Framework and approach for Murraylink

For regulatory control period commencing 1 July 2018

July 2016

AUSTRALIAN ENERGY REGULATOR

Inquiries about this publication should be addressed to:

Australian Energy Regulator
GPO Box 520
Melbourne Vic 3001

Tel: 1300 585 165
Email: AERInquiry@aer.gov.au
AER Reference: 58710

Contents

Shortened forms

Shortened Form	Extended Form
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
CESS	capital expenditure sharing scheme
capex	capital expenditure
EBSS	efficiency benefit sharing scheme
F&A	Framework and approach
MAR	maximum allowable revenue
MIC	market impact component
NCC	network capability component
NCIPAP	network capability incentive parameter action plan
NEM	National Electricity Market
NEO	National Electricity Objective
NER or the rules	National Electricity Rules
opex	operating expenditure
RAB	regulatory asset base
STPIS	service target performance incentive scheme
TNSP	transmission network service provider

Introduction

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. Murraylink is an interconnector that provides a path for the flow of electricity to the limit of its 220MW capacity, in both directions, between the South Australian and Victorian transmission networks. We regulate the revenues that Murraylink can recover from customers.

This framework and approach (F&A) paper is the first step in the process to determine the revenue that Murraylink can recover from customers over the five year period from 2018 to 2023. 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 Murraylink 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.

Framework and approach for Murraylink

Murraylink's current five year regulatory control period ends on 30 June 2018. Our F&A paper for the next regulatory control period must be published by the end of July 2016.[1]

In December 2015 Murraylink wrote to the AER providing suggestions for its first F&A. In March 2016 we published a draft F&A setting out our proposed approach for the 2018−23 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 (expenditure assessment guideline), and
- whether depreciation will be based on forecast or actual capital expenditure in updating the regulatory asset base.

We received no submissions on the draft F&A paper.

Table 1 summarises **indicative dates** for the Murraylink transmission determination process.

1 NER, cl. 6A.10.1A(a)(i) and (e).

Table 1 Murraylink transmission determination process

Step	Date
AER to publish F&A paper for Murraylink	By 31 July 2016
Murraylink to submit revenue proposal	31 January 2017
AER to publish issues paper on Murraylink revenue proposal	March 2017**
AER to hold public forum on issues paper	March 2017**
Submissions on revenue proposal/issues paper close	May 2017**
AER to publish draft transmission determination	September 2017*
AER to hold predetermination conference	October 2017*
Murraylink submits revised revenue proposal	December 2017*
Submissions on draft determination close	January 2017*
AER to publish final transmission determination	30 April 2018

Source: NER, Chapter 6A, Part E

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

** The dates provided for submissions/cross submissions and forums are based on the AER receiving a sufficiently compliant proposal. These dates may alter if we receive a non-compliant proposal.

Part A: Overview

This F&A covers how we propose to apply a range of incentive schemes and guidelines to Murraylink along with our proposed approach to calculating depreciation. The positions we set out in our F&A are not binding on us or Murraylink.[2] This means that during the determination process it is open to us to change our position, and for Murraylink to propose a different position, on matters set out in the F&A. If our position changes from that set out in the F&A, we will provide clear reasons.

The purpose of the F&A is to provide Murraylink and stakeholders with an indication of our likely position on matters that Murraylink is required to address in its revenue proposal. The nature of the F&A is such that it will also provide a degree of regulatory predictability.

Incentive schemes are a component of incentive-based regulation and complement our approach to assessing efficient costs. 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
- incentivise TNSPs to consider economically efficient alternatives to augmenting their networks.

Part B of this F&A sets out our proposed approach to the application of incentive schemes for Murraylink over the 2018–23 regulatory control period. The following schemes will apply:

- STPIS
- EBSS
- CESS.

Part B also sets out our proposed approach to the application of our expenditure assessment guideline and our approach to calculating depreciation. We will apply the expenditure assessment guideline[3] including the information requirements applicable to Murraylink at the commencement of the 2018–23 regulatory control period. We also propose to use the forecast depreciation approach to establish Murraylink's RAB at the commencement of the 2023–28 regulatory control period.

2 NER, cl. 6A.10.1A(f).

3 The first version of the guideline was published on 29 November 2013. It can be located at www.aer.gov.au/node/18864.

We do not propose to apply a small–scale incentive scheme to Murraylink for the 2018–23 regulatory control period. Although the rules provide that we may develop small-scale incentive schemes to encourage more efficient investment or operation of networks,[4] at this stage, we have not developed any such scheme. Should our position change, we will consult broadly with stakeholders on the development and application of any small-scale incentive scheme.

4 NER, cl. 6A.7.5.

Part B: Attachments

1 Service target performance incentive scheme

This attachment sets out our proposed approach and reasons for our intended application of the STPIS to Murraylink in its upcoming regulatory control period.

We create, administer and maintain the STPIS in accordance with the requirements of the rules.[5] The STPIS provides incentives for each TNSP 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.[6]

The STPIS consists of three components:

- a service component, which has four main parameters and various sub-parameters which act as key indicators of network reliability
- a market impact component (MIC), which encourages TNSPs to minimise the impact of network outages on the dispatch of generation
- a network capability component, which encourages TNSPs to undertake low cost projects to promote efficient levels of network capability from existing assets when most needed, while maintaining adequate levels of reliability.

Each year, the TNSP's maximum allowed revenue (MAR) is adjusted based on its performance against the STPIS parameters in the previous calendar year. The STPIS can result in a maximum revenue increment or decrement between one and five per cent of the annual MAR.[7]

1.1 Proposed approach

The latest version of the STPIS in existence at the commencement of the 2018–23 regulatory control period will apply to Murraylink. This is expected to be STPIS version 5 (October 2015). Two of the three components (service and market impact component) will apply. The network capability component does not apply to Murraylink.[8]

The MAR that Murraylink 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 the annual compliance review process.[9]

In its revenue proposal, Murraylink must:

- submit proposed values for the service component parameters.[10]

5 NER, cl 6A.7.4(a)
6 NER, cl. 6A.7.4(b)(1).
7 NER, cl. 6A.7.4(b)(3).
8 STPIS, version 4, cl 2.2(d)
9 STPIS, version 5, section 6
10 STPIS, version 5, section 3.2

- submit data for its market impact component in accordance with Appendix C for the preceding seven regulatory years.[11] It must submit a proposed value for a performance target, unplanned outage event limit and dollar per dispatch interval incentive.[12]

We will accept Murraylink's proposed parameter values for the service and market impact components if the proposed values comply with STPIS version 5 clauses 3.2 and 4.2.[13]

1.2 Reasons for proposed approach

The reasons for our proposed approach to the application of each of the STPIS components are set out below.

Service component

The service component will apply to Murraylink to provide an incentive for the business to maintain or improve network availability and reliability. In this component, Murraylink can receive a revenue increment or decrement of up to 1.25 per cent of its MAR for the regulatory year.

There are four parameters in the service components, however only two parameters will apply to Murraylink: 'unplanned outage circuit event rate' and 'proper operation of equipment'. Appendix A and Appendix B of the STPIS define the service component parameters for Murraylink.[14] The standard definition for the 'Unplanned outage circuit event rate' parameter is modified as set out in Appendix B. The standard definition of 'Proper operation of equipment parameter' applies (Appendix A). The two parameters: 'Loss of supply event frequency' and 'Average outage duration' will not apply to Murraylink.

We will assess whether Murraylink's proposed performance targets, caps, collars and weightings comply with the parameter definitions, values and weightings set out in Section 3 [Table 3.2], Appendix A, B and E of the STPIS.

Our method of assessment of the parameter values is set out in section 3.2 of the scheme. We may reject the proposed values where we are of the opinion that they are inconsistent with the objectives listed in clause 1.4 of the STPIS.[15]

Market impact component

The market impact component will be applied to Murraylink to provide an incentive for the business to minimise the impact of its transmission outages that can affect NEM market outcomes.

In this component, Murraylink is subject to a symmetrical financial incentive which falls between a range of minus one percent (penalty) and plus one per cent (reward) of its maximum allowed revenue based on actual performance.[16]

11 STPIS, version 5, section 4.2(a)
12 STPIS, version 5, section 4.2(b)
13 STPIS, version 5, October 2015
14 STPIS, version 5, Appendix A and B
15 STPIS, version 5, cl 3.2(l)

As part of our determination process, we will assess Murraylink's proposed parameter values in accordance with version 5 of the STPIS.[17]

Network capability component

The network capability component (NCC) does not apply to Murraylink, as per clause 2.2(d) of the STPIS version 5.

16 STPIS, version 5, cl 4.3

17 Specifically, clause 4.2(f)(1)-(5) applies to Murraylink because it is commencing STPIS version 5 during the forthcoming regulatory control period and therefore, Appendix F–Example 1 is relevant.

2 Efficiency benefit sharing scheme

The 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.

This attachment sets out our proposed approach and reasons on how we intend to apply the EBSS to Murraylink.

The EBSS provides for a fair sharing between TNSPs and network users of opex efficiency gains and efficiency losses.[18] We also have regard to the following factors in developing and implementing the EBSS:[19]

- 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.

2.1 Proposed approach

The latest version of the EBSS in existence at the commencement of the 2018–23 regulatory control period will apply to Murraylink. This is expected to be EBSS version 2 (November 2013). In summary, this will include:

- the formulae for calculating efficiency gains and losses
- our approach to adjustments to forecast or actual opex when calculating carryover amounts
- our approach to determining the carryover period.

2.2 Reasons for proposed approach

We revised the EBSS in 2013 and merged the distribution and transmission schemes. Changes to the EBSS relate to the criteria for adjustments and exclusions under the scheme.[20] In 2013, we also amended the scheme to provide flexibility to account for any adjustments made to base year opex to remove the impacts of one-off factors. The EBSS

18 NER, cl. 6A.6.5(a).

19 NER, cl. 6A.6.5(b).

20 We will no longer allow for specific exclusions such as uncontrollable opex or for changes in opex due to unexpected increases or decreases in network growth. We may also exclude categories of opex not forecast using a single year revealed cost approach from the scheme on an ex post basis if doing so better achieves the requirements of the rules.

also clarifies how we will determine the carryover period. These revisions affect how we will calculate carryover amounts for future regulatory control periods.[21]

In developing the EBSS we had regard to the requirements under the rules. Our reasoning and considerations are set out in the scheme and accompanying explanatory statement. This reasoning extends to the factors we must have regard to in implementing the scheme.

The EBSS must provide for a fair sharing of efficiency gains and losses.[22] Under the scheme, TNSPs and consumers receive a benefit where a TNSP reduces its costs during a regulatory control period and both bear a share of any increase in costs.

Under the EBSS, positive and negative carryovers reward and penalise TNSPs for efficiency gains and losses, respectively.[23] The EBSS provides a continuous incentive for TNSPs to achieve opex efficiencies throughout the regulatory control period. This is because the TNSP receives carryover payments so it retains any efficiency gains or losses it makes within the regulatory period for the length of the carryover period. This is regardless of the year in which it makes the gain or loss.[24]

This continuous incentive to improve efficiency encourages efficient and timely opex throughout the regulatory control period, and reduces the incentive for a TNSP to inflate opex in the expected base year. This provides an incentive for TNSPs to reveal their efficient opex which, in turn, allows us to better determine efficient opex forecasts for future regulatory control periods.

The EBSS also leads to a fair sharing of efficiency gains and losses between TNSPs and consumers. For instance the combined effect of our forecasting approach and the EBSS is that opex efficiency gains or losses are shared approximately 30:70 between TNSPs and consumers. This means for a one dollar efficiency saving in opex the TNSP keeps 30 cents of the benefit while consumers keep 70 cents of the benefit.

Example 1 shows how the EBSS operates. It illustrates how the benefits of a permanent efficiency improvement are shared approximately 30:70 between a network service provider and consumers.

21 AER, *Efficiency benefit sharing scheme*, 29 November 2013.
22 NER, cl. 6A.6.5(a).
23 NER, cl. 6A.6.5(b) and 6A.6.5(a).
24 NER, cl. 6A.6.5(b)(1).

Example 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:

1. 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.

2. 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 expired. This is because what consumers pay through the forecast opex and EBSS building blocks ($95 million) is lower from Year 10 onwards.

Table 2 provides a more detailed illustration of how the benefits are shared between service providers and consumers over time.

(Example 1 continued)

Table 2 Example of how the EBSS operates

	Reg. period 1					Reg. period 2					Future
Year	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).

** 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

In implementing the EBSS we must also have regard to any incentives TNSPs may have to capitalise expenditure.[25] Where opex incentives are balanced with capex incentives, a TNSP does not have an incentive to favour opex over capex, or vice-versa. The CESS is a symmetric capex scheme with a 30 per cent incentive power. This is consistent with the incentive power for opex provided by the EBSS when used together with our revealed cost opex forecasting approach. During the regulatory control period when the CESS and EBSS are applied, incentives will be relatively balanced, and TNSPs should not have an incentive to favour opex over capex or vice versa. The CESS is discussed further in attachment 3.

We must also consider the possible effects of implementing the EBSS on incentives for non-network alternatives:[26]

- Expenditure on non-network alternatives typically takes the form of opex rather than capex. Successful non-network alternatives should result in the TNSP spending less on capex than it otherwise would have.
- We propose applying both the CESS and EBSS in future regulatory control periods. As a result a TNSP has an incentive to implement a non-network alternative if the increase in opex is less than the corresponding decrease in capex. In this way, the TNSP will receive a net reward for implementing the non-network alternative.[27] This is because the rewards and penalties under the EBSS and CESS are balanced and symmetric. In the past where the EBSS operated without a CESS, we excluded expenditure on non-network alternatives when calculating rewards and penalties under the scheme. This

25 NER, cl. 6A.6.5(b)(3).

26 NER, cl. 6A.6.5(b)(4).

27 When the TNSP spends more on opex it receives a 30 per cent penalty under the EBSS. However, when there is a corresponding decrease in capex the TNSP receives a 30 per cent reward under the CESS. So where the decrease in capex is larger than the increase in opex the TNSP receives a larger reward than penalty, a net reward.

was because TNSPs may otherwise receive a penalty for increasing opex without a corresponding reward for decreasing capex.[28]

[28] Without a CESS the reward for capex declines over the regulatory period. If an increase in opex corresponded with a decrease in capex, the off-setting benefit of the decrease in capex depends on the year in which it occurs.

3 Capital expenditure sharing scheme

The 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 network charges in the future. This attachment sets out our proposed approach and reasons for how we intend to apply the CESS to Murraylink in future regulatory control periods.

The CESS approximates the 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 any underspend or overspend amount should be.
- We calculate the CESS payments taking into account the financing benefit or cost to the TNSP of any underspend or overspend amount.[29]
- 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 the benefit or cost of an underspend or overspend amount, while consumers retain 70 per cent of the benefit or cost of an underspend or overspend amount. 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. Conversely, in the case of any overspend, the TNSP pays for 30 cents of the cost while consumers bear 70 cents of the cost.

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:[30]

- make that decision in a manner that contributes to the capex incentive objective set out in the rules[31]

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

30 NER, cl. 6A.6.5A.

31 NER, cl. 6A.5A(a); the capex criteria are set out in cl. 6A.6.7(c)(1)−(3) of the NER.

- consider the CESS principles,[32] capex objectives,[33] 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.

3.1 Proposed approach

The latest version of the CESS in existence at the commencement of the 2018–23 regulatory control period will apply to Murraylink. This is expected to be CESS version 1 (November 2013) as set out in our capex incentive guideline.

3.2 Reasons for proposed approach

We propose to apply the CESS to Murraylink as we consider this will contribute to the capex incentive objective.

As part of our Better Regulation program we consulted on and published version 1 of the capex incentive guideline which sets out the CESS.[34] The guideline specifies that in most circumstances we will apply a CESS, in conjunction with forecast depreciation.[35] We also propose to apply forecast depreciation, which is discussed further in attachment 5.

In developing the CESS we took into account the capex incentive objective, capex criteria, capex factors 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 underspend and overspend amounts happens at the end of each regulatory control period when we update a TNSP's RAB to include new capex. If a TNSP spends less than its approved forecast during a regulatory control period, it will benefit within that period. Consumers benefit at the end of that regulatory control 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.[36] Because of this a TNSP may choose to spend capex

32 NER, cl. 6A.6.5A(c).
33 NER, cl. 6A.6.7(a).
34 AER, *Capital expenditure incentive guideline for electricity network service providers*, November 2013, pp. 5−9.
35 AER, *Capital expenditure incentive guideline for electricity network service providers*, November 2013, pp. 10−11.
36 As the end of a regulatory control 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 control period, the greater its reward will be.

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.

4 Expenditure forecast assessment guideline

This attachment sets out our intention to apply the expenditure assessment guideline[37] including the information requirements applicable to Murraylink at the commencement of the 2018–23 regulatory control period. We propose applying the guideline as it sets out our expenditure assessment approach. The guideline outlines for TNSPs and interested stakeholders the types of assessments we will do to determine efficient expenditure allowances and the information we require from TNSPs to do so.

The guideline is based on a nationally consistent reporting framework allowing us to compare the relevant efficiencies of TNSPs and decide on efficient expenditure allowances. The rules require Murraylink to advise us by 30 June 2016 of the methodology it proposes to use to prepare forecasts.[38] In the final F&A we must set out our proposed approach to the application of the guideline.[39] This will provide clarity to Murraylink and assist it with the information it should include in its revenue proposal. It will also provide a degree of predictability for both Murraylink as well as other stakeholders.

The guideline contains a suite of assessment/analytical tools and techniques to assist our review of revenue proposals submitted by TNSPs. We intend to apply some of the assessment techniques set out in the guideline. The techniques include:

- benchmarking (economic techniques and category analysis)
- methodology review
- governance and policy review
- predictive modelling
- trend analysis
- cost benefit analysis
- detailed project review (including engineering review).

We exercise our judgement in determining the extent to which we use a particular technique in assessing a revenue proposal. When assessing a revenue proposal we use the techniques we consider appropriate depending on the specific circumstances of the determination. The expenditure assessment guideline is flexible and recognises that a range of different estimating techniques may be employed to develop an expenditure forecast.

37 The first version of the guideline was published on 29 November 2013. It can be located at www.aer.gov.au/node/18864.
38 NER, cl. 6A.10.1B(b)(1).
39 NER, cl. 6A.10.1A(b)(5).

We developed the expenditure assessment guideline to apply broadly to all electricity transmission and distribution businesses. However, given the smaller scale of Murraylink's assets and nature of its network operations we do not intend applying standardised benchmarking analysis (including top down economic benchmarking or driver-based benchmarks) or predictive modelling in assessing its capex and opex forecasts. Our proposed approach for opex will involve consideration of revealed costs and the 'base-step-trend' approach. For capex, our proposed approach will involve detailed reviews of Murraylink's asset management practices and specified projects. Consequently, the information we will seek from Murraylink 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.

5 Depreciation

As part of the roll forward methodology, when the RAB is updated from forecast capex to actual capex at the end of a regulatory control period, it is also adjusted for depreciation. This attachment sets out our proposed approach to calculating depreciation when the RAB is rolled forward.

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 provides the incentives for TNSPs to pursue continuous capex efficiencies. Using actual depreciation increases these incentives. There is more information on depreciation as part of the overall capex incentive framework in our capex incentive guideline.[40] 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 in 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 shorter lived assets compared to longer lived assets. Forecast depreciation, on the other hand, leads to the same incentive for all assets.

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

In this F&A, we 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.[41]

Specifically, we are required to set out in our capex incentive guideline our process for determining which form of depreciation we propose to use in the RAB roll forward process.[42] Our decision on whether to use actual or forecast depreciation must be consistent with the capex incentive objective. We must have regard to:[43]

- 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 capex factors.

5.1 Proposed approach

We propose to use the forecast depreciation approach to establish Murraylink's RAB at the commencement of the 2023–28 regulatory control period. We consider this approach will provide sufficient incentives for Murraylink to achieve capex efficiency gains over the 2018–23 regulatory control period.

5.2 Reasons for proposed approach

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

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 consider:

- the substitutability between capex and opex and the balance of incentives between these

41 NER, cl. S6A.2.2B.
42 NER, cl. 6A.5A(b)(3).
43 NER, cl. S6A.2.2B.

- the balance of incentives with service outcomes
- 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 incentive guideline, we considered this to be a sufficient incentive for a TNSP to achieve efficiency gains over the regulatory control period in most circumstances.

As discussed in attachment 3, we propose to apply the CESS to Murraylink for the regulatory control period commencing 1 July 2018.

For Murraylink, 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.[44]

44 Our ex post capex measures are set out in the capex incentive guideline, AER, *Capital expenditure incentive guideline for electricity network service providers*, November 2013, pp. 13−19. The guideline also sets out how all our capex incentive measures are consistent with the capex incentive objective. See pp. 20−21.