



**DRAFT DECISION**  
**TasNetworks distribution**  
**determination**  
**2017–18 to 2018–19**

**Attachment 9 – Efficiency**  
**benefit sharing scheme**

September 2016

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## Note

This attachment forms part of the AER's draft decision on TasNetworks' distribution determination for 2017–19. It should be read with all other parts of the draft decision.

The draft 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 mechanisms

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## Shortened forms

Shortened form	Extended form
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
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
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
repex	replacement expenditure

Shortened form	Extended form
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) aims to provide an incentive for service providers to pursue efficiency improvements in operating expenditure (opex) and to share efficiency gains between network service providers and network users. It is intrinsically linked to our forecasting approach for opex.

To encourage a service provider to become more efficient, under an ex ante framework, a service provider retains any efficiency gains it makes until the end of the regulatory control period when its opex forecast is reset. The EBSS allows the service provider to retain any efficiency gains it makes for a total of six years, regardless of the year in which the gains are made.<sup>1</sup> This provides a continuous incentive for service providers to pursue efficiency gains over the regulatory control period. It also discourages a service provider from incurring opex in the expected base year to receive a higher opex allowance in the following regulatory control period.

During the 2012–17 regulatory control period, TasNetworks operated under the Electricity distribution network service providers' EBSS released in June 2008.<sup>2</sup>

### 9.1 Draft decision

We have determined an EBSS carryover amount of \$18.1 million (\$2016–17) from the application of the EBSS during the 2012–17 regulatory control period.<sup>3</sup> This is \$23.0 million (\$2016–17) less than TasNetworks' proposal. The primary reason for this difference is that TasNetworks' EBSS calculations assume year 4 (2015–16) is used as the base year to forecast opex. However, TasNetworks used year 3 (2014–15) to forecast opex.

Our draft decision for the EBSS carryover amounts from the 2012–17 regulatory control period is outlined in table 9.1.

**Table 9.1 Draft decision on TasNetworks' EBSS carryover amounts (\$ million, 2016–17)**

	2017–18	2018–19	Total
TasNetworks' proposal	20.6	20.6	41.1
Draft decision	9.0	9.0	18.1

Source: TasNetworks, *Regulatory proposal 2017–19*, PTRM; AER analysis. Totals may not add up due to rounding.

<sup>1</sup> The service provider keeps any efficiency gains in the year it makes them. The service provider then keeps those gains for the length of the carryover period. The carryover length is usually five years so the service provider keeps efficiency gains for a total of six years.

<sup>2</sup> AER, *Electricity distribution network service providers—Efficiency benefit sharing scheme*, June 2008.

AER, *Aurora, distribution determination 2012–17 - attachments, final decision*, April 2012, p. 273.

<sup>3</sup> AER, *Electricity distribution network service providers—Efficiency benefit sharing scheme*, June 2008.

In our final decision we will update estimated opex with actual opex for 2015–16. This may change the carryover amounts we determine in the final decision.

Looking forward, our draft decision is to apply version two of the EBSS to TasNetworks in the 2017–19 regulatory control period.<sup>4</sup> This is consistent with our final framework and approach paper and TasNetworks' proposal.<sup>5</sup> When we apply the EBSS we will exclude the cost categories listed in section 9.4.2 from the scheme.

Table 9.2 sets out our draft decision on the target opex for the EBSS (total opex less excluded categories) we will use to calculate efficiency gains in the 2017–19 regulatory control period, subject to further adjustments allowed by the EBSS.

**Table 9.2 Forecast opex for the EBSS (\$ million, 2016–17)**

	2017–18	2018–19	Total
<b>Forecast opex</b>	<b>62.3</b>	<b>60.8</b>	<b>123.1</b>
Less exclusions			
Debt raising costs	1.1	1.1	-2.2
GSL payments	1.6	1.6	-3.2
DMIA	-	-	-
Electrical safety inspection levy payments	2.0	2.0	-4.1
NEM levy payments	0.4	0.4	-0.8
NEM and retail contestability opex	1.3	1.3	-2.5
<b>Forecast opex for the EBSS target</b>	<b>55.9</b>	<b>54.4</b>	<b>110.3</b>

Note: Numbers may not add up to total due to rounding.

Source: AER analysis.

## 9.2 TasNetworks' proposal

### 9.2.1 Carryover amounts from the 2012–17 regulatory control period

TasNetworks proposed we include an EBSS increment of \$41.1 million (\$2016–17) in its regulated revenue for the 2017–19 regulatory control period, from applying the EBSS in the 2012–17 regulatory control period.<sup>6</sup>

<sup>4</sup> AER, *Efficiency benefit sharing scheme for electricity network service providers*, November 2013.

<sup>5</sup> AER, *Final Framework and approach for TasNetworks*, July 2015, pp. 65–69; TasNetworks, *Regulatory proposal*, January 2016, p. 123.

<sup>6</sup> TasNetworks included an EBSS carryover of \$41.1 million in its proposed PTRM.



TasNetworks excluded the following categories of expenditure, as set out in its distribution determination:

- debt raising costs
- guaranteed service level (GSL) payments
- the demand management innovation allowance (DMIA)
- non-network alternatives
- electrical safety inspection levy payments
- national energy market (NEM) levy payments
- NEM and retail contestability opex
- movements in provisions.<sup>7</sup>

### **9.2.2 Application of the EBSS in the 2017–19 regulatory control period**

TasNetworks proposed we apply version two of the scheme apply in the 2017–19 regulatory control period. It proposed we exclude the following cost categories from the scheme:

- superannuation costs for defined benefits schemes
- DMIA
- non-network alternatives
- electrical safety inspection levy payments
- NEM levy payments
- debt raising costs
- GSL payments
- self-insurance costs.<sup>8</sup>

TasNetworks also proposed we remove movement in provisions and recognised pass throughs events from forecast and actual opex.

## **9.3 AER’s assessment approach**

Under the National Electricity Rules (NER) we must determine:

1. the revenue increments or decrements for each year of the 2017–19 regulatory control period arising from the application of the EBSS during the 2012–17 regulatory control period.<sup>9</sup>

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<sup>7</sup> TasNetworks, *Regulatory proposal, proposed EBSS model*, January 2016.

<sup>8</sup> TasNetworks, *Regulatory proposal*, January 2016, p. 124.

2. how the EBSS will apply to TasNetworks in the 2017–19 regulatory control period.<sup>10</sup>

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

- 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.

Our final framework and approach paper for TasNetworks sets out how we had regard to these matters in our decision to apply version two of the EBSS to Powerlink.<sup>13</sup>

### 9.3.1 Interrelationships

The EBSS is intrinsically linked to our opex revealed cost forecasting approach. Under our revealed cost forecasting approach we base our forecast on a service provider's audited actual opex in a single year. Under this opex forecasting approach, the EBSS has two functions:

- it mitigates the incentive to increase opex in the expected 'base year' to increase forecast opex for the following regulatory control period
- it provides a continuous incentive to make efficiency gains—that is, service providers receive the same reward for an underspend and the same penalty for an overspend in each year of the regulatory control period.

Furthermore, when we assess a service provider's opex proposal, we are to have regard to whether the opex forecast is consistent with any incentive schemes that apply to the service provider, including the EBSS.<sup>14</sup>

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<sup>9</sup> NER, cl. 6.4.3(a)(5).

<sup>10</sup> NER, cl. 6.3.2(a)(3); cl. 6.12.1(9).

<sup>11</sup> NER, cl. 6.5.8(a).

<sup>12</sup> NER, cl. 6.5.8(c).

<sup>13</sup> *Final Framework and Approach for TasNetworks*, June 2015, pp. 66–67.

<sup>14</sup> NER, cl. 6A.6.6(e)(8).

## 9.4 Reasons for draft decision

This section provides the reasons for the carryover amounts that arise from applying the EBSS during the 2012–17 regulatory control period, and how we will apply the EBSS in the 2017–19 regulatory control period.

### 9.4.1 Carryover amounts from the 2012–17 regulatory control period

We determine TasNetworks should receive EBSS carryover amounts totalling \$18.1 million (\$2016–17) from applying the EBSS during the 2012–17 regulatory control period. We calculated this in accordance with the EBSS that applied to TasNetworks.<sup>15</sup>

In our final decision, we will update TasNetworks' EBSS carryover amounts using:

- actual audited opex for 2015–16
- the latest forecast of CPI for June 2017 in the RBA's *Statement on monetary policy*
- the rate of return we determine in our final decision.

In the 2012–17 regulatory control period, TasNetworks was subject to the Electricity distribution network service providers' EBSS.<sup>16</sup> We calculate the EBSS carryover amounts based on the difference between:

- approved forecast opex which is set out in our determination for TasNetworks for the 2012–17 regulatory control period
- audited actual opex for the regulatory years from 2012–13 to 2015–16 less excluded cost categories.

We set out the formulas for calculating the carryover amounts in the scheme itself.<sup>17</sup>

We reviewed how TasNetworks calculated its proposed EBSS carryover and, in consultation with TasNetworks, identified several issues. The main issue is that TasNetworks' calculations assumed it had used 2015–16 as the base year to forecast opex when in fact it used 2014–15. We discuss each of the issues in more detail below.

Table 9.3 compares our forecast carryover amounts with TasNetworks' proposed carryover amounts. Normally the carryover amounts accrue over a five year period, however, because the 2017–19 regulatory control period is only two years, both we and TasNetworks calculated a net present value equivalent amount over two years.

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<sup>15</sup> AER, *Electricity distribution network service providers - Efficiency benefit sharing scheme*, June 2008, pp. 4–6.

<sup>16</sup> AER, *Electricity distribution network service providers - Efficiency benefit sharing scheme*, June 2008.

<sup>17</sup> AER, *Electricity distribution network service providers - Efficiency benefit sharing scheme*, June 2008, pp. 5–6.

**Table 9.3 EBSS carryover amounts**

	2017–18	2018–19	2019–20	2010–21	2021–22	Total	NPV
TasNetworks' proposal	14.0	9.2	14.5	5.1	–	<b>42.8</b>	<b>39.1</b>
TasNetworks' proposal, two year equivalent	20.6	20.6				<b>41.1</b>	<b>39.1</b>
Draft decision	8.9	4.5	9.3	–	–4.8	<b>17.9</b>	<b>17.3</b>
Draft decision, two year equivalent	9.0	9.0				<b>18.1</b>	<b>17.3</b>

Note: Based on a real discount rate of 2.96 per cent, consistent with our draft decision on the rate of return. Numbers may not add up to totals due to rounding.

Source: TasNetworks, *Regulatory proposal and proposed PTRM*; AER analysis.

The EBSS carryover we calculated (\$18.1 million or \$17.3 million in NPV terms) is lower than the carryover TasNetworks proposed (\$41.1 million or \$39.1 million in NPV terms) for four reasons:

1. we used a different estimate of 2016–17 opex, which changed the incremental gain for 2016–17
2. we calculated the incremental gain for 2012–13 differently
3. we used different values of inflation
4. we used a different discount rate to calculate two years of carryover payments equal in NPV terms.

We discuss these issues below.

### ***Estimate of 2016–17 'actual' opex***

When we determine EBSS carryover amounts we typically do not know actual audited opex for the final year of the current regulatory control period, in this case 2016–17. Consequently we need to estimate this to calculate gains or losses for 2016–17. To ensure consistency with the opex forecast this estimate should reflect the same level of efficiency as in the base year.

Version one of the distribution EBSS specifies that we will estimate final (fifth) year opex as:

$$A_5^* = F_5 - (F_f - A_f)$$

where  $F_f$  and  $A_f$  are the forecast and actual opex figures respectively for the base year used to forecast opex for the following regulatory control period.

TasNetworks used forecast and actual opex in 2015–16 to estimate its opex for 2016–17. However, this was not the base year it used to forecast opex, which was 2014–15.

Consequently, TasNetworks would be rewarded twice for the incremental efficiency gain it makes in 2015–16 – once through the EBSS and a second time through its opex forecast, which does not reflect those efficiency gains because it is based on opex in 2014–15.

Correcting this error reduces the EBSS carryover by \$20.4 million (\$2016–17).

We engaged with TasNetworks to clarify this issue.<sup>18</sup>

### ***First year incremental efficiency gain***

The EBSS that applied to TasNetworks has two different equations for calculating the incremental efficiency gains in the first year of the regulatory control period. The one that should be used depends on whether the EBSS is being applied for the first time or not.

The 2012–17 regulatory control period was the first time TasNetworks has had the EBSS applied to it. However, to calculate its incremental efficiency gain for 2012–13 TasNetworks used the equation that should be used when the EBSS has previously been applied.

Using the correct formula for the incremental gain in 2012–13 reduces the EBSS carryover by \$0.6 million (\$2016–17).

### ***CPI adjustment***

To calculate EBSS carryovers, TasNetworks converted nominal dollar amounts to real 2016–17 dollars using a lagged CPI index (September quarter CPI).<sup>19</sup> However, we have used unlagged June quarter CPI in order to be consistent with our opex model.

It is important we use the same CPI adjustments for both because of the interaction between the carryover amounts accrued in 2012–17 and the starting point for the opex forecast for 2017–19.

When we set the opex forecast from the 2014–15 base year, the reward (penalty) TasNetworks is paid for any underspend (overspend) in the base year needs to be consistent with the impact that underspend (overspend) has on the opex forecast. For example, if TasNetworks delivers lower opex in the base year it will:

- increase its incremental gain in the base year, increasing its EBSS carryover
- reduce the starting point for the opex forecast, reducing the total opex forecast.

The size of the EBSS reward should correspond to the reduction in base opex. However, if the CPI used to calculate the efficiency gains is not the same as the CPI

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<sup>18</sup> TasNetworks, response to AER information request #IR15, *TasNetworks response to questions raised by the AER*, 12 August 2016.

<sup>19</sup> TasNetworks, *Regulatory proposal, EBSS model*, January 2016.

used to establish the base year used to forecast opex, this will not be the case and TasNetworks may get a windfall gain or loss as a result. As noted above, in implementing the EBSS we 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 distributors earn under the scheme.<sup>20</sup> This may not be the case if we use different CPI values for the EBSS as we do for forecasting opex.

Using the correct CPI values increases the EBSS carryover by \$0.9 million (\$2016–17). We also note that we require inflation values through to June 2017 to calculate the EBSS carryover amounts. We will update our estimate of CPI for June 2017 in our final decision using the RBA's inflation forecast in its most recent *Statement on monetary policy*.

### ***Net present value adjustment***

Through the application of the EBSS during the 2012–17 regulatory control period, TasNetworks has accrued carryover amounts for each of the years from 2017–18 to 2021–22 inclusive. TasNetworks' next regulatory control period, however, is only two years long. Consequently we have converted the calculated carryover amounts to two equal amounts, for 2017–18 and 2018–19, with a net present value equal to the five carryover amounts determined. TasNetworks also did this in its regulatory proposal.

We updated TasNetworks' calculation to reflect the carryover amounts we determined and to reflect the rate of return we determined in this draft decision. We will update the net present value calculation in our final decision using the rate of return we determine in that decision.

## **9.4.2 Application of the EBSS in the 2017–19 regulatory control period**

Looking forward, we will apply version two of the EBSS to TasNetworks in the 2017–19 regulatory control period.<sup>21</sup> We consider the EBSS is needed to provide TasNetworks with a continuous incentive to pursue efficiency gains during the 2017–19 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 TasNetworks 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.

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<sup>20</sup> NER, clause 6.5.8(c)(1).

<sup>21</sup> AER, *Efficiency benefit sharing scheme for electricity network service providers*, November 2013.

## Length of carryover period

The length of the carryover period for the 2017–19 regulatory control period should be the same length as the regulatory control period commencing on 1 July 2019. This aligns the EBSS carryover period with the total length of TasNetworks' regulatory control period and ensures continuous incentives.<sup>22</sup>

## 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.

We will estimate actual opex for the final regulatory year.

We will do this according to the formulas set out in version two of the EBSS.<sup>23</sup>

## Adjustments to forecast or actual opex when calculating carryover amounts

The EBSS allows us to exclude categories of costs that we do not forecast 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
- DMIA
- GSL payments
- electrical safety inspection levy payments
- NEM levy payments.

We agree with TasNetworks' that we should exclude these cost categories from the EBSS because they are not forecast based on revealed expenditure in a single year.

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<sup>22</sup> NER, cl. 6.5.8(c)(2).

<sup>23</sup> AER, *Efficiency benefit sharing scheme for electricity network service providers*, November 2013, pp. 7–9.

We will not exclude the following categories of opex from the EBSS:

- superannuation costs for defined benefit schemes
- self-insurance
- non-network alternatives.

As we have outlined in attachment 7, we prefer to forecast total opex using a single year revealed cost approach. TasNetworks adopted a similar forecasting approach. Because these costs are included in our total opex forecast based on revealed expenditure in a single year, there is no reason to exclude them from the EBSS.

By including costs such as self-insurance and superannuation costs in the EBSS, uncontrollable cost decreases or increases are shared between service providers and consumers in the same way as any efficiency gain or loss (that is, approximately 30:70 with a five year carryover period). If we exclude such costs, the service provider's share of cost decreases or increases differs across the regulatory control period. We do not consider cost increases should be shared differently between service providers and consumers in different regulatory years.

Non-network alternative expenditure is a means of deferring capital (network) expenditure. Previously we have excluded non-network alternative costs from the EBSS because of the imbalance between opex and capex incentive schemes. However, with the introduction of the capex expenditure sharing scheme (CESS), this is no longer the case. Including non-network alternative costs in the EBSS maintains the balanced incentive for TasNetworks to consider demand management and other forms of non-network alternative expenditure as an efficient substitute to network solutions.<sup>24</sup>

In addition to the excluded cost categories, we will adjust actual opex to reverse any movements in provisions. Consistent with the approach we applied in implementing the EBSS for the 2012–17 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 during the regulatory control period.

Consistent with version two of the EBSS 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<sup>25</sup>

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<sup>24</sup> NER, cl. 6.5.8(c)(5) requires us to have regard to the possible effects of the scheme on incentives for the implementation of non-network alternatives.

<sup>25</sup> NER, cl. 6.5.8(c)(5) requires us to have regard to any incentives the service provider may have to capitalise expenditure.



- exclude categories of opex not forecast using a single year revealed cost approach for the regulatory control period beginning in 2019–20 where doing so better achieves the requirements of clause 6.5.8 of the NER.<sup>26</sup>

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<sup>26</sup> AER, *Efficiency benefit sharing scheme for electricity network service providers*, November 2013, p. 9.