



PRELIMINARY DECISION
United Energy distribution
determination
2016 to 2020

Attachment 9 – Efficiency
benefit sharing scheme

October 2015

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Note

This attachment forms part of the AER's preliminary decision on United Energy's revenue proposal 2016–20. It should be read with all other parts of the preliminary decision.

The preliminary decision includes the following documents:

Overview

Attachment 1 - Annual revenue requirement

Attachment 2 - Regulatory asset base

Attachment 3 - Rate of return

Attachment 4 - Value of imputation credits

Attachment 5 - Regulatory depreciation

Attachment 6 - Capital expenditure

Attachment 7 - Operating expenditure

Attachment 8 - Corporate income tax

Attachment 9 - Efficiency benefit sharing scheme

Attachment 10 - Capital expenditure sharing scheme

Attachment 11 - Service target performance incentive scheme

Attachment 12 - Demand management incentive scheme

Attachment 13 - Classification of services

Attachment 14 - Control mechanism

Attachment 15 - Pass through events

Attachment 16 - Alternative control services

Attachment 17 - Negotiated services framework and criteria

Attachment 18 - f-factor scheme

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Shortened forms

Shortened form	Extended form
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
AMI	advanced metering infrastructure
augex	augmentation expenditure
capex	capital expenditure
CCP	Consumer Challenge Panel
CESS	capital expenditure sharing scheme
CPI	consumer price index
DRP	debt risk premium
DMIA	demand management innovation allowance
DMIS	demand management incentive scheme
distributor	distribution network service provider
DUoS	distribution use of system
EBSS	efficiency benefit sharing scheme
ERP	equity risk premium
Expenditure Assessment Guideline	Expenditure Forecast Assessment Guideline for electricity distribution
F&A	framework and approach
GSL	guaranteed service level
MRP	market risk premium
NEL	national electricity law
NEM	national electricity market
NEO	national electricity objective
NER	national electricity rules
NSP	network service provider
opex	operating expenditure
PPI	partial performance indicators
PTRM	post-tax revenue model
RAB	regulatory asset base
RBA	Reserve Bank of Australia

Shortened form	Extended form
repex	replacement expenditure
RFM	roll forward model
RIN	regulatory information notice
RPP	revenue and pricing principles
SAIDI	system average interruption duration index
SAIFI	system average interruption frequency index
SLCAPM	Sharpe-Lintner capital asset pricing model
STPIS	service target performance incentive scheme
WACC	weighted average cost of capital

9 Efficiency benefit sharing scheme

The efficiency benefit sharing scheme (EBSS) provides an additional incentive for service providers to pursue efficiency improvements in opex.

To encourage a service provider to become more efficient, it is allowed to keep any difference between its approved forecast and its actual opex during a regulatory control period. This is supplemented by the EBSS which provides the service provider with an additional reward for reductions in opex it makes and additional penalties for increases in opex. In total, these rewards and penalties work together to provide a continuous incentive for a service provider to pursue efficiency gains over the regulatory control period. The EBSS also discourages a service provider from incurring opex in the expected base year in order to receive a higher opex allowance in the following regulatory control period.

During the 2011–15 regulatory control period, United Energy operated under the Electricity distribution network service providers' EBSS released in June 2008.¹

9.1 Preliminary decision

We approve an EBSS carryover amount of \$24.7 million (\$2015) from the application of the EBSS in the 2011–15 regulatory control period.² The difference between our calculations of the EBSS carryover amounts and United Energy's proposal is attributable to:

- a different formula used to calculate EBSS carryover amounts for 2011 which reduced the carryover
- an adjustment to forecast opex for the difference between actual and forecast network growth which increased the carryover by a small amount
- a correction to the movements in provisions recorded for 2013 which increased the carryover.

Our preliminary decision for the EBSS carryover amounts from the 2011–15 regulatory control period is outlined in Table 9.1.

¹ AER, *Electricity distribution network service providers - Efficiency benefit sharing scheme*, June 2008.

² AER, *Electricity distribution network service providers - Efficiency benefit sharing scheme*, June 2008.

Table 9.1 AER’s preliminary decision on United Energy’s EBSS carryover amounts (\$ million, 2015)

	2016	2017	2018	2019	2020	Total
United Energy’s proposed carryover	2.0	19.8	5.9	0.1	0.0	27.7
Preliminary decision	-12.0	18.6	7.5	10.7	0.0	24.7

Note: Numbers may not add due to rounding.

Source: AER analysis; United Energy, *Regulatory proposal*, p. 280.

Our preliminary decision is to apply version two of the EBSS to United Energy in the 2016–20 regulatory control period.³ When we apply version two of the EBSS, we will exclude the cost categories listed in section 9.4.2 from forecast and actual opex for the calculation of EBSS carryover amounts. Table 9.2 sets out our preliminary decision on United Energy’s target opex for the EBSS (total opex less excluded categories⁴), against which we will calculate efficiency gains in the 2016–20 regulatory control period.

Table 9.2 AER’s preliminary decision on United Energy’s forecast opex for the EBSS (\$ million, 2015)

	2016	2017	2018	2019	2020
Forecast opex for the EBSS	126.8	128.3	130.3	132.3	134.0

Source: AER analysis.

Note: Total forecast opex less forecast opex on DMIA, debt raising costs and GSL payments.

9.2 United Energy’s proposal

9.2.1 Carryover amounts accrued during the 2011–15 regulatory control period

United Energy proposed that \$27.7 million (\$2015) be added to its regulated revenue in the 2016–20 regulatory control period.

In estimating its proposed EBSS carryover amounts United Energy adjusted its actual opex for the following costs:

- debt raising costs
- the demand management incentive allowance (DMIA)

³ AER, *Efficiency benefit sharing scheme for electricity network service providers*, November 2013.

⁴ Debt raising costs, DMIA and GSL payments.

- guaranteed service level (GSL) payments
- movements in provisions.⁵

To calculate the carryover amount accrued in 2011, United Energy proposed using the year one formula (the difference between actual opex and the allowance). It stated this was consistent with our determination for the 2011–15 regulatory control period where we set its Efficiency Carryover Mechanism to zero.⁶ Rather than change the formula in the RIN to achieve the same result, United Energy adjusted actual opex in 2009 and 2010 to record zero efficiency gains for those years.⁷

9.2.2 Application of the EBSS in the 2016–20 regulatory control period

United Energy proposed version two of the scheme would apply to it in the 2016–20 regulatory control period. It proposed excluding:

- GSL payments
- DMIA
- debt raising costs.

It did not propose any modifications to the scheme.⁸

9.3 AER’s assessment approach

Under the National Electricity Rules (NER) we must decide on:

1. the revenue increments or decrements (if any) for each year of the 2016–20 regulatory control period arising from the application of the EBSS during the 2011–15 regulatory control period⁹
2. how the EBSS will apply to United Energy in the 2016–20 regulatory control period.¹⁰

The EBSS must provide for a fair sharing between service providers and network users of opex efficiency gains and efficiency losses.¹¹ We must also have regard to the following factors when implementing the EBSS:¹²

⁵ United Energy, *Regulatory proposal*, April 2015, Reset RIN, table 7.5.1.
United Energy did not make adjustments for network growth or capitalisation policy changes.

⁶ United Energy, *Regulatory proposal*, April 2015, p. 135.

⁷ United Energy, *Regulatory proposal*, April 2015, Reset RIN, table 7.5.1.

⁸ United Energy, *Regulatory proposal*, April 2015, p. 135; Reset RIN, table 7.5.2.

⁹ NER, cl. 6.4.3(a)(5).

¹⁰ NER, cl. 6.3.2(a)(3); cl. 6.12.1(9).

¹¹ NER, cl. 6.5.8(a).

¹² NER, cl. 6.5.8(c).

- the need to ensure that benefits to electricity consumers likely to result from the scheme are sufficient to warrant any reward or penalty under the scheme
- the need to provide the network service provider with continuous incentives to reduce opex
- the desirability of both rewarding the service providers for efficiency gains and penalising them for efficiency losses
- any incentives that service providers may have to capitalise expenditure
- the possible effects of the scheme on incentives for the implementation of non-network alternatives.

9.3.1 Interrelationships

The EBSS is intrinsically linked to our opex revealed cost forecasting approach. Under this opex forecasting approach, the EBSS has two specific functions:

- to mitigate the incentive for a service provider to increase opex in the expected 'base year' to increase its forecast opex allowance for the following regulatory control period.
- to provide a continuous incentive for a service provider to make efficiency gains - service providers receive the same reward for an underspend and the same penalty for an overspend in each year of the regulatory control period.

Where we do not propose to rely on the revealed costs of a service provider in forecasting opex, this has consequences for the service provider's incentives to make productivity improvements and consequently our decision on how we apply the EBSS.

9.4 Reasons for preliminary decision

This section provides the reasons for our preliminary decision on the carryover amounts that arise from applying the EBSS during the 2011–15 regulatory control period, and how we will apply the EBSS in the 2016–20 regulatory control period.

9.4.1 Carryover amounts from the 2011–15 regulatory control period

We consider United Energy should receive an EBSS carryover amount of \$24.7 million (\$2015) from the application of the EBSS during the 2011–15 regulatory control period. Our calculation is in accordance with section 2.3 of the Electricity distribution network service providers EBSS.¹³

¹³ AER, *Electricity distribution network service providers Efficiency benefit sharing scheme*, June 2008, pp. 4–6.

In the 2011–15 regulatory control period, United Energy was subject to the Electricity distribution network service providers EBSS.¹⁴ Under this scheme, the EBSS carryover amounts are based on the difference between:

- approved forecast opex which is set out in our determination for United Energy for the 2011–15 regulatory control period
- actual opex for the regulatory years from 2011–12 to 2014–15 less excluded cost categories.

The formulas for calculating the carryover amounts are set out in this scheme.¹⁵

The EBSS carryover we calculated (\$24.7 million) is different to the carryover United Energy’s proposed (\$27.7 million) because:

- we used different formulas to calculate EBSS carryover amounts for 2011
- United Energy did not adjust forecast opex to account for actual growth
- United Energy incorrectly reported movements in provisions for 2013.

Carryover amount for 2011

We calculated the efficiency gains in 2011 differently to United Energy. We consider the EBSS that applied to the 2011–15 regulatory control period should continue from the scheme that applied in the 2006–10 regulatory control period. However, United Energy disagreed and proposed that the EBSS should start anew in 2011.

United Energy stated that starting anew is consistent with our final determination for the 2011–15 regulatory control period, where we set its Efficiency Carryover Mechanism to zero.¹⁶ However, this is incorrect.¹⁷ In our final decision, we stated that the year six formula should be used to measure efficiency gains made in 2011.¹⁸ We considered that this ensured the efficiency gains or losses made in the 2006–10 regulatory control period would not be included in the EBSS for the 2011–15 regulatory control period. Using the year six formula instead of the first year formula reduces United Energy’s carryover amount.

Adjustment for the difference between forecast and actual network growth

Our Victorian distribution determination 2011–15 stated that to calculate the carryover amounts, forecast opex should be adjusted to account for the difference between

¹⁴ AER, *Electricity distribution network service providers Efficiency benefit sharing scheme*, June 2008.

¹⁵ AER, *Electricity distribution network service providers Efficiency benefit sharing scheme*, June 2008, pp. 5–6.

¹⁶ United Energy, *Regulatory proposal*, April 2015, p. 135.

¹⁷ United Energy, *Revised regulatory proposal for distribution prices and services 2011 – 15*, 23 July 2010, pp. 297 and 302. In its revised proposal for that determination, United Energy stated the EBSS should start anew in 2011, with the first year formula. That is, that the year six formula should not be applied in 2011.

¹⁸ AER, *Victorian distribution determinations 2011–16, Final decision*, pp. 643–644, 653–654.

forecast and actual growth. In other words, for the forecasts used in the scale escalation method described in appendix J of the final determination we should substitute:

- actual values for the years 2011–2014 for:
 - customer numbers
 - the number of distribution transformers
 - zone substation capacity MVA
 - line length
- revised forecasts for 2015.

United Energy did not adjust forecast opex to account for actual growth. We have corrected this in our calculations which slightly increased United Energy's carryover amount.¹⁹

We also corrected an error United Energy made in reporting movements in provisions for 2013 which increased its carryover amount. The net effect of these three adjustments is small.

9.4.2 How the EBSS will apply in the 2016–20 regulatory control period

We will apply version two of the EBSS to United Energy.²⁰ We consider the EBSS is needed to provide United Energy with a continuous incentive to pursue efficiency gains during the 2016–20 regulatory control period. As we typically rely on a single year revealed cost approach to forecasting opex, we consider the EBSS is also needed to provide United Energy with an incentive not to increase its opex in the expected base year.

Version two of the EBSS specifies our approach to determining the length of the carryover period, calculating the incremental efficiency gains and adjusting forecast or actual opex when calculating carryover amounts. These are detailed below.

Length of carryover period

The length of the carryover period for the 2016–20 regulatory control period will be five years. This aligns the EBSS carryover period with the total length of United Energy's regulatory control period.

¹⁹ United Energy, *Response to information request IR#015*, 31 July 2015 and 3 August 2015.

²⁰ AER, *Efficiency benefit sharing scheme for electricity network service providers*, November 2013.

Incremental efficiency gains

We will calculate incremental efficiency gains differently depending on whether they are in:

- the first regulatory year
- the second regulatory year to the penultimate regulatory year
- the final regulatory year.

We will do this according to the formulas set out in version two of the EBSS.²¹

When calculating actual opex under the EBSS we will adjust reported actual opex for the 2016–20 regulatory control period to reverse any movements in provisions. Consistent with the approach we applied in implementing the EBSS for the 2011–15 regulatory control period, for regulatory purposes we consider actual opex net of movement in provisions best reflects the actual opex incurred by the service provider.

Adjustments to forecast or actual opex when calculating carryover amounts

The EBSS also allows for exclusions of categories of costs from the EBSS where we do not forecast them using a single year revealed cost forecasting approach. This is designed to fairly share efficiency gains and losses. For instance, where a service provider achieves efficiency improvements, it receives a benefit through the EBSS and consumers receive a benefit through lower forecast opex in the next period. This is the way consumers and the service provider share in the benefits of an efficiency improvement.

If we do not use a single year revealed cost forecasting approach, lower actual opex will not necessarily be passed through to consumers. Consumers should not pay for EBSS benefits where they do not receive the benefits of a lower opex forecast.

We will exclude the following categories of costs from the EBSS:

- debt raising costs
- GSL payments
- demand management innovation allowance (DMIA)
- losses on the scrapping of assets.

As debt raising costs, GSL payments and DMIA are not forecast based on revealed expenditure they should be excluded from the EBSS.

We will also exclude losses on the scrapping of assets from the EBSS. This was proposed by Jemena in its regulatory proposal.²² Losses on the scrapping of assets

²¹ AER, *Efficiency benefit sharing scheme for electricity network service providers*, November 2013, pp. 7–9.

are accounting records of the shortfalls between the proceeds from selling assets and their accounting written down values. Jemena stated that consistent with accounting standards, and subject to audit, these losses are reported as opex in its statutory accounts.²³ The EBSS is designed to reward businesses for becoming more efficient over time and penalise them for becoming less efficient. It is the actual opex a service provider incurs that we are concerned about when measuring efficiency improvements. As a loss on the scrapping of an asset is an accounting adjustment to expenditure, rather than an actual outlay made by a service provider in providing network services, including it in the EBSS would mean United Energy would be rewarded or penalised for accounting adjustments. We do not consider this would be consistent with the aims of the EBSS.

In addition to the excluded cost categories we will also:

- adjust forecast opex to add (subtract) any approved revenue increments (decrements) made after the initial regulatory determination. This may include approved pass through amounts.
- adjust actual opex to add capitalised opex that has been excluded from the RAB
- exclude categories of opex not forecast using a single year revealed cost approach for the regulatory control period beginning in 2021 where doing so better achieves the requirements of clause 6.5.8 of the NER.

²² Jemena, *Regulatory proposal*, p. 41.

²³ Jemena, *Response to IR#011*, 14 July 2015, p. 2.