following regulatory control period are based on the actual opex in year 4, F_f is F_4 and A_f is A_4).

Where differences arise between the estimate, A_5^*, and the actual opex amount incurred by a DNSP in the final regulatory year, A_5, the efficiency gain or loss in the first year of the following regulatory control period will be adjusted as follows:

$$E_6 = \left(F_6 - A_6\right) - \left(F_5 - A_5\right) + \left(F_f - A_f\right)$$

2.3.2 Adjustments to forecast operating expenditure allowances for the purposes of calculating carryover amounts

In calculating the efficiency gains or losses to be carried over, the measurement of actual opex over the regulatory control period must be done using the same cost categories and methodology used to calculate the forecast opex for that regulatory control period. Adjustments will be made where necessary to correct for variances in cost categories, methodologies and errors.

If capitalisation policies during the regulatory control period have changed, the DNSP must adjust the forecast opex used to calculate the carryover amounts so that the forecast opex is consistent with the capitalisation changes. A DNSP must provide a detailed description of the changes in capitalisation policies and a calculation of the impact of those changes in capitalisation policy on forecast and actual opex.

For the purposes of calculating the carryover amounts, the forecast opex must be adjusted for the cost consequences of any differences between forecast and actual demand growth over the regulatory control period. These adjustments must be made using the same relationship between growth and expenditure used in establishing the forecast opex. Adjustments must only be applied to those components of opex that have a direct relationship to growth.

The AER will permit a DNSP to propose a range of additional cost categories for exclusion from the operation of the EBSS. These categories must be specific to the business, and the DNSP must provide an identifiable reason for exclusion, and should not involve an ongoing business activity. A DNSP must propose cost categories for exclusion from the EBSS in their regulatory proposal prior to the commencement of the regulatory control period during which the EBSS will be applied.

A DNSP must justify a proposal to exclude cost categories to the AER. A DNSP must also not seek to exclude categories of costs that could otherwise be regarded as controllable costs, for example, labour and materials costs and service provider costs. Proposed adjustments to the forecast opex will only be accepted by the AER if they are for changes in costs the AER considers are uncontrollable and will not adversely impact the operation of the EBSS.

The AER will list cost categories it considers to be uncontrollable in its revenue determination for each DNSP for exclusion from the calculation of carryover amounts at the end of the regulatory control period during which the EBSS was applied.

Opex spent on non-network alternatives will be excluded from the actual and forecast opex amounts used to calculate carryover gains or losses under the EBSS.

Approved increases or decreases in actual opex associated with recognised pass through events will be excluded from the actual and forecast expenditure amounts used to calculate carryover gains or losses under the EBSS.

Where a standard control service does not remain a standard control service in the following regulatory control period, the AER may remove the opex relating to that service from the actual and forecast opex figures used to calculate carryover amounts. In determining whether to do so, the AER will consider factors such as the materiality of the impact on carryover amounts, the potential for and magnitude of cross-subsidies, and whether there is any evidence of the DNSP inappropriately shifting costs to maximise carryover payments.

The opex forecast must include any necessary adjustments for changes in responsibilities that result from compliance with a new or amended law or licence, or other statutory or regulatory requirement. This may include requirements that can be demonstrated to arise directly from a recognised practice or policy generally applicable to similar firms participating in the National Electricity Market.

In calculating carryover gains or losses, the AER must be satisfied that the actual and forecast opex accurately reflects the costs faced by the DNSP in the regulatory control period.

2.3.3 Carryover period

The duration of the carryover period, in conjunction with the appropriate discount rate, influence the sharing ratio of gains and losses between distribution network users and the DNSP. A five regulatory year carryover period results in a benefit-sharing ratio of approximately 30:70 between the DNSP and distribution network users respectively. A ten regulatory year carryover period results in a ratio of approximately 50:50.

The AER will adopt a nominal carryover period of five regulatory years to calculate the carryover amounts except where the AER has approved a longer regulatory control period as part of a DNSP's revenue determination. Where this is the case, the AER will consider permitting a longer carryover period on a case-by-case basis.

2.3.4 Application of carryovers

Subject to the adjustments noted in section 2.3.2 of this document, the AER will apply all carryovers, both positive and negative. Carryover amounts will be included as a building block element in the calculation of a DNSP's allowed revenue for the regulatory control period following the regulatory control period in which the EBSS applied.

3 Capital expenditure and distribution losses

The EBSS does not apply to efficiency gains and efficiency losses that relate to capex or distribution losses.

Appendix A: Example of the efficiency benefit sharing scheme calculation

	Current regulatory control period					Following regulatory control period				
Regulatory year	1	2	3	4	5	6	7	8	9	10
Forecast opex	101	100	103	100	101	93	93	93	93	93
Actual opex	100	99	94	93	94[a]					
Incremental gain/loss	1	0	8[b]	-2	0	[c]				
Efficiency carryover										
Regulatory year 1		1	1	1	1	1				
Regulatory year 2			0	0	0	0	0			
Regulatory year 3				8	8	8	8	8		
Regulatory year 4					-2	-2	-2	-2	-2	
Regulatory year 5						0	0	0	0	0
Carry forward amounts						7	6	6	-2	0
Opex used for pricing purposes	101	100	103	100	101	100	99	99	91	93

Note: All figures are in real terms.

(a) This figure is an estimate only because the actual opex amount is not known at the time of a DNSP's revenue determination. This estimate has been calculated using the equation:

$$\begin{aligned} A_5^* &= F_5 - (F_4 - A_4) \\ &= 101 - (100 - 93) \\ &= 94 \end{aligned}$$

The correction for this estimate, which has been omitted for simplicity, will impact the incremental efficiency gain or loss for regulatory year 6 and thus the carryover amount for regulatory year 11.

(b)
$$\begin{aligned} E_3 &= (F_3 - A_3) - (F_2 - A_2) \\ &= (103 - 94) - (100 - 99) \\ &= 8 \end{aligned}$$

(c) The incremental efficiency gain or loss for regulatory year 6 will be calculated using the following equation:

$$E_6 = (F_6 - A_6) - (F_5 - A_5) + (F_f - A_f)$$