



**Draft decision**

**Directlink transmission determination**

**2015-16 to 2019-20**

**Attachment 5: Regulatory depreciation**

November 2014

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## Note

This attachment forms part of the AER's draft decision on Directlink's revenue proposal 2015–20. It should be read with other parts of the draft decision.

The draft decision includes the following documents:

Overview

Attachment 1 – maximum allowed revenue

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 – pricing methodology and negotiated services

Attachment 13 – pass through events

# Contents

<b>Contents</b> .....	<b>5-4</b>
<b>Shortened forms</b> .....	<b>5-5</b>
<b>5 Regulatory depreciation</b> .....	<b>5-7</b>
5.1 Draft decision.....	5-7
5.2 Directlink's proposal.....	5-7
5.3 AER's assessment approach.....	5-8
5.3.1 Interrelationships .....	5-9
5.4 Reasons for draft decision .....	5-10
5.4.1 Remaining asset lives .....	5-10
5.4.2 Standard asset lives .....	5-10

## Shortened forms

Shortened form	Extended form
AARR	aggregate annual revenue requirement
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
ASRR	aggregate service revenue requirement
augex	augmentation expenditure
capex	capital expenditure
CCP	Consumer Challenge Panel
CESS	capital expenditure sharing scheme
CPI	consumer price index
DRP	debt risk premium
EBSS	efficiency benefit sharing scheme
ERP	equity risk premium
MAR	maximum allowed revenue
MRP	market risk premium
NEL	national electricity law
NEM	national electricity market
NEO	national electricity objective
NER	national electricity rules
NSP	network service provider
NTSC	negotiated transmission service criteria

Shortened form	Extended form
opex	operating expenditure
PPI	partial performance indicators
PTRM	post-tax revenue model
RAB	regulatory asset base
RBA	Reserve Bank of Australia
repex	replacement expenditure
RFM	roll forward model
RIN	regulatory information notice
RPP	revenue pricing principles
SLCAPM	Sharpe-Lintner capital asset pricing model
STPIS	service target performance incentive scheme
TNSP	transmission network service provider
TUoS	transmission use of system
WACC	weighted average cost of capital

## 5 Regulatory depreciation

The AER is required to decide on the indexation of the regulatory asset base (RAB) and depreciation building blocks for Directlink's 2015–20 regulatory control period.<sup>1</sup> The regulatory depreciation allowance (or return of capital) is the net total of the straight-line depreciation (negative) and the indexation of the RAB (positive).

This attachment sets out our draft decision on Directlink's regulatory depreciation allowance. It also presents our draft decision on the proposed depreciation schedules, including an assessment of the proposed standard and remaining asset lives to be used for forecasting depreciation allowances.

### 5.1 Draft decision

We do not accept Directlink's proposed regulatory depreciation allowance of \$11.1 million (\$ nominal) for the 2015–20 regulatory control period. Instead, we determine a regulatory depreciation allowance of \$10.5 million (\$ nominal) for Directlink, a reduction of \$0.6 (or 5.4 per cent) from the proposal. Our amendment reflects our determinations on other components of Directlink's proposal that affect the forecast regulatory depreciation allowance—for example, the forecast inflation rate (attachment 3), forecast capital expenditure (capex) (attachment 6) and the opening RAB value (attachment 2).<sup>2</sup> Table 5-1 sets out our draft decision on the annual regulatory depreciation allowance for Directlink's 2015–20 regulatory control period.

**Table 5-1 AER's draft decision on Directlink's depreciation allowance for the 2015–20 regulatory control period (\$ million, nominal)**

	2015–16	2016–17	2017–18	2018–19	2019–20	Total
Straight-line depreciation	4.9	5.2	5.5	5.7	6.0	27.4
Less: inflation indexation on opening RAB	3.3	3.4	3.4	3.4	3.4	16.9
<b>Regulatory depreciation</b>	<b>1.6</b>	<b>1.9</b>	<b>2.1</b>	<b>2.3</b>	<b>2.6</b>	<b>10.5</b>

Source: AER analysis.

### 5.2 Directlink's proposal

Directlink proposed a forecast regulatory depreciation allowance of \$11.1 million (\$ nominal) over the 2015–20 regulatory control period as shown in Table 5-2. Directlink used the straight-line depreciation method employed in the AER's post-tax revenue model (PTRM) to calculate its regulatory depreciation allowance. It proposed to align the remaining asset life of the 'Transmission lines' asset class (36 years) with that of the 'Substations' asset class<sup>3</sup> (26 years). It also proposed to use the remaining asset life of 26 years to depreciate any new capex proposed for the 2015–20 regulatory control period.<sup>4</sup> That is, the standard asset lives for the 'Transmission lines' and 'Converter stations' asset classes are assigned 26 years to depreciate forecast capex over 2015–20. Table 5-2 sets out Directlink's proposed depreciation allowance for the 2015–20 regulatory control period.

<sup>1</sup> NER, cl. 6A.5.4(a)(1) and (3).

<sup>2</sup> NER, cl. 6A.6.3(a)(1).

<sup>3</sup> In Directlink's proposed PTRM, this asset class is referred to as 'Converter stations'.

<sup>4</sup> Directlink, *Revenue proposal*, pp. 79–80.

**Table 5-2 Directlink's proposed depreciation allowance for the 2015–20 regulatory control period (\$ million, nominal)**

	2015–16	2016–17	2017–18	2018–19	2019–20	Total
Straight-line depreciation	4.9	5.3	5.7	6.0	6.4	28.3
Less: inflation indexation on opening RAB	3.2	3.4	3.5	3.5	3.6	17.2
<b>Regulatory depreciation</b>	<b>1.7</b>	<b>2.0</b>	<b>2.2</b>	<b>2.5</b>	<b>2.8</b>	<b>11.1</b>

Source: Directlink, *Revenue proposal*, p. 80.

### 5.3 AER's assessment approach

We are required to determine the regulatory depreciation allowance as part of a TNSP's annual building block revenue requirement.<sup>5</sup> Our calculation of a TNSP's regulatory depreciation building block is made in the PTRM and depends on several components. The calculation of depreciation in each year is governed by the value of assets included in the RAB at the beginning of the regulatory year and the depreciation schedules.

Our standard approach to calculating depreciation is to employ the straight-line method as set out in the PTRM. We consider that the straight-line method of depreciation satisfies the National Electricity Rules (NER) requirements in clause 6A.6.3(b). It provides an expenditure profile that reflects the nature of the assets over their economic life.<sup>6</sup> Regulatory practice has been to assign a standard asset life to each category of assets that represents the economic or technical life of the asset or asset class. We must consider whether the proposed depreciation schedules conform to the following requirements:

- The schedules depreciate using a profile that reflects the nature of the assets or category of assets over the economic life of that asset or category of assets.<sup>7</sup>
- The sum of the real value of the depreciation attributable to any asset or category of assets must be equivalent to the value at which that asset or category of assets was first included in the RAB for the relevant transmission system.<sup>8</sup>

To the extent that a TNSP's revenue proposal does not comply with the above requirements, we must determine the depreciation schedules for calculating the depreciation for each regulatory year.<sup>9</sup>

The regulatory depreciation allowance is an output of the PTRM. We therefore have assessed the TNSP's proposed regulatory depreciation allowance by analysing the proposed inputs to the PTRM for calculating the regulatory depreciation allowance. These inputs include:

- the opening RAB as at 1 July 2015
- the forecast net capex in the 2015–2020 regulatory control period
- the forecast inflation rate for the above regulatory control period

<sup>5</sup> NER, cl. 6A.5.4(a)(3).

<sup>6</sup> NER, cl. 6A.6.3(b)(1).

<sup>7</sup> NER, cl. 6A.6.3(b)(1).

<sup>8</sup> NER, cl. 6A.6.3(b)(2).

<sup>9</sup> NER, cl. 6A.6.3(a)(2)(ii).



- the standard asset life for each asset class—used for calculating the depreciation of new assets associated with forecast net capex in the above regulatory control period
- the remaining asset life for each asset class—used for calculating the depreciation of existing assets associated with the opening RAB as at 1 July 2015.

Our draft decision on a TNSP's regulatory depreciation allowance reflects our determinations on the opening RAB as at 1 July 2015, forecast capex, and forecast inflation building block components (the first three inputs in the above list). Our determinations on these components of the TNSP's proposal are discussed in attachments 2, 6 and 3 respectively.

In this attachment, we assessed the TNSP's proposed standard asset lives against:

- the approved standard asset lives in the transmission determination for the current regulatory control period
- the standard asset lives of comparable asset classes approved in our recent transmission determinations for other TNSPs.

Unlike other TNSPs Directlink is an interconnector and therefore does not operate as a meshed network of assets. Directlink proposed to align its remaining asset lives for relevant asset classes to a single life. We will assess whether this proposal provides a depreciation schedule that reflects the nature of the Directlink assets over their economic life.

### 5.3.1 Interrelationships

The regulatory depreciation allowance is a building block component of the annual building block revenue requirement.<sup>10</sup> Higher (or quicker) depreciation leads to higher revenues over the regulatory control period. It also causes the RAB to reduce more quickly (assuming no further capex). This reduces the return on capital allowance, although this impact is usually secondary to the increased depreciation allowance.

Ultimately, however, a TNSP can only recover the capex it has incurred on assets once. The depreciation allowance therefore reflects how quickly the RAB is being recovered and is based on the remaining and standard asset lives used in the depreciation calculation.

The depreciation allowance depends on the level of the opening RAB and the forecast capex. Any increase in these factors also increases the depreciation allowance.

To prevent double counting of inflation through the WACC and RAB, the regulatory depreciation allowance also has an offsetting reduction for indexation of the RAB.<sup>11</sup> Factors that affect forecast inflation and/or the size of the RAB will therefore affect the size of this indexation adjustment.

Figure 2-1 (in attachment 2) shows the relative size of the inflation and straight-line depreciation and their impact on the RAB based on Directlink's proposal. A ten per cent increase in the straight-line depreciation allowance causes revenues to increase by about 2.8 per cent.

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<sup>10</sup> In the PTRM, the distinction is made between straight-line depreciation and regulatory depreciation. The difference being that regulatory depreciation is the straight-line depreciation minus the indexation adjustment.

<sup>11</sup> If the asset lives are extremely long, such that the straight-line depreciation rate is lower than the inflation rate, then negative regulatory depreciation can emerge. The indexation adjustment is greater than the straight-line depreciation in such circumstances.

## 5.4 Reasons for draft decision

We accept Directlink's proposed straight-line depreciation method for calculating the regulatory depreciation allowance as set out in the PTRM. However, we reduced Directlink's proposed forecast regulatory depreciation allowance by \$0.6 million (or 5.4 per cent) to \$10.5 million. Our amendment is mainly driven by our determination on other components of Directlink's revenue proposal—for example, the forecast inflation rate (attachment 3), forecast capex (attachment 6) and the opening RAB as at 1 July 2015 (attachment 2)—affecting the forecast regulatory depreciation allowance.

### 5.4.1 Remaining asset lives

We accept Directlink's proposal to align the remaining asset life of the 'Transmission line' asset class with that of the 'Substation' asset class. In general, the asset life of an asset class should reflect the technical life of the assets in that asset class. However, unlike other TNSPs, Directlink's transmission line assets and substation assets are used jointly as a single entity to provide prescribed transmission services. The transmission line will have no useful life when the substation ceases to operate. This assessment is consistent with our transmission determination for Murraylink on this similar issue.<sup>12</sup>

Table 5-3 sets out our draft decision on Directlink's remaining asset lives as at 1 July 2015.

### 5.4.2 Standard asset lives

We accept Directlink's proposal to change its standard asset lives for depreciating new capex over the 2015–20 regulatory control period. This results in capex being depreciated over the remaining life of the existing assets i.e. 26 years. We consider the proposed forecast capex are for stay in business and ancillary equipment purposes and should have the same remaining life as the substation assets. Therefore, we are satisfied that it is reasonable to change the standard asset life of the 'Transmission line' asset class and 'Substations' asset class to 26 years to better reflect the expected economic life of Directlink's forecast capex.<sup>13</sup>

Table 5-3 sets out our draft decision on Directlink's standard asset lives for the 2015–20 regulatory control period.

**Table 5-3** AER's draft decision on Directlink's standard and remaining asset lives as at 1 July 2015 (years)

Asset class	Standard asset life	Remaining asset life as at 1 July 2015
Substations	26.2	26.2
Transmission line	26.2	26.2
Easements	n/a	n/a

Source: AER analysis.  
n/a: not applicable.

<sup>12</sup> AER, *Draft decision: Murraylink transmission determination 2013–14 to 2022–23*, November 2012, pp. 62–63.

<sup>13</sup> NER, cl. 6A.6.3(b)(1).