2017/18 – 2021/22 Revenue Proposal
Depreciation Approach – Pre-reading

November 2015

Purpose

The purpose of this note is to:

- provide information about the Australian Energy Regulator's (AER's) current approach to regulatory depreciation;
- describe at a high level the differences between regulatory depreciation and pure straight-line depreciation;
- summarise and provide references to consultation papers issued since early 2014 on alternative depreciation models; and
- request input and feedback from stakeholders regarding the use of regulatory depreciation and the feasibility of alternative depreciation models. This is to assist Powerlink in determining focus areas for future consideration.

Background

With demand growth in Queensland forecast to be essentially flat over the next decade, Powerlink is mindful of the need to carefully monitor and, where feasible, identify opportunities to improve network utilisation. Despite this emphasis, the longer term impacts of changing consumer behaviour and emerging technologies (such as battery storage) may give rise to a scenario of reducing network utilisation (either localised or broad based).

In this context, the way in which a network service provider recovers depreciation costs from network users over time deserves further consideration, particularly if there is a risk that recovery of increasing depreciation costs may occur at a time of reducing network utilisation – which would have the effect of increasing prices to network users.

Powerlink is in the early stages of considering this issue and is seeking input from stakeholders to assist in setting a direction for future investigation and consultation.

What is Depreciation?

Depreciation represents the decline in the value of assets through use over time.

Depreciation is a cost to Powerlink, which is calculated as an annual charge equal to the value of regulatory assets over their remaining useful lives (referred to as *straight-line depreciation* in this note).

The AER's approach to depreciation (referred to as *regulatory depreciation* in this note) is based on applying a straight-line depreciation methodology to the Regulatory Asset Base (RAB) at the start of each regulatory period, indexed for inflation. The resulting annual depreciation charge is then reduced by the value of the same inflationary factor. Indexing the RAB for inflation has the effect of increasing the annual depreciation charge over time.

Regulatory depreciation is one of the key building-blocks used to calculate Powerlink's Maximum Allowed Revenue (MAR) and represents approximately 8%-10% of the MAR in Powerlink's current regulatory period (2013-17).

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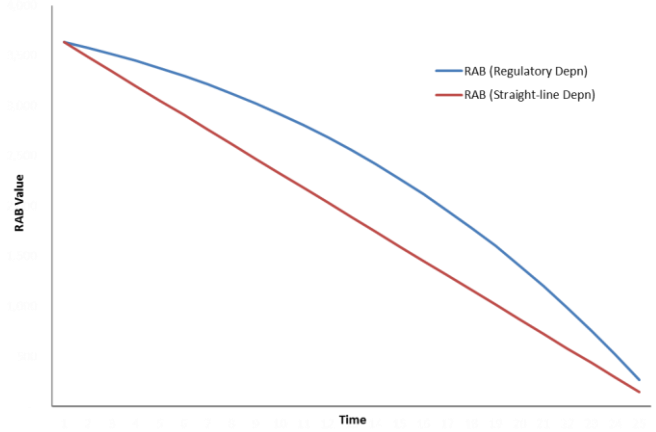
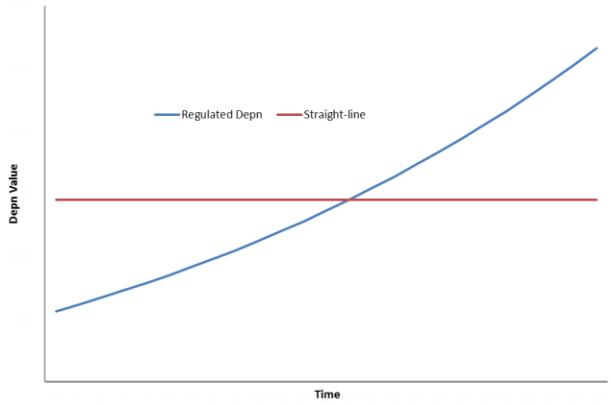
Return on Capital = a measure of return on investments (capex)
Return of Capital = annual regulatory depreciation allowance
Opex = annual operating and maintenance cost allowance
Tax = calculated effective company tax payable
EBSS = carryover amounts for the Efficiency Benefit Sharing Scheme from the previous regulatory period

Regulatory versus Straight-Line Depreciation

The effect of regulatory depreciation compared to straight-line depreciation is depicted in the chart below:





A straight-line depreciation method reduces the asset value consistently over time, providing a relatively even Return of Capital (RoC) over the life of an asset.

The regulatory depreciation method maintains a higher asset value initially and delays the RoC to the back end of the asset life. The RAB balance under the regulatory depreciation method is higher in the early life of the asset and decreases in line with the regulatory depreciation profile.

A fundamental principle of the regulatory framework is to encourage efficient use of, and investment in, the network. The regulatory depreciation method was developed at a time of increasing electricity usage and sought to encourage efficient use of the network assets by aligning growth in the use of the asset (on the assumption of increasing network utilisation) with increasing RoC over time. In an environment of increasing network utilisation, the contribution of the RoC to electricity price would be relatively stable over time.

However, usage of electricity transported over the transmission network has changed and this has resulted in a potential issue with regulatory depreciation, particularly when a network is faced with static or declining utilisation over time. Under regulatory depreciation, RoC may be increasing at a time when utilisation of the network may be declining, resulting in increased electricity prices flowing through to network users.

In contrast, straight-line depreciation would result in a relatively even RoC over the life of the asset and is better suited to static levels of network use. Compared to regulatory depreciation it would have the effect of increasing electricity prices incurred by network users in the early stages of an asset's life, to mitigate the potential for electricity price increases due to reducing network utilisation in the future.

Straight-line and regulatory depreciation methodologies will both result in the same net present value of asset revenue recovered by a network service provider over the life of the regulatory assets (assuming a constant Weighted Average Cost of Capital).

Industry Consultation

Since early 2014, a number of Discussion Papers[1] have recognised the emerging risks related to long term network utilisation and the implications for future recovery of depreciation costs. These papers have discussed various depreciation approaches to align the recovery of capital with reducing network utilisation levels, thereby aligning pricing with levels of network use. A number of reasons for considering such a change in depreciation approach have been put forward.

Reason for change	Key points
Managing long term electricity prices	• Fairness and equity - preserving the user-pays principle[2] to the extent that it contributes to inter-generational equity • Price stability - ensuring long term price stability
Keeping investor risk low	• Emerging risks related to future network utilisation may provide a basis for investors to reassess the rate of return required from investment in network assets. This could have the effect of increasing the required Return on Capital and electricity prices.
Avoiding network user departure	• An increase in electricity prices (brought about by the factors above), coupled with the emergence of alternative lower cost energy solutions, may bring about the departure of network users from transmission networks. This would leave the balance of remaining network users to bear the costs of providing transmission services.
Taking advantage of a lower WACC environment	• Lower rates of return are currently occurring. This may provide an opportunity to accommodate a shift in depreciation approach (leading to a shorter term increase in Return of Capital compared to the existing regulatory depreciation method) without causing a net increase in revenue requirements and electricity prices.

[1] - AusNet Services 2017 Transmission Revenue Reset – Stakeholder Consultation Paper – Accelerated Depreciation, Incenta Economic Consulting – flexible depreciation as a risk management tool for electricity and gas networks – Energy Networks Association February 2014, Energy Networks Association – Future Network Cost Recovery and Depreciation August 2015.

[2] The user-pays principle suggests that users pay their share of costs associated with a service.

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Powerlink is aware that some consumers and sections of the media have responded negatively to the concept of alternative depreciation models[3]. To date, Powerlink has also received informal feedback from some industry stakeholders that they would not support a change in depreciation approach that would have the effect of increasing electricity prices in the short term, compared to the existing arrangements.

Powerlink's Proposed Approach for Revenue Proposal

While Powerlink considers the outlook for static usage of the transmission network indicates a change in depreciation approach may be required at some time in the future, for the purposes of its Revenue Proposal for the 2018-22 regulatory period, Powerlink's initial view is to continue applying regulatory depreciation in accordance with the Australian Energy Regulator's (AER) current approach.

Powerlink considers that the complexity of this issue requires broader consultation with industry, consumers and regulators to inform any broader changes to the regulatory framework.

Your feedback

Powerlink is seeking feedback from stakeholders on the following questions, to assist in determining the future focus of investigations and consultation on depreciation:

1. How much value do you place on the user-pays principle and the longer term stability of electricity price?

2. In an environment of static or declining usage of the transmission network, what is the most appropriate depreciation approach for Powerlink to use in the long term interests of consumers and why?

3 Power bills up to cover exodus, Courier Mail, 21 September 2015