



Preliminary framework and approach

Directlink Regulatory control period commencing 1 July 2020

March 2018

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Shortened forms

Shortened Form	Extended Form
AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
capex	capital expenditure
CESS	capital expenditure sharing scheme
EBSS	efficiency benefit sharing scheme
expenditure assessment guideline	expenditure forecast assessment guideline for electricity distribution
F&A	framework and approach
MAR	maximum allowable revenue
MIC	market impact component
NEM	National Electricity Market
NCC	network capability component
NEO	National Electricity Objective
NER or the rules	National Electricity Rules
next regulatory control period	1 July 2020 to 30 June 2025
opex	operating expenditure
RAB	regulatory asset base
STPIS	service target performance incentive scheme
TNSP	transmission network service provider

About the framework and approach paper

We, the Australian Energy Regulator (**AER**), are responsible for the economic regulation of electricity transmission and distribution systems in all Australian states and territories, with the exception of Western Australia. Directlink is an interconnector that provides a path for the flow of electricity to the limit of its 220MW capacity, in both directions, between the New South Wales and Queensland transmission networks. We regulate the revenues that Directlink can recover from customers.

This framework and approach (**F&A**) paper is the first step in the process to determine the revenue that Directlink can recover from customers over the five year period from 2020 to 2025. The F&A highlights the broad nature of certain regulatory arrangements that will apply for the next regulatory control period. The F&A also facilitates early consultation with consumers and other stakeholders and assists Directlink in preparing its expenditure proposal.

In order to set the revenues that regulated businesses can recover from their customers, we use incentive based regulation. The incentive regulation framework is designed to encourage regulated businesses to spend efficiently and to share the benefits of efficiency gains with consumers. Specifically, it is designed to encourage businesses to make efficient decisions on when and what type of expenditure to incur in order to meet their network reliability, safety, security and quality requirements.

Directlink's current five year regulatory control period ends on 30 June 2020. Our F&A paper for the next regulatory control period must be published by the end of July 2018.¹

As required under the rules, this F&A paper sets out our proposed approach for the next regulatory control period on the application of the following:

- service target performance incentive scheme (**STPIS**)
- expenditure efficiency benefit sharing scheme (**EBSS**)
- capital expenditure sharing scheme (**CESS**)
- expenditure forecast assessment guidelines, and
- whether depreciation will be based on forecast or actual capital expenditure in updating the regulatory asset base.

Following release of the F&A paper, Directlink will submit a revenue proposal by 31 January 2019 for its regulatory control period commencing on 1 July 2020.

¹ NER, cl. 6A.10.1A(a)(i) and (e).

Table 1 summarises the transmission determination process as it relates to Directlink.

Table 1 Directlink transmission determination process

Step	Date
AER publishes preliminary position F&A for Directlink	March 2018
Submissions on preliminary F&A for Directlink close	27 April 2018
AER to publish final F&A for Directlink	July 2018
Directlink submits regulatory proposal to AER	January 2019
AER publishes issues paper and holds public forum	March/April 2019**
Submissions on regulatory proposal close	May 2019
AER to publish draft transmission determination	September 2019*
AER to hold a predetermination conference	October 2019**
Directlink to submit revised regulatory proposal to AER	December 2019
Submissions on revised regulatory proposals and draft decision close	January 2020*
AER to publish transmission determination for regulatory control period	April 2020

Source: NER, chapter 6A, Part E

Notes: * The NER does not provide specific timeframes in relation to publishing draft decisions. Accordingly, this date is indicative only.

** The dates provided for submissions and the public forum are based on the AER receiving compliant proposals. These dates may alter if the AER receives non-compliant proposals.

1 Overview

This F&A covers how we propose to apply a range of incentive schemes and other guidelines to Directlink as well as our approach to calculating depreciation. The positions we set out in this F&A paper are not binding on the AER or Directlink.² This means it is open to the AER to change its position on matters set out in this F&A paper where there is reason to change, for example, because of changed circumstances.

Incentive schemes encourage transmission network service providers (**TNSPs**) to manage their businesses in a safe, reliable manner that benefits the long term interests of consumers. The schemes also provide TNSPs with incentives to spend efficiently and to meet or exceed service quality/reliability targets. In some instances, TNSPs may incur a financial penalty if they fail to meet set targets. The overall objectives of the schemes are to:

- encourage appropriate levels of service quality
- maintain network reliability as appropriate
- incentivise TNSPs to spend efficiently on capital expenditure (**capex**) and operating expenditure (**opex**)
- share efficiency gains and losses between TNSPs and consumers, and
- incentivise TNSPs to consider economically efficient alternatives to augmenting their networks.

We summarise the specific schemes below and provide an overview of our expenditure forecast assessment guideline and approach to calculating depreciation.

Service target performance incentive scheme

Our national service target performance incentive scheme (**STPIS**) provides a financial incentive to TNSPs to maintain and improve service performance. The STPIS aims to safeguard service quality for customers that may otherwise be affected as TNSPs seek out cost efficiencies. We propose to apply version 5 of the STPIS to Directlink for its next regulatory control period.³

Efficiency benefit sharing scheme

The operating expenditure efficiency benefit sharing scheme (**EBSS**) aims to provide a continuous incentive for TNSPs to pursue efficiency improvements in opex, and provide for a fair sharing of these between TNSPs and network users. Consumers benefit from improved efficiencies through lower regulated prices in the future.

We propose to apply the EBSS to Directlink in the next regulatory control period.⁴

² NER, clause 6A.10.1A(f).

³ The STPIS was last amended in September 2015 and corrected in October 2015. Available at <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/service-target-performance-incentive-scheme-version-5-september-2015-amendment>.

⁴ AER, *Efficiency benefit sharing scheme*, 29 November 2013. Available at <https://www.aer.gov.au/networks->

Capital expenditure sharing scheme

The capital expenditure sharing scheme (**CESS**) provides financial rewards for TNSPs whose capex becomes more efficient and financial penalties for those that become less efficient. Consumers benefit from improved efficiency through lower regulated prices in the future.

We propose to apply the CESS to Directlink in the next regulatory control period.⁵

Expenditure forecast assessment guidelines

The expenditure forecast assessment guideline is based on a nationally consistent reporting framework allowing us to compare the relative efficiencies of TNSPs and decide on efficient expenditure allowances. Our proposed approach is to apply the expenditure assessment guideline, including the information requirements, to Directlink in the next regulatory control period.⁶

The guideline outlines a suite of assessment/analytical tools and techniques to assist our review of Directlink's revenue proposal. We intend to apply the assessment techniques set out in the guideline relating to TNSPs.

Depreciation

As part of the roll forward methodology, when a TNSP's regulatory asset base (**RAB**) is updated from forecast capex to actual capex at the end of a regulatory period, it is also adjusted for depreciation. The depreciation we use to roll forward the RAB can be based on either actual capex incurred during the regulatory control period, or the capex allowance forecast at the start of the regulatory control period. The choice of depreciation approach is one part of the overall capex incentive framework. The incentive based regulatory framework provides benefits to consumers from improved efficiencies through lower regulated prices.

We propose to use forecast depreciation to establish the RAB for the regulatory control period commencing in 2025 for Directlink.

Small-scale incentive scheme

The rules provide that we may develop small-scale incentive schemes.⁷ At this stage, we have not developed any such schemes to encourage more efficient investment or operation of networks, as may be envisaged under this provision of the NER. For this reason, we do not propose to apply a small-scale incentive scheme to Directlink.

Further details of our proposed approach and reasons for each aspect of the F&A are set out below.

[pipelines/guidelines-schemes-models-reviews/efficiency-benefit-sharing-scheme-ebss-%E2%80%93-november-2013](https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/efficiency-benefit-sharing-scheme-ebss-%E2%80%93-november-2013).

⁵ Available at <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/expenditure-incentives-guideline-2013/final-decision>.

⁶ We are continuously improving the economic benchmarking techniques that are captured in our Guideline. This includes reviewing and refining our analysis of operating environment factors. See section 5 for more detail.

⁷ NER, clause 6A.7.5.

2 Service target performance incentive scheme

This attachment sets out our proposed approach and reasons on how we intend to apply the STPIS⁸ to Directlink in its regulatory control period.

The AER creates, administers and maintains the STPIS in accordance with the requirements of the NER. The purpose of the STPIS is to provide incentives to TNSPs to provide greater transmission network reliability when network users place greatest value on reliability, and improve and maintain the reliability of the elements of the transmission network most important to determining spot prices.⁹ In Directlink's case the STPIS can result in a maximum revenue increment or decrement of up to three per cent of its maximum allowable revenue (**MAR**) in a regulatory year.¹⁰

The STPIS works as part of the building block determination.¹¹ As part of the revenue determination, we make a decision on the application of the STPIS to a TNSP for the regulatory control period and the values associated with the applicable STPIS parameters.¹² In each regulatory year, the TNSP's MAR is adjusted based on its performance against the STPIS parameters in the previous calendar year.

The STPIS is part of incentive based regulation we use across all energy networks we regulate. The incentives provided by the CESS and EBSS for cost efficiencies are balanced with the incentive to improve service standards provided by the STPIS.

The STPIS must:

- provide incentives for each TNSP to:¹³
 - provide greater reliability of the transmission system that is owned, controlled or operated by it at all times when transmission network users place greatest value on the reliability of the transmission system
 - improve and maintain the reliability of those elements of the transmission system that are most important to determining spot prices
- result in a potential adjustment to the revenue TNSP may earn, from the provision of prescribed transmission services, in each regulatory year in respect of which the STPIS applies
- ensure that the maximum revenue increment or decrement as a result of the operation of the STPIS will fall within a range that is between 1 per cent and 5 per cent of the MAR for the relevant regulatory year

⁸ Version 5, available at <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/service-target-performance-incentive-scheme-version-5-september-2015-amendment>.

⁹ NER, clause 6A.7.4(b)(1).

¹⁰ NER, clause 6A.7.4(b)(3).

¹¹ NER, clause 6A.5.4(a)(5) and (b)(5).

¹² NER, clause 6A.4.2(5); 6A.14.1(1)(iii).

¹³ NER, clause 6A.7.4(b).

- take into account the regulatory obligations or requirements with which TNSPs must comply
- take into account any other incentives provided for in the rules that TNSPs have to minimise capital or operating expenditure; and
- take into account the age and ratings of the assets comprising the relevant transmission system.

In developing the STPIS we had regard to the requirements of the rules, as set out in our final decision on the STPIS published in October 2015.¹⁴ Under an incentive based regulation framework, TNSPs have an incentive to reduce costs. Cost reductions are beneficial to TNSP's and customers where service performance is maintained or improved. However, cost efficiencies achieved at the expense of service performance standards are not desirable. Version 5 of the STPIS seeks to ensure that increased financial efficiency does not result in deterioration of service performance for customers.

2.1 Proposed approach

We propose to apply version 5 of the STPIS to Directlink for the next regulatory control period.

However, we are concerned that application of the STPIS in its current form to Directlink may produce incentive targets that do not promote the National Electricity Objective (NEO).¹⁵ In particular, under the current STPIS, the MIC performance targets are set using the rolling average of three previous calendar years of actual performance data.¹⁶ However, it may not be appropriate to apply Directlink's recent performance data to set its performance targets for the next regulatory control period. This is discussed further in the reasons below. Accordingly, we may consider whether a review and amendment to the STPIS would be appropriate prior to the commencement of Directlink's next regulatory control period on 1 July 2020.

With respect to other elements of the STIPS:

- We propose to apply the service component of version 5 of the STPIS in the next regulatory control period (expected to be 2020–25). We will set out in Directlink's transmission determination the applicable parameter values for its regulatory control period. The sub-parameters specific to Directlink for the average circuit outage rate parameter will apply and the weightings for each parameter/sub-parameter specific to Directlink will apply.
- The network capability component of version 5 does not apply to Directlink.¹⁷
- The maximum allowed revenue that Directlink can earn in each regulatory year will be adjusted according to its performance against the values included in its transmission determination, as assessed by us in accordance with the scheme.

¹⁴ AER, *Final decision, TNSP service target performance incentive scheme*, version 5, October 2015.

¹⁵ NEL, section 7.

¹⁶ AER, *Electricity TNSP*, STPIS, version 5, October 2015, clause 4.2(c) and Appendix C.

¹⁷ AER, *STPIS*, version 5, October 2015, clause 2.2(d).

2.2 Reasons for proposed approach

In general, we consider the amendments to the STPIS as incorporated in version 5 improve the scheme's incentives for TNSPs to:

- provide greater reliability of the transmission system that is owned, controlled or operated by it at all times when network users place greatest value on the reliability of the transmission system; and
- improve and maintain the reliability of those elements of the transmission system that are most important to determining spot prices.

For these reasons, we consider version 5 of the STPIS should apply to Directlink.

Service component

The service component of the STPIS incentivises TNSPs to maintain and improve network availability and reliability by measuring performance against certain parameters. Under this component of the scheme, a TNSP can receive a revenue increment or decrement of up to one per cent of its MAR for the regulatory year.

A TNSP receives a financial incentive (reward) in proportion to the extent its annual performance exceeds its performance target (calculated as the s-factor). If the TNSP fails to meet its performance target, it incurs a financial penalty in proportion to the extent its annual performance does not meet the performance target.

Version 5 of the STPIS amended the service component parameters to focus more on unplanned outages, including a new parameter focusing on proper operation of equipment. Performance against these parameters can be used as a lead indicator of a deterioration of network reliability.¹⁸

The scheme contains definitions for each parameter. The definitions specify the applicable sub-parameters, unit of measure, source of performance data, the formula for measuring performance, definitions of relevant terms, inclusions (which specify particular equipment or events which are to be measured) and exclusions.

We will assess whether Directlink's proposed performance targets, caps, collars and weightings comply with the version 5 STPIS requirements for:¹⁹

- average circuit outage rate, with two sub-parameters:
- circuit outage rate – fault
- circuit outage rate – forced outage
- proper operation of equipment, with three sub-parameters:
- failure of protection system
- material failure of supervisory control and data acquisition (SCADA) system

¹⁸ AER, *Final decision, TNSP service target performance incentive scheme*, version 5, October 2015, p. 13.

¹⁹ AER, *Electricity TNSP, STPIS*, version 5, October 2015, clause 3.1.

- incorrect operational isolation of primary or secondary equipment.

We must accept Directlink's proposed parameter values if they comply with the requirements of the STPIS.²⁰ We may reject them if they are inconsistent with the objectives of the STPIS.²¹

Market impact component

The market impact component (**MIC**) provides financial rewards to TNSPs for improvements in their performance measured against a performance target. A TNSP may earn an additional revenue increment of up to 1.25 per cent of its MAR.²² Unlike the service component, the MIC has no financial penalty.

The MIC provides an incentive to TNSPs to minimise the impact of transmission outages that can affect the NEM spot price. It measures performance against the market impact parameter, which is number of dispatch intervals where an outage on the TNSP's network results in a network outage constraint with a marginal value greater than \$10/MWh.²³

In version 5 of the STPIS, the MIC the annual performance target is based on the average of the median five of the preceding seven calendar years of performance measure. Actual performance is measured annually and is the rolling average of the two most recent calendar years.

A rolling target and actual performance measure provides a tighter incentive to ensure outages on prescribed assets have limited impact on wholesale spot market outcomes. Further, a rolling target ensures the target is relevant to the TNSP's current maintenance and construction activities and limits the incentive for TNSPs to engage in strategic behaviour to influence the outcomes of the scheme.

Network capability component

The network capability component does not apply to Directlink, as per clause 2.2(d) of the STPIS.

²⁰ AER, *Electricity TNSP*, STPIS, version 5, October 2015, clause 3.2(a).

²¹ AER, *Electricity TNSP*, STPIS, version 5, October 2015, clause 3.2(m).

²² AER, *Electricity TNSP*, STPIS, version 5, October 2015, clause 3.3(a)

²³ AER, *Electricity TNSP*, STPIS, version 5, October 2015, Appendix C

3 Efficiency benefit sharing scheme

The EBSS is intended to provide a continuous incentive for transmission businesses to pursue efficiency improvements in opex, and provide for a fair sharing of these between businesses and consumers. Consumers benefit from improved efficiencies through lower network prices in future regulatory control periods.

We address our position on the application of the EBSS in relationship to our proposed opex forecasting approach and benchmarking below. We also explain the rationale underpinning the scheme.

This section sets out our preliminary position and reasons on how we intend to apply the EBSS to Directlink in the 2020–25 regulatory control period.

3.1 AER's preliminary position

We intend to apply the EBSS to Directlink in the 2020–25 regulatory control period if we are satisfied the scheme will fairly share efficiency gains and losses between the business and consumers.²⁴ This will occur only if the opex forecast for the following period is based on the businesses revealed costs. Our transmission determination for Directlink for the 2020–25 regulatory control period will specify if and how we will apply the EBSS.²⁵

3.2 AER's assessment approach

The EBSS must provide for a fair sharing of opex efficiency gains and efficiency losses between a network service provider and network users.²⁶ We must also have regard to the following factors in developing and implementing the EBSS:²⁷

- 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 service providers with a continuous incentive to reduce opex
- the desirability of both rewarding service providers for efficiency gains and penalising service providers 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.

3.3 Reasons for AER's preliminary position

The EBSS applies to Directlink in the 2015–20 regulatory control period.²⁸

²⁴ NER, cl. 6.5.8(a).

²⁵ AER, *Efficiency benefit sharing scheme*, 29 November 2013.

²⁶ NER, cl. 6.5.8(a).

²⁷ NER, cl. 6.5.8(c).

²⁸ AER, *Efficiency benefit sharing scheme*, 29 November 2013.

We will decide if and how we will apply the EBSS to Directlink in the 2020–25 regulatory control period in our determination. The decision to apply the EBSS will depend on whether we expect to use the business' revealed costs in the 2020–25 regulatory control period to forecast opex in the following period.

Why we would apply the EBSS

We will only apply the EBSS in the 2020–25 regulatory control period if we expect we will use a revealed cost forecasting approach to forecast opex for the 2025–30 regulatory control period.

The EBSS is intrinsically linked to our revealed cost forecasting approach. This approach relies on identifying an efficient opex amount in the base year (the 'revealed costs' of the transmission business), which we use to develop a total opex forecast. When a business makes an incremental efficiency gain, it receives a reward through the EBSS, and consumers benefit through a lower revealed cost forecast for the subsequent period. This is how efficiency improvements are shared between consumers and the business.

Under a revealed cost approach without an EBSS, a transmission business has an incentive to spend more opex in the expected base year. Also, a transmission business has less incentive to reduce opex towards the end of the regulatory control period, where the benefit of any efficiency gain is retained for less time.

If we use a revealed cost forecasting approach we apply the EBSS because:

- it reduces the incentive for a transmission business to inflate opex in the expected base year in order to gain a higher opex forecast for the next regulatory control period
- it provides a continuous incentive for a transmission business to pursue efficiency improvements across the regulatory control period. This is because the EBSS allows a business to retain efficiency gains for a total of six years, regardless of the year in which it was made.

In implementing the EBSS we also consider any incentives transmission business may have to capitalise expenditure.²⁹ Where opex incentives are balanced with capex incentives, a transmission business does not have an incentive to favour opex over capex, or vice-versa. If the CESS and EBSS are both applied, these incentives will be relatively balanced. We discuss the CESS further in section 3.3.

Why we would not apply the EBSS

We will not apply the EBSS if it is likely we will *not* use a revealed cost forecasting approach to forecast opex for the 2025–30 regulatory control period.

If we apply the EBSS but do not forecast opex using revealed costs, a transmission business could in theory receive an EBSS reward for efficiency gains (at a cost to consumers), but consumers would not benefit through a lower revealed cost forecast. If the transmission business expects this, it has an incentive to increase its EBSS carryover by underspending

²⁹ NER, cl. 6.5.8(c)(4).

in its base year, knowing the underspend will not reduce its opex forecast.³⁰ Consumers would pay the EBSS reward but not receive a share of the underspend and would be worse off. This outcome is contrary to the NER which requires that the EBSS must provide for a fair sharing of efficiency gains and losses between a transmission business and consumers.³¹

If a transmission business' revealed costs in the 2015–20 regulatory control period are materially higher than the opex incurred by a benchmark efficient transmission business, we will be unlikely to use revealed costs to forecast opex for the 2020–25 regulatory control period. In which case, we will be unlikely to apply the EBSS.

Example 3.1 How the EBSS operates

- Assume that in the first regulatory period, a network service provider's forecast opex is \$100 million per annum (p.a.).
- Assume that during this period the service provider delivers opex equal to the forecast for the first three years. Then, in the fourth year of the regulatory period, the service provider implements a more efficient business practice for maintaining its assets. As a result, the service provider will be able to deliver opex at \$95 million p.a. for the foreseeable future.
- This efficiency improvement affects regulated revenues in two ways:
 - Through forecast opex. If we use the penultimate year of the regulatory period to forecast opex in the second regulatory period, the new forecast will be \$95 million p.a. If the efficiency improvement is permanent, all else being equal, forecast opex will also be expected to be \$95 million p.a. in future regulatory periods.
 - Through EBSS carryover amounts. The service provider receives additional carryover amounts so that it receives exactly six years of benefits from an efficiency improvement. Because the service provider has made an efficiency improvement of \$5 million p.a. in Year 4, to ensure it receives exactly six years of benefits, it will receive annual EBSS carryover amounts of \$5 million in the first four years (Years 6 to 9) of the second regulatory period.
- As a result of these effects, the service provider will benefit from the efficiency improvement in Years 4 to 9. This is because the annual amount the service provider receives through the forecast opex and EBSS building blocks (\$100 million) is more than what it pays for opex (\$95 million) in each of these years.
- Consumers benefit from Year 10 onwards after the EBSS carryover period has

30 In our explanatory statement to the EBSS, we discuss why we should exclude the expenditure categories not forecast using a single year revealed cost forecasting method from the EBSS to prevent network users being worse off. AER, *Explanatory statement - efficiency benefit sharing scheme*, November 2013, pp. 18-19.

31 NER, cl'6.5.8(a).

(Example 2.1 continued)

Table 2 Example of how the EBSS operates

Year	Regulatory period 1					Regulatory period 2					Future
	1	2	3	4	5	6	7	8	9	10	
Forecast (Ft)	100	100	100	100	100	95	95	95	95	95	95 p.a.
Actual (At)	100	100	100	95	95	95	95	95	95	95	95 p.a.
Underspend (Ft – At = Ut)	0	0	0	5	5	0	0	0	0	0	0 p.a.
Incremental efficiency gain (It = Ut – Ut–1)	0	0	0	5	0	0*	0	0	0	0	0 p.a.
Carryover (I1)		0	0	0	0	0					
Carryover (I2)			0	0	0	0	0				
Carryover (I3)				0	0	0	0	0			
Carryover (I4)					5	5	5	5	5		
Carryover (I5)						0	0	0	0	0	
Carryover amount (Ct)						5	5	5	5	0	0 p.a.
Benefits to NSP (Ft – At +Ct)	0	0	0	5	5	5	5	5	5	0	0 p.a.
Benefits to consumers (F1 – (Ft +Ct))	0	0	0	0	0	0	0	0	0	5	5 p.a.
Discounted benefits to NSP**	0	0	0	5	4.7	4.5	4.2	4.0	3.7	0	0
Discounted benefits to consumers**	0	0	0	0	0	0	0	0	0	3.5	58.8***

Notes: * At the time of forecasting opex for the second regulatory period we don't know actual opex for year 5. Consequently this is not reflected in forecast opex for the second period. That means an underspend in year 6 will reflect any efficiency gains made in both year 5 and year 6. To ensure the carryover rewards for year 6 only reflect incremental efficiency gains for that year we subtract the incremental efficiency gain in year 5 from the total underspend. In the example above, I6 = U6 – (U5 – U4).

(Example 2.1 continued)

** Assumes a real discount rate of 6 per cent.

*** As a result of the efficiency improvement, forecast opex is \$5 million p.a. lower in nominal terms. The estimate of \$58.7m is the net present value of \$5 million p.a. delivered to consumers annually from year 11 onwards.

Table 3 sums the discounted benefits to NSPs and consumers from the bottom two rows of Table 2. As illustrated below, the benefits of the efficiency improvement are shared approximately 30:70 in perpetuity between the service provider and consumers.

Table 3 Sharing of efficiency gains—Year 4 forecasting approach, with EBSS

	NPV of benefits of efficiency improvement ¹	Percentage of total benefits
Benefits to service provider	\$26.1 million	30 per cent
Benefits to consumers	\$62.3 million	70 per cent
Total	\$88.3 million	100 per cent

4 Capital expenditure sharing scheme

The capital expenditure sharing scheme (CESS) provides financial rewards for TNSPs whose capex becomes more efficient and financial penalties for those that become less efficient. Consumers benefit from improved efficiency through lower regulated prices in the future. This attachment sets out our proposed approach and reasons for how we intend to apply the CESS to Directlink in its regulatory control period.

The CESS approximates efficiency gains and efficiency losses by calculating the difference between forecast and actual capex. It shares these gains or losses between TNSPs and network users.

The CESS works as follows:

- We calculate the cumulative underspend or overspend for the current regulatory control period in net present value terms.
- We apply the sharing ratio of 30 per cent to the cumulative underspend or overspend to work out what the TNSP's share of the underspend or overspend should be.
- We calculate the CESS payments taking into account the financing benefit or cost to the TNSP of the underspends or overspends.³² We can also make further adjustments to account for deferral of capex and ex post exclusions of capex from the RAB.
- The CESS payments will be added or subtracted to the TNSP's regulated revenue as a separate building block in the next regulatory control period.

Under the CESS a TNSP retains 30 per cent of an underspend or overspend, while consumers retain 70 per cent of the underspend or overspend. This means that for a one dollar saving in capex the TNSP keeps 30 cents of the benefit while consumers keep 70 cents of the benefit.

4.1 Proposed approach

We propose to apply the CESS as set out in our capex incentives guideline to Directlink in its next regulatory control period.³³

In deciding whether to apply a CESS to a TNSP, and the nature and details of any CESS to apply to a TNSP, we must:³⁴

- make that decision in a manner that contributes to the capex incentive objective³⁵

³² We calculate benefits as the benefits to the TNSP of financing the underspend since the amount of the underspend can be put to some other income generating use during the period. Losses are similarly calculated as the financing cost to the TNSP of the overspend.

³³ AER, Capital expenditure incentive guideline for electricity network service providers, pp. 5–9.

³⁴ NER, clause 6A.6.5A.

³⁵ NER, clause 6A.5A(a); the capex criteria are set out in clause 6A.6.7(c)(1)-(3) of the NER.

- consider the CESS principles,³⁶ capex objectives,³⁷ other incentive schemes, and where relevant the opex objectives, as they apply to the particular TNSP, and the circumstances of the TNSP.

Broadly, the capex incentive objective is to ensure that only capex that meets the capex criteria enters the RAB used to set prices. Therefore, consumers only fund capex that is efficient and prudent.

4.2 Reasons for proposed approach

We propose to continue applying the CESS to Directlink in this regulatory control period. We consider this will contribute to the capex incentive objective.³⁸

In developing the CESS we took into account the capex incentive objective, capex criteria, capex objectives, and the CESS principles. We also developed the CESS to work alongside other incentive schemes that apply to TNSPs including the EBSS and STPIS.

For capex, the sharing of underspends and overspends happens at the end of each regulatory period when we update a TNSP's RAB to include new capex. If a TNSP spends less than its approved forecast during a period, it will benefit within that period. Consumers benefit at the end of that period when the RAB is updated to include less capex compared to if the TNSP had spent the full amount of the capex forecast. This leads to lower prices in the future.

Without a CESS the incentive for a TNSP to spend less than its forecast capex declines throughout the period.³⁹ Because of this a TNSP may choose to spend capex earlier, or on capex when it may otherwise have spent on opex, or less on capex at the expense of service quality—even if it may not be efficient to do so.

With the CESS a TNSP faces the same reward and penalty in each year of a regulatory control period for capex underspends or overspends. The CESS will provide TNSPs with an ex ante incentive to spend only efficient capex. TNSPs that make efficiency gains will be rewarded through the CESS. Conversely, TNSPs that make efficiency losses will be penalised through the CESS. In this way, TNSPs will be more likely to incur only efficient capex when subject to a CESS, so any capex included in the RAB is more likely to reflect the capex criteria. In particular, if a TNSP is subject to the CESS, its capex is more likely to be efficient and to reflect the costs of a prudent TNSP.

When the CESS, EBSS and STPIS apply to TNSPs the incentives for improvements in opex, capex and service outcomes are more balanced. This encourages businesses to make efficient decisions on when and what type of expenditure to incur, and to efficiently trade off expenditure reductions with service quality and reliability.

³⁶ NER, clause 6A.6.5A(c).

³⁷ NER, clause 6A.6.7(a).

³⁸ NER, clause 6A.5A(a); the capex criteria are set out in clause 6A.6.7(c) of the NER.

³⁹ As the end of the regulatory period approaches, the time available for the TNSP to retain any savings gets shorter. So the earlier a TNSP incurs an underspend in the regulatory period, the greater its reward will be.

5 Expenditure forecast assessment guideline

This chapter sets out our intention to apply our expenditure forecast assessment guideline (the EFA guideline)⁴⁰ including the information requirements applicable to Directlink for the 2020–25 regulatory control period. The EFA guideline sets out our expenditure forecast assessment approach developed and consulted upon during the Better Regulation program. It outlines the assessment techniques we will use to assess a transmission business' proposed expenditure forecasts, and the information we require from the business.

The EFA guideline uses a nationally consistent reporting framework that allows us to compare the relative efficiencies of transmission businesses and decide on efficient expenditure forecasts. The NER requires Directlink to advise us by 31 October 2017 of the methodology they propose to use to prepare their forecasts.⁴¹ In the final F&A we must advise whether we will deviate from the EFA guideline.⁴² This will provide clarity on how we will apply the EFA guideline and the information Directlink should include in their regulatory proposal. This contributes to an open and transparent process and makes our assessment of expenditure forecasts more predictable. The EFA guideline contains a suite of assessment/analytical tools and techniques to assist our review of the expenditure forecasts that transmission businesses include in their regulatory proposals. We intend to have regard to the assessment tools set out in the guideline. The tool kit includes:

- models for assessing proposed replacement and augmentation capex
- benchmarking (including broad economic techniques and more specific analysis of expenditure categories)
- methodology, governance and policy reviews
- predictive modelling and trend analysis
- cost benefit analysis and detailed project reviews.⁴³

We exercise judgement to determine the extent to which we use a particular technique to assess a regulatory proposal. We use the techniques we consider appropriate depending on the specific circumstances of the determination. The guideline is flexible and recognises that we may employ a range of different estimating techniques to assess an expenditure forecast.

Given the smaller scale of Directlink's assets and nature of its network operations we do not intend to apply standardised benchmarking analysis (including top down economic benchmarking or driver-based benchmarks) or predictive modelling in assessing its capex and opex forecasts.

⁴⁰ We were required to develop the EFA guideline under clauses 6.4.5 and 11.53.4 of the NER. We published the guideline on 29 November 2013. It can be located at www.aer.gov.au/node/18864.

⁴¹ NER, cl. 6.8.1A(b)(1).

⁴² NER, cl. 6.8.1(b)(2)(viii).

⁴³ AER, *Explanatory statement: Expenditure assessment guideline for electricity transmission and distribution*, 29 November 2013.

For opex. Directlink has suggested that while the expenditure forecast assessment guideline is applicable, the AER express a preference that the 'base-step-trend' approach may not be as suitable for Directlink as it may be for other networks.⁴⁴ Our proposed approach for opex will involve consideration of revealed costs and the 'base-step-trend' approach. As set out in our expenditure forecast assessment guideline, this is our preferred approach to assessing opex, however, when appropriate we may assess opex using other forecasting techniques.⁴⁵

For capex, our proposed approach will involve detailed reviews of Directlink's asset management practices and specific projects. Consequently, the information we will seek from Directlink through the regulatory information notice will not include the same standardised data on expenditures and related benchmarking measures that are set out in the guideline.

⁴⁴ Directlink letter, *Re: Framework and Approach Paper for Directlink*, 27 October 2017, p 1-2.

⁴⁵ AER, *Expenditure Forecast Assessment Guideline for Electricity Transmission*, November 2013.

6 Depreciation

As part of the process of rolling forward a TNSP's RAB to the start of the next regulatory control period, we update the RAB for actual capex incurred during the current regulatory control period and also adjust for depreciation. This attachment sets out our proposed approach to calculating depreciation when the RAB is rolled forward to the commencement of the 2025–2030 regulatory control period.

The depreciation we use to roll forward the RAB can be based on either:

- Actual capex incurred during the regulatory control period (actual depreciation). We roll forward the RAB based on actual capex less the depreciation on the actual capex incurred by the TNSP; or
- The capex allowance forecast at the start of the regulatory control period (forecast depreciation). We roll forward the RAB based on actual capex less the depreciation on the forecast capex approved for the regulatory control period.

The choice of depreciation approach is one part of the overall capex incentive framework.

Consumers benefit from improved efficiencies through lower regulated prices. Where a CESS is applied, using forecast depreciation maintains the incentives for TNSPs to pursue capex efficiencies, whereas using actual depreciation would increase these incentives. There is more information on depreciation as part of the overall capex incentive framework in our capex incentives guideline.⁴⁶ In summary:

- If there is a capex overspend, actual depreciation will be higher than forecast depreciation. This means that the RAB will increase by a lesser amount than if forecast depreciation were used. So, the TNSP will earn less revenue into the future (i.e. it will bear more of the cost of the overspend into the future) than if forecast depreciation had been used to roll forward the RAB.
- If there is a capex underspend, actual depreciation will be lower than forecast depreciation. This means that the RAB will increase by a greater amount than if forecast depreciation were used. Hence, the TNSP will earn greater revenue into the future (i.e. it will retain more of the benefit of an underspend into the future) than if forecast depreciation had been used to roll forward the RAB.

The incentive from using actual depreciation to roll forward the RAB also varies with the life of the asset. Using actual depreciation will provide a stronger incentive for the TNSP to underspend capex on shorter lived assets compared to longer lived assets as this will lead to a relatively larger increase in the RAB. Use of forecast depreciation, on the other hand, leads to the same incentive for capex regardless of asset lives. This is because using forecast depreciation does not affect the TNSP's incentive on capex as the TNSP does not lose the full cost of any overspend and is not able to keep all the benefits of any underspend. To this end, using forecast depreciation means the capex incentive is focussed on the return on capital.

⁴⁶ AER, *Capital expenditure incentive guideline for electricity network service providers*, November 2013, pp. 10–11.

6.1 Proposed approach

We propose to use the forecast depreciation approach to establish the RAB at the commencement of the 2025–2030 regulatory control period for Directlink. We consider this approach will provide sufficient incentives for the Directlink to achieve capex efficiency gains over the next regulatory control period.

In the F&A paper, we must set out our proposed approach as to whether we will use actual or forecast depreciation to establish a TNSP's RAB at the commencement of the following regulatory control period.⁴⁷

We are required to set out in our capex incentives guideline our process for determining which form of depreciation we propose to use in the RAB roll forward process.⁴⁸ Our decision on whether to use actual or forecast depreciation must be consistent with the capex incentive objective. We must have regard to:⁴⁹

- any other incentives the service provider has to undertake efficient capex
- substitution possibilities between assets with different lives
- the extent of overspending and inefficient overspending relative to the allowed forecast
- the capex incentive guideline
- the capital expenditure factors.

6.2 Reasons for proposed approach

Consistent with our capex incentives guideline, we propose to use the forecast depreciation approach to establish the RAB for Directlink at the commencement of the 2025–2030 regulatory control period.

We had regard to the relevant factors in the rules in developing the approach to choosing depreciation set out in our capex incentives guideline.⁵⁰

Our approach is to apply forecast depreciation except where:

- there is no CESS in place and therefore the power of the capex incentive may need to be strengthened, or
- a TNSP's past capex performance demonstrates evidence of persistent overspending or inefficiency, thus requiring a higher powered incentive.

In making our decision on whether to use actual depreciation in either of these circumstances we will consider:

- the substitutability between capex and opex and the balance of incentives between these
- the balance of incentives with service outcomes

⁴⁷ NER, clause S6A.2.2B.

⁴⁸ NER, clause 6A.5A(b)(3).

⁴⁹ NER, clause S6A.2.2B.

⁵⁰ AER, *Capital expenditure incentive guideline for electricity network service providers*, November 2013, pp. 12–13.

- the substitutability of assets of different asset lives.

We have chosen forecast depreciation as our proposed approach because, in combination with the CESS, it will provide a 30 per cent reward for capex underspends and 30 per cent penalty for capex overspends, which is consistent for all asset classes. In developing our capex incentives guideline, we considered this to be a sufficient incentive for a TNSP to achieve efficiency gains over the regulatory control period in most circumstances.

The opening RAB at the commencement of the 2020–25 regulatory control period will be established using forecast depreciation, as stated in our previous determination that applies to Directlink for the 2015–20 regulatory control period. The use of forecast depreciation to establish the opening RAB for the commencement of the 2025–30 regulatory control period therefore maintains the current approach. Directlink is currently subject to a CESS and we propose to continue to apply the CESS in the 2020–25 regulatory control period. We discuss this in section **Error! Reference source not found.**

For Directlink, at this stage, we consider the incentive provided by the application of the CESS in combination with the use of forecast depreciation and our other ex post capex measures should be sufficient to achieve the capex incentive objective.⁵¹

⁵¹ Our ex post capex measures are set out in the capex incentives guideline, AER capex incentives guideline, pp. 13–19; the guideline also sets out how all our capex incentive measures are consistent with the capex incentive objective, AER capex incentives guideline, pp. 20–21.