GOLDFIELDS GAS PIPELINE

Access Arrangement Revision Proposal

Supporting Information: Attachment 4

HoustonKemp Economists
Depreciation Methodology for the Goldfields Gas Pipeline

15 August 2015

HOUSTONKEMP
Economists

Depreciation Methodology for the Goldfields Gas Pipeline

A report for Goldfields Gas Transmission Pty Ltd

25 August 2014

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1. Introduction

This report has been prepared by HoustonKemp at the request of Goldfields Gas Transmission Pty Ltd (GGT). Its subject is the methodology used to calculate the return of capital for the Goldfields Gas Pipeline (GGP) under the National Gas Rules (NGRs).[1]

GGP provides gas transportation services using pipeline capacity that is 'covered' under the provisions of the National Gas Rules (NGR) and National Gas Law (NGL). GGT is required to prepare a revised access arrangement for reference services provided by the covered portion of the GGP for submission to and approval by the Western Australian Economic Regulation Authority (ERA). The revised access arrangement is to apply for the period from 1 January 2015 to 31 December 2019 and is to be submitted for review by the ERA no later than 15 August 2014.[2]

In determining the total revenue that is used to derive reference tariffs for the covered pipeline capacity, GGT must estimate each of the cost building blocks that make up the total allowed revenue for the provision of reference services by the covered pipeline. In that context, GGT has asked us to assess whether the methodology it has proposed in its revised access arrangement to calculate the depreciation element of these cost building blocks is consistent with the NGRs.

Our report is structured as follows:

- section 2 describes the GGP and the market for reference services provided by this particular pipeline;
- section 3 explains two commonly applied regulatory methods for determining depreciation and summarises the relevant provisions in the NGRs; and
- section 4 presents our analysis of the depreciation method proposed by GGT by reference to the NGRs and the particular circumstances of the GGP.

1 National Gas Law, National Gas (South Australia) Act 2008.

2 Proposed Revised Access Arrangement for the Goldfields Gas Pipeline, 13 June 2014.

2. The Goldfields Gas Pipeline

2.1 Background

The GGP is a 1,380 kilometre gas transmission pipeline that provides gas transportation services to a range of locations between Yaraloola and Kalgoorlie. It is owned by: [3]

- the APA Group; and
- the Alinta Energy Group.

A portion of the GGP's capacity is covered under the National Third Party Access Code for Natural Gas Pipelines (the gas code) and, consequently, GGP is required to submit an access arrangement for approval by the ERA.

2.2 Capacity

The GGP has undergone a number of capacity expansions since it commenced operation in 1996. In particular, it was:

- expanded in 2006 by adding a compressor at Paraburdoo;
- expanded in 2009 by building compressors at Wyloo West and at Ned's Creek; and
- expanded again, during 2013 and 2014, by adding compressors at Yarraloola, Paraburdoo and Turee Creek.

The addition of compressors in 2013 and 2014 is expected to increase the nameplate capacity of the GGP from 155 terajoules (TJ) per day to 202TJ per day.[4] The purpose of this most recent expansion was to meet the increase in demand for electricity generation arising from forecast increases in iron ore export capacity in the Pilbara region, though to 2023.[5] In particular, the Turee Creek compressor increased the capacity of the GGP – although not along the entire length of the pipeline – such that gas can be:[6]

- transported to a new gas fired generation plant that provides electricity to Rio Tinto Iron Ore's iron ore operations; and
- transported to a new gas fired generation plant being developed by BHP Billiton Iron Ore to supply its iron ore operations.

Importantly, the pipeline capacity underpinning the provision of these services is not covered and so the obligation to develop and comply with an approved access arrangement in relation to those services does not apply.

3 The APA Group and Alinta Energy Group own approximately 88 per cent and 12 per cent of the GGP respectively.

4 Independent Market Operator, *Gas Statement of Opportunities*, January 2014, page 40.

5 Independent Market Operator, *Gas Statement of Opportunities*, January 2014, page 41.

6 GGT, *Proposed Treatment of the RTIO/BHP Expansion – election under clause 10.2(a) of the Goldfields Gas Pipeline Access Arrangement*, 7 January 2014, page 1.

The capacity of the GGP's covered pipeline service is approximately 109TJ/day of capacity.[7]

2.3 Shippers/customers

Fifteen shippers haul gas on the GGP, with the gas end users primarily being mining companies with interests in the production of:[8]

- iron ore;
- gold;
- nickel; and/or
- lead.

Other gas end users include a small number of independent electricity generators that supply mining operations and local townships, as well as a gas distributor that supplies the Kalgoorlie township.

2.4 Demand

The market for reference services provided by the GGP is distinct from that served by other pipelines in Western Australia, and more generally, in that it is characterised by a small number of relatively large customers who operate in a single industry sector, ie, the mining of natural resources. One consequence of these circumstances is that the demand for reference services provided by the GGP is principally a function of global demand for natural resources.

Notwithstanding the nature of global demand for natural resources, the intrinsic characteristics of the mining operations that meet this demand mean that growth in demand for reference services provided by the GGP generally occurs:

- through discrete lumpy investment, which is linked to particular mine expansion projects;
- to meet the specific needs of a single user or users; and
- when users are prepared to underwrite the necessary pipeline investment by entering a long term gas transportation agreement.

One consequence of these circumstances is that the covered capacity of the GGP has been almost fully contracted for the last ten years and that further capacity expansion investment would be required to accommodate any material growth in demand. We understand from GGT that no such growth is forecast in the 2015 to 2019 period, and the proposed reference tariffs in the revised access arrangement have been prepared consistent with that expectation.

In our opinion, the market for reference services provided by the existing covered capacity can therefore be described as mature, with relatively limited scope for future growth. Further, we note that none of the recent expansions in the GGP have been covered for the purpose of the NGRs.

7 ERA, *Goldfields Gas Transmission's Proposed Expansion of the Goldfields Gas Pipeline*, Issues Paper, 27 March 2014, page 6.

8 GGT, Proposed Treatment of the RTIO/BHP Expansion – election under clause 10.2(a) of the Goldfields Gas Pipeline Access Arrangement, 7 January 2014, page 6.

3. Depreciation and the NGRs

The NGRs state that total revenue for a service provider in each regulatory year is to be determined using the building block approach, whereby the building blocks are:[9]

- the return on capital;
- the return of capital, ie, depreciation;
- the estimated cost of corporate income tax;
- forecast operating expenditure; and
- increments or decrements resulting from an incentive mechanism.

There are a number of methods that can be applied to determine the return of capital cost building block. In this section we describe both the straight line and indexed straight line depreciation methods, the former being that proposed by GGT in its revised access arrangement for the GGP. We also explain the relevant provisions in the NGR that guide the choice of depreciation method, and provide an economic interpretation of those provisions.

3.1 Depreciation methods

There are a number of alternate methods that can be applied to determine a depreciation schedule in each year such that an asset is fully depreciated at the end of its economic life. In net present value terms, these alternate methods are financially 'equivalent' in that the present value of revenue derived under each method will be the same. However, the time profile under which capital is recovered over the economic life of an asset may be materially different, as between one approach and another, and this in turn may have real economic effects.

GGT's revised access arrangement proposes to determine a depreciation allowance to be incorporated into each year's total allowed revenue for the covered capacity of the GGP using what is known as the 'straight line' depreciation method.

As a matter of principle, there is a very wide range of potential depreciation methods and so time profiles for this cost building block. Notwithstanding, straight line is one of the two methods for determining regulatory depreciation most commonly applied in Australia, with the other known as 'indexed straight line' depreciation. On that basis, we have restricted our analysis to the comparing and evaluating of these two depreciation methods, each of which we summarise below.

3.1.1 Straight line depreciation

Straight line depreciation sets the allowance for depreciation over the economic life of an asset so as to be equal in current price terms in each year. This depreciation method is generally implemented in conjunction with an asset base that is not subject to any annual indexation adjustment to account for the effects of consumer price inflation.

[9] NGR, rule 76.

Straight line depreciation – albeit with a company-specific transitional arrangement – was proposed by ATCO Gas Australia Pty Ltd (AGA) in its revised access arrangement for gas distribution services provided over the period 2014 to 2019,[10] and is a methodology that:

- is consistent with international accounting practices;[11]
- is accepted by the Australian Tax Office for the purposes of determining assessable income;[12] and
- has been applied by regulators in the United States to determine reasonable tariffs for utility services for the best part of a century.[13]

3.1.2 Indexed straight line depreciation

In contrast to straight line depreciation, indexed straight line depreciation:

- sets a different annual allowance for depreciation in each year; and
- is applied in conjunction with an asset base that is indexed annually for the effects of consumer price inflation, ie, each year the asset base is escalated through time for the expected change in consumer prices, generally the all groups Consumer Price Index (CPI), measured as the weighted average of eight capital cities in Australia.

Indexed straight line depreciation calculates the allowance in a particular year so as to be equal to:

- the opening value of the asset base divided by its remaining asset life; less
- the amount by which the opening asset base is indexed for inflation in that year.

Indexed straight line depreciation is the approach used by the Australian Energy Regulator (AER) in its post-tax revenue model, which it uses to determine allowed annual revenue in the context of price-setting decisions for electricity network and covered gas pipeline services.

3.1.3 Profile through time

The two depreciation methodologies we describe above give rise to materially different time profiles for the value of the capital base, depreciation allowance and so capital-related annual revenue.

To illustrate the magnitude of these differences, Figure 1, Figure 2 and Figure 3 illustrate the results – for the case of a single asset – of a model that calculates the value in each year of the capital base, depreciation and capital-related revenue for two assets, each with an initial value of $1 million, but which differ in that:[14]

- one has an economic life of 40 years; and

10 AGA, *Access Arrangement Information*, 17 March 2014.

11 Australian Accounting Standards Board, *AASB 116 Property, Plant and Equipment (as amended)*, 2 August 2010, page 26

12 See: 'Prime cost method', ATO, *Guide to depreciating assets 2013*, June 2013, page 7.

13 See Phillips, Charles F, *The Regulation of Public Utilities, Theory and Practice*, 1993, pages 271-272.

14 For the purpose of these examples, the expected inflation rate was assumed to be 2.5 per cent and the nominal cost of capital to be 10 per cent.

- the other has an economic life of 120 years.

Figure 1 Depreciation allowance

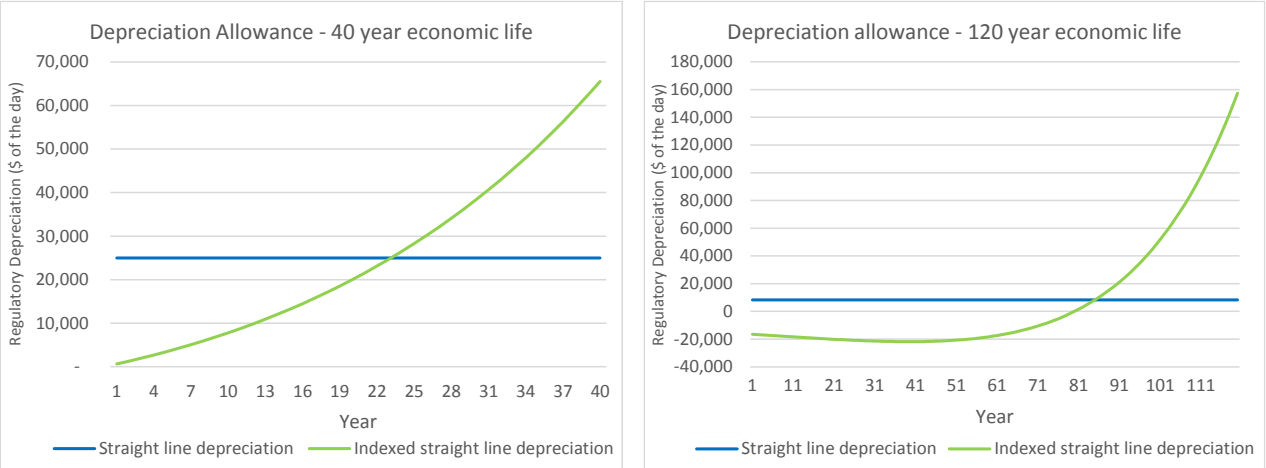
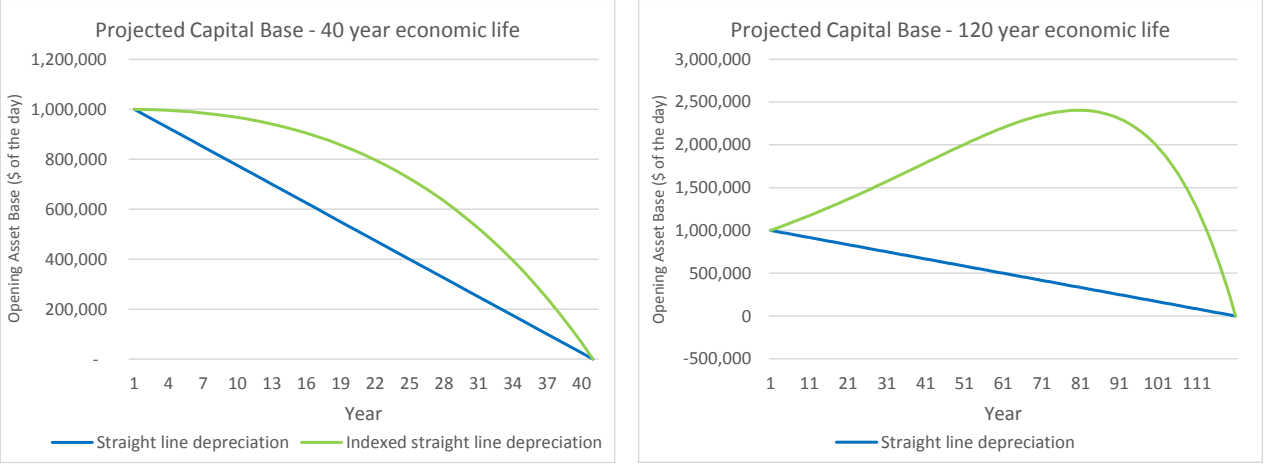


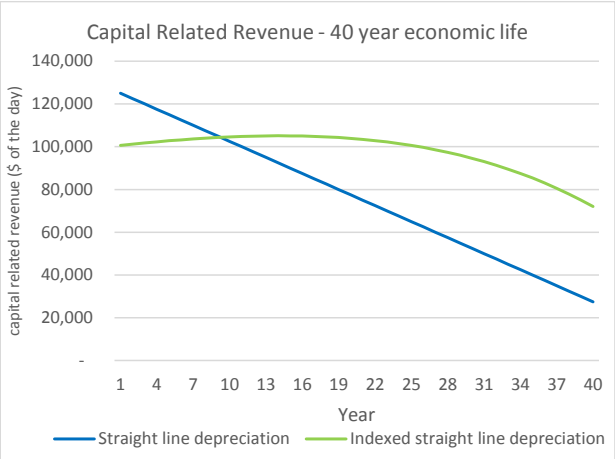
Figure 1 illustrates that, for a single asset, indexed straight line depreciation results in materially lower depreciation allowances in earlier years and higher allowances in later years, as compared with straight line depreciation. In other words, indexed straight line depreciation defers the annual allowance for depreciation of a single asset to later years, relative to straight line depreciation. Indeed, for an asset with a 120 year economic life, the indexed straight line depreciation methodology results in a negative depreciation allowance in each of the first 80 years, ie, the asset first appreciates in value, before then depreciating to a value of zero over the last 40 years of its economic life.

Figure 2 Opening capital base



The deferral of the annual depreciation allowance to later years that occurs under the indexed straight line depreciation method, as compared with (unindexed) straight line depreciation, gives effect to a materially higher value of the capital base over the entire span of an asset's economic life, as illustrated in Figure 2 above. Further, we note that the capital base actually appreciates over the first 80 years under indexed straight line depreciation.

Figure 3 Capital related revenues



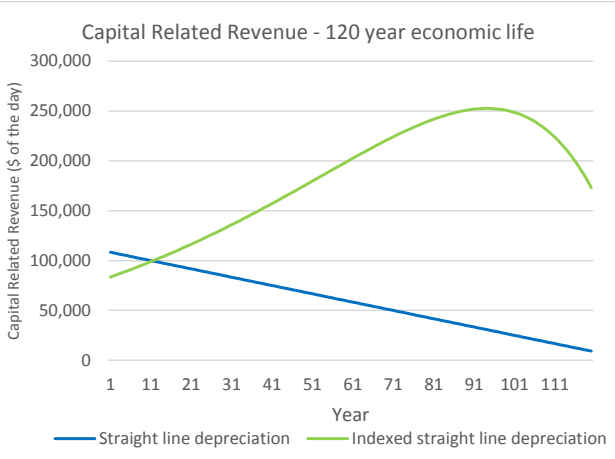


Figure 3 above illustrates the time profile of capital-related revenue allowance associated with the two depreciation methods, where capital related-revenue allowance is the sum of the depreciation and return on capital elements of the building block approach referred to in rule 76 of the NGRs.

Figure 3 shows that, despite initially lower capital-related revenues, when applied to a single asset, indexed straight line depreciation results in materially higher capital-related revenues in later years, as compared with those under straight line depreciation.

To summarise, the application of the building block approach means that a higher depreciation allowance, and so total revenues, in the early years of an asset's life, must be offset by a lower depreciation allowance and total revenues in the future.

It follows that, all else being equal, the depreciation methodology has a potentially significant effect on the time profile of reference tariffs, the level of which is a function of the total revenue allowance in any year, and the number of units of reference service to be provided in the same year. However, we note that the time profile of the level of reference tariffs will also be affected by:

- the mix of assets used to provide reference services and their respective economic lives;
- the level of operating and maintenance costs and the way these are expected to change through time;
- the quantum and timing of new capital investments;
- changes in the demand for reference services;
- changes in the allowed rate of return on the capital base; and
- the cost of company income tax.

3.2 Rule 89 of the NGR

The depreciation method adopted so as to derive the return on capital element of the cost building blocks has a potentially significantly effect on the time profile of total revenues and so the revenue per unit of service to be recovered from customers

Recognising these consequences for the time profile of the level of revenue to be recovered each year through reference tariffs, the NGR sets out a number of requirements that are to be taken into account in designing a deprecation method. These requirements are encapsulated in rule 89 of the NGR, which sets out the criteria used to determine the depreciation schedule in an access arrangement. Rule 89 states that:

(1) The depreciation schedule should be designed:

  (a) so that reference tariffs will vary, over time, in a way that promotes efficient growth in the market for reference services; and

  (b) so that each asset or group of assets is depreciated over the economic life of that asset or group of assets; and

  (c) so as to allow, as far as reasonably practicable, for adjustment reflecting changes in the expected economic life of a particular asset, or a particular group of assets; and

  (d) so that (subject to the rules about capital redundancy), an asset is depreciated only once (ie that the amount by which the asset is depreciated over its economic life does not exceed the value of the asset at the time of its inclusion in the capital base (adjusted, if the accounting method approved by the AER permits, for inflation)); and

  (e) so as to allow for the service provider's reasonable needs for cash flow to meet financing, non-capital and other costs.

(2) Compliance with subrule (1)(a) may involve deferral of a substantial proportion of the depreciation, particularly where:

  (a) the present market for pipeline services is relatively immature; and

  (b) the reference tariffs have been calculated on the assumption of significant market growth; and

  (c) the pipeline has been designed and constructed so as to accommodate future growth in demand.

(3) The AER's discretion under this rule is limited.

In our opinion, rules 89(1)(a) and 89(2) are the most relevant elements of rule 89 for determining the depreciation method in the particular circumstances of the GGP. We therefore describe below the economic interpretation of rules 89(1)(a) and 89(2), and do not explicitly address the other provisions of rule 89 for the purpose of our analysis.

3.2.1 Efficient growth

Rule 89(1)(a) requires the depreciation schedule to be designed such that it results in a time profile of reference tariffs that promotes efficient growth in the market for reference services.

In economics, there are three widely recognised dimensions of efficiency, ie, allocative, productive and dynamic efficiency, each of which is reflected in the national gas objective (NGO), which is the guiding principle underpinning the NGRs. The NGO is:[15]

[15] National Gas Law, National Gas (South Australia) Act 2008, clause 23.

> *'… to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas.'*

The NGO explicitly refers to each of the three dimensions of economic efficiency, ie, the references to 'investment in', 'operation' and 'use of' natural gas services correspond, respectively, to the dynamic, productive and allocative dimensions of efficiency. By virtue of its focus on changes in the use of a pipeline over time, rule 89(1)(a) of the NGRs goes to the allocative efficiency implications of one depreciation schedule, as compared with another.

Tariffs that reflect the principle of allocative efficiency are those that ensure users are presented with a financial signal that reflects the resource cost of providing the service, thereby encouraging users to consume the service only when the benefit to them exceeds the cost of its provision. However, it is important to note that:

- the allocative efficiency of any given reference tariff will principally depend on its structure, ie, the choice of charging parameter – say, as between capacity, throughput or fixed elements – and the balance between those charging parameters; whereas
- the depreciation method affects the time profile of revenue per unit of service, as distinct from the structure of reference tariffs.

It is widely recognised in economic literature[16] that, in the presence of fixed costs, the most efficient means to achieve allocative efficiency is through the use of a two-part tariff structure. An allocatively efficient two-part tariff should be designed so that:

- the variable element of the tariff is set as close as possible to the long run marginal cost (LRMC) of the resources used to provide that element of service; and
- the fixed element of the tariff is set so as to recover the residual revenue requirement for that year.

LRMC is a forward-looking concept that considers the change in future costs – assessed at a particular point in time – necessitated by a postulated change in future demand. It follows that, properly calculated, LRMC is unaffected by previously incurred capital costs. Further, since LRMC is estimated over a time frame sufficient to allow all factors of production to be varied, and because forward-looking market circumstances change, any estimate of LRMC will change through time.[17]

Setting reference tariffs such that the revenue per unit of service that must be recovered by them varies through time so as to reflect as closely as possible to LRMC of the relevant reference service will ensure that consumers face price signals that reflect the resource cost of providing reference services. This in turn encourages consumers to demand reference services only when the benefit to them exceeds the cost of provision. Such a time profile of reference tariffs will be allocatively efficient and promote efficient growth in the market for reference services.

However, in circumstances whereby capital costs previously incurred need to be recovered, the total revenue per unit of service is likely to include a residual element that exceeds the forward-

16 See, for example: Oi, Walter Y, *A Disneyland Dilemma: Two-Part Tariffs for a MickeyMouse Monopoly*. Quarterly Journal of Economics 85 (1971), pages 77-96.

17 We note that LRMC can be significantly affected by the balance between existing capacity and anticipated demand – because these two variables affect the timing and quantum of necessary future capacity expansions.

looking LRMC of providing a unit of service. This residual revenue requirement is affected by the return of capital building block element, the time profile of which will be affected by the choice of depreciation method.

Determining a depreciation schedule that promotes efficient growth in the market for reference services then becomes a question of how to allocate this residual revenue requirement per unit of service through time, in a manner that minimises the extent of departure from the allocatively efficient, LRMC-based tariff.

It follows that, to the extent there is scope for growth in the market for reference services, this will best be achieved by a depreciation schedule that results in a time profile of total revenue per unit of service that minimises the extent of departure from the ideal, LRMC-based structure of tariffs.

This is interpretation of rule 89(2) of the NGR is consistent with its implied reference to the time profile of revenue per unit of service when determining an appropriate depreciation method. In particular, rule 89(2) permits a deferral of depreciation, and so of total revenue to be recovered, when it is expected that the market for reference services will be larger in the future.

3.2.2 Deferment of Depreciation

Rule 89(2) refers to three scenarios in which a substantial deferment of depreciation may be considered by reference to rule 89(1), ie, where:

(a) the present market for pipeline services is relatively immature; and

(b) the reference tariffs have been calculated on the assumption of significant market growth; and

(c) the pipeline has been designed and constructed so as to accommodate future growth in demand.

Each of these scenarios implies that a gas pipeline has a material amount of spare capacity available, and that this spare capacity is expected to be utilised in the future.

In the event that any such spare capacity is taken up over time, the operation of the building block approach causes the revenue per unit of service (or the reference tariff) to fall through time – because the annual revenue requirement is allocated between a greater number of units served. To mitigate such a fall in the revenue per unit, rule 89(2) permits depreciation to be deferred such that total revenue rises as the market for reference services provided by a pipeline grows.

To summarise, in our opinion each of the scenarios set out in rule 89(2) is more likely to apply to the circumstances of a relatively new gas pipeline with significant spare capacity, rather than an established gas pipeline with limited available capacity.

4. Depreciation Methodology

In this section we assess straight line and indexed straight line depreciation by reference to the NGRs and the particular circumstances of the GGP. We conclude that the straight line depreciation approach proposed by GGT in its revised access arrangement is consistent with the NGR.

4.1 Scope for efficient growth

In section 2.3 we explained that the market for reference services provided by the GGP is characterised by a relatively small number of large customers primarily involved in the mining of natural resources. Further, in section 2.4 we described the particular features of the demand and capacity balance in the market for reference services provided by the GGP, highlighting that:

- the GGP has operated at or near to capacity for the last decade;
- capacity expansion takes the form of discrete, lumpy investments designed to meet the needs of one or more particular customers, whom in turn are willing to underwrite the investment with long term gas transportation agreements;
- the services provided as a consequence of recent capacity expansions have not been covered; and
- no material growth is forecast in demand for services provided by the GGP, and reference tariffs for the GGP have been determined so as to be consistent with that expectation.

Consistent with this outlook, in our opinion the market for reference services provided by the GGP can best be characterised as mature, with limited scope for future growth. A corollary of these circumstances is that the time profile of the future expected costs of providing services is unlikely to be important for the prospects for growth in the market for reference services. This conclusion has significant implications for the interpretation and application of rule 89(1)(a).

The guidance provided by rule 89(1)(a) principally goes to the selection of a depreciation method that results in a time profile of reference tariffs that, in turn, promotes efficient growth in the market for reference services. However, in the absence of much or any scope for serving efficient growth in the market for reference services by means of the available covered capacity of the GGP, a wide range of depreciation methods is likely to be consistent with rule 89(1)(a).

It follows that the evaluation of different potential depreciation methods for the GGP is unlikely to be assisted by looking beyond the ability of one method or another to promote efficient growth in the market for reference services. Rather, it is more helpful to turn to the wider-ranging revenue and pricing principles, which guide the application of the NGRs. We discuss the implications of the revenue and pricing principles for the choice of depreciation method below.

For completeness, we note that the circumstances of the GGP are distinct from those that would typically be faced by a covered gas pipeline serving residential and commercial customers in one or more large population centres, and in which there would generally be reasonable scope to develop and grow the market for the reference services provided.

4.2 Revenue and Pricing Principles

We noted above that the assessment of a depreciation method in the particular circumstances of the GGP is unlikely to be assisted by the particular question of that which promotes efficient growth in the market for reference services. Rather, such an assessment is more likely to be assisted by the wider-ranging revenue and pricing principles, which guide the application of the NGRs in general. The revenue and pricing principles state that:[18]

> *'A service provider should be provided with a reasonable opportunity to recover at least the efficient costs the service provider incurs in —*
>
> *(a) providing reference services; and*
> *(b) complying with a regulatory obligation or requirement or making a regulatory payment.'*

Adopting these considerations, in our opinion, the depreciation method applied to the GGP in the revised access arrangement should be that which is likely to provide the most effective opportunity to recover the efficient costs incurred in providing the reference services, ie, the extent of capital investment in the GGP.

4.2.1 Recovering investment in the GGP

In our opinion, the method for returning capital invested in the GGP, ie, depreciation, should seek to recover relatively more depreciation during periods when customers have a relatively high willingness to pay.

We explained in section 2.3 that the GGP provides reference services to a small number of very large customers involved in the mining of natural resources – most prominently, nickel, iron ore, gold and lead. Figure 4 below presents long term price series for each of these natural resources.

[18] National Gas Law, National Gas (South Australia) Act 2008, clause 24(2).

Figure 4 Gold, Nickel, Iron Ore and Lead prices from 1960 to 2013 in 2010 USD[19]

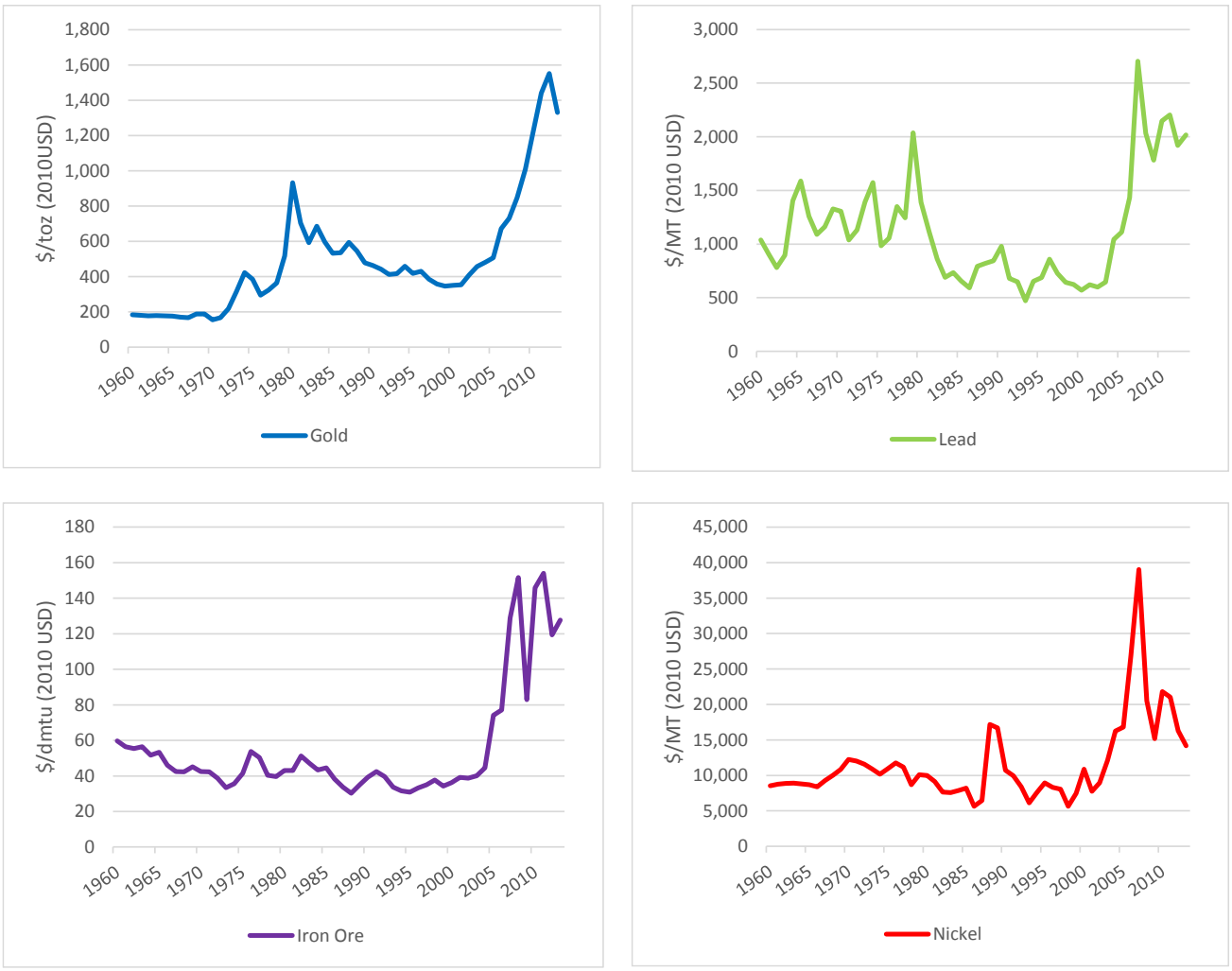


Figure 4 illustrates that world prices for the natural resources produced by the end users of the reference services provided by the GGP are, in general, significantly higher than their respective historical norms. It follows that, at present, the end users of the reference services provided by the GGP have a relatively high ability of willingness to pay for services that form inputs to the mining of these resource products.

In our opinion, the depreciation method used to determine an annual depreciation allowance in each year of the remaining life of the GGP should be that which recovers relatively more depreciation in earlier years, rather than later years. Such an approach would amount to the prudent management of the future risk that resource prices will not remain at their current historical highs, in which event the ability or willingness of users to pay for pipeline services will be reduced. In extreme, such an approach would reduce the risk of the GGP pipeline asset being stranded, through unanticipated shrinkage in the demand for reference services.

The adoption of a depreciation method that reduced or minimised such risk would also:

- reduce the risk associated with investing in the GGP;

[19] World Bank, World DataBank – Global Economic Monitor Commodities.

- reduce the degree of mining-related risk exposure, thereby reducing the return (ie, the weighted average cost of capital or WACC) that would otherwise be required by investors in the GGP; and, ultimately
- reducing the long run average reference tariffs for end-users.

For these reasons, in our opinion there is no case for the application of a depreciation method that defers the recovery of depreciation towards later years in the economic life of the GGP. Further, rule 89(2) gives weight to this conclusion since none of the scenarios that it contemplates as being appropriate for a deferment of depreciation apply to the circumstances of the GGP, ie, the GGP does not have significant spare capacity that is expected to be utilised in the future.

5. Conclusion

The particular circumstances of the GGP mean that the most appropriate depreciation method is that which results in a time profile of depreciation that recovers relatively more depreciation during periods when customers have a relatively high willingness to pay.

Long term trends in the world price of the particular resources produced by mines served by the GGP reinforce that its customers presently have a relatively high willingness or ability to pay for gas transportation services.

In section 3.1.3 we described that the principal difference between indexed straight line and straight line depreciation is that the former results in a depreciation time profile involving a substantial degree of deferral to later years. In contrast, straight line depreciation sets the annual allowance for depreciation so as to be equal in current price terms over the economic life of an asset. Straight line depreciation therefore recovers relatively more depreciation in the earlier years of an asset's life, as compared with indexed straight line depreciation.

For these reasons, in our opinion the straight line depreciation approach proposed by GGT in its revised access arrangement is consistent with the NGR.

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