

Establishing opening tax inputs for a Post-tax Wacc methodology

DBNGP (WA)
Transmission Pty Ltd

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1. Executive Summary

This report describes the methodology applied in the calculation of various tax inputs for presentation into a revenue model to support the Access Arrangement being proposed by DBNGP (WA) Transmission Pty Ltd (DBP) for tariffs that will apply for the period 1 January 2016 to 31 December 2020 (the next regulatory period). This assisted in the establishment of tax inputs to the regulatory modelling process for the first time as DBP transitions from a pre-tax to a post-tax methodology as required by the National Gas Rules (NGR).

In the calculation of the opening tax inputs to the revenue model for the next regulatory period, we have had regard to the National Gas Rules (NGR) and in particular NGR 87A for the calculation of the cost of corporate income tax, and NGR 74 for forecasting and estimating.

Based on the assumptions and the methodology set out in this report,

- the opening written down tax value of the assets used for reference services calculated as at 1 January 2016 is estimated as \$1,238,432,632;
- the opening written down value of tax losses which could be applied to the calculation of the regulatory tax allowance as at 1 January 2016 is estimated as : \$nil

The values expressed here have been prepared based on the assumptions and findings set out in this report. They relate to the inputs for the calculation of the tax allowance in a regulatory revenue calculation supporting tariffs developed for an access arrangement. They are prepared on components of the business that are assigned to the delivery of reference services and these values are not to be used for corporate tax purposes for the taxable entity which may incorporate different assumptions outside of the regulatory tax assumptions applied for the purposes of the access arrangement.

2. Introduction

2.1 Background and purpose

DBP is a gas transmission business operating a gas transmission pipeline which brings natural gas from Dampier (the North West Shelf area of Western Australia) and delivers this gas to markets in Western Australia, as far south as Perth and Bunbury.

DBP services a small number of transmission customers and delivers gas to ATCO Gas Australia Pty Ltd, the gas distributor for the Perth region.

DBP is required to submit revisions to their access arrangement by 1 January 2015 for a revision to those terms and prices to commence on 1 January 2016.

DBP's proposed revisions to the access arrangement for the period beginning 1 January 2016 will base reference tariffs on a building block approach which will move from a Pre-tax Weighted Average Cost of Capital (WACC) approach to Post-tax WACC for the first time.

The application of a Post-Tax methodology in the calculation of building block revenues in a regulated business removes the effect of tax from the cost of capital applied in the determination of the return on assets. Removing the cost of tax in the WACC requires a separate tax allowance to be calculated and included in the revenue building blocks to enable the service provider to earn an appropriate return on its investment over the life of the investment.

Whilst the Post-tax approach will impact timing of the revenues received from the investments as compared to a Pre-tax approach, the net present value of the returns should be the same over the life of the assets, all assumptions being the same over the life of the assets.

Under the previous Pre-tax approach, there was no need for any tax related inputs to be applied in the process. Therefore the change to a Post-tax approach has triggered the need for new tax related inputs to the calculation for the first time.

Adoption of the Post-tax approach

The National Gas Rules requires a Nominal Vanilla rate of return to be applied in the development of tariffs. The Nominal Vanilla rate of return incorporates a Post-tax approach which is consistent with the Economic Regulatory Authority's (ERA's) Rate of Return Guideline and the approach adopted in the ERA's recent draft decision on ATCO Gas Australia¹.

The NGR specifies that the revenue for the reference services shall be calculated in accordance with NRG Rule 76:

76 Total revenue

Total revenue is to be determined for each regulatory year of the access arrangement period using the building block approach in which the building blocks are:

- (a) a return on the projected capital base for the year (See Divisions 4 and 5); and*
- (b) depreciation on the projected capital base for the year (See Division 6); and*
- (c) the estimated cost of corporate income tax for the year (See Division 5A); and*
- (d) increments or decrements for the year resulting from the operation of an incentive mechanism to encourage gains in efficiency (See Division 9); and*

¹ ERA Draft Decision in ATCO Gas Australia – October 2014 – Page 130

(e) a forecast of operating expenditure for the year (See Division 7).

The NGR also specifies the calculation of the tax allowance under Division 5A, Rule 87A:

Division 5A

87A Estimated cost of corporate income tax

(1) The estimated cost of corporate income tax of a service provider for each regulatory year of an access arrangement period (ETC_t) is to be estimated in accordance with the following formula:

$$ETC_t = (ETI_t \times r_t) (1 - y)$$

Where

ETI_t is an estimate of the taxable income for that regulatory year that would be earned by a benchmark efficient entity as a result of the provision of reference services if such an entity, rather than the service provider, operated the business of the service provider;

r_t is the expected statutory income tax rate for that regulatory year as determined by the AER; and

y is the value of imputation credits.

The NGR further specifies that the process of forecasting or estimating values applied in the preparation of tariffs in an access arrangement should meet the requirements of NGR 74:

74 Forecasts and estimates

(1) Information in the nature of a forecast or estimate must be supported by a statement of the basis of the forecast or estimate.

(2) A forecast or estimate:

(a) must be arrived at on a reasonable basis; and

(b) must represent the best forecast or estimate possible in the circumstances

Purpose of this report

The sole purpose of this report is to provide an independent view of the efficient benchmark corporate tax inputs relevant to the delivery of DBP's reference services. This may assist the ERA or any relevant appellate body to consider whether the forecast tax allowance included in DBP's proposed revisions to the access arrangement for the DBP reference services for the period 1 January 2016 to 31 December 2020 are consistent with the requirements of NGR 87A and NGR 74.

2.2 Structure of this report

This report outlines the results of our work undertaken with the purpose of responding to DBP's terms of reference, and is structured as follows:

- Section 3 outlines the approach to developing the benchmark tax inputs as required in the scope. This comprises;

- Section 3.1 which outlines the assumptions applied in the methodology to calculate DBP's estimate of corporate tax for the DBNGP for the period 1 January 2016 to 31 December 2020;
- Section 3.2 which outlines the assumptions we have applied in the methodology to calculate the opening Written Down Value of the Tax Asset Base as at 1 January 2016 and the assumptions we have applied in calculating an opening tax loss position for regulatory purposes as at 1 January 2016 DBP;
- Section 4 details the results of the analysis on individual assumptions applied by DBP and the commentary on the analysis;
- Section 5 is the author's statement; and
- Appendices provide supporting information.

2.3 Requirements of the independent report

2.3.1 The independent author

The author of this report is KPMG. KPMG has used the following experts to produce this report.

Robin Holmes
KPMG
151 Pirie Street
Adelaide SA 5000

Matthew Popham
KPMG
235 St Georges Terrace
Perth, WA 6000

2.3.2 Training and experience

The qualifications and relevant experience of Robin Holmes and Matthew Popham is set out in their CVs attached at Appendix B.

2.3.3 The questions the experts have been asked to consider

DBP has requested the independent author to provide an estimate of the

- Written down value of the regulatory TAB as at 1 January 2016, and
- Opening written down value of any tax losses as at 1 January 2016;

for a benchmark efficient entity providing reference services for the DBNGP; and

- a test of the methodology of calculating the tax allowance in the next access arrangement period to determine if it is in compliance with the National Gas Rules.

The **scope** of the Engagement is agreed as follows:

1. Scope

The purpose of the Engagement is to assist you with:

- Part 1 – a report in the form of an Independent Report Style that considers the approach adopted by DBP in estimating the corporate tax inputs as required by the National Gas Rules (NGR) 87(A) in a way the meets the requirements for forecasts and estimates under NGR 74 in support of a Post-Tax approach to the derivation of revenues for an access arrangement.

Part 1 – estimate of corporate tax

In determining if DBP has estimated corporate tax consistently with the NGR we will test the assumptions identified in Appendix 2 as follows:

a) Are the various assumption employed in the calculation of the opening Written Down Value (WDV) of the Tax Asset Base (TAB) consistent with:

- The National Gas Law & Rules
- Australian Income Tax law

b) Are the various assumption employed in the calculation of the opening tax loss position (if any) is consistent with:

- The National Gas Law & Rules
- Australian Income Tax law

In determining the consistency with the National Gas Rules, we may also consider:

- ERA benchmark regulatory tax assumptions applied in the regulatory tax calculations used in a post-tax regulatory decision;
- Other regulators benchmark regulatory tax assumptions applied in the regulatory tax calculations used in a post-tax regulatory decisions applied in Australia

The Terms of Reference for this engagement are set out in Appendix A.

2.3.4 The documents and material the experts have considered

The author has considered information from the following sources in preparing this report:

- the ERA's 2014 Access Arrangement Guideline – March 2014;
- the National Gas Rules – Version 22;
- the ERA's Rate of Return Guideline – December 2013;
- the ATCO Gas Australia draft decision – October 2014;
- Final Decision on Proposed Revisions to the Access Arrangement for the Dampier to Bunbury Natural Gas Pipeline – ERA November 2005;
- DBP Amended Proposed Revised Access Arrangement Information – 2 June 2005;
- Access Arrangement Information for the Dampier to Bunbury Natural Gas Pipeline – Amended by DBNGP (WA) Transmission Pty Ltd – 18 October 2012;
- the addendum to Vaughan Linfield's report of 18 December 2013, dated 27 November 2014 on the review of ATCO Gas' regulated tax assets; and
- such information that, in the expert's opinion, should be taken into account to address the questions outlined above.

The specific sources of information are listed in Appendix D.

2.3.5 Factual Findings

The independent opinions are based on the application of a methodology that is tested against the NGR and the calculation of tax inputs provided by DBP applied against that methodology.

The findings are set out as follows:

- the opening TAB and tax losses as at 1 January 2016 are described in Section 4 of this report.

2.3.6 The author's opinion

The author has set out below its opinion on the question posed by the terms of reference.

This opinion is based wholly and substantially on the supporting experts' specialised knowledge.

In the author's opinion, and based on the methodologies applied in this report, the

- Opening TAB as at 1 January 2016 is \$ 1,238,432,632; and
- Opening Tax losses as at 1 January 2016 are \$ nil.

2.3.7 The reasons for the author's opinion

The independent author has set out below the reasons for these opinions:

- DBP has developed an opening tax position for its TAB and tax losses which is derived from a basis which has commenced with the historical tax records of the business and adjusted for regulatory methodology in accordance with the NGR as set out below.
- The assumptions applied in the calculation of opening tax inputs for DBPs access arrangement have been tested against their consistency with the National Gas Rules and in particular Rule 87A, which sets out the parameters that will be applied in the calculation of the tax allowance in the building blocks revenue calculation and in the roll forward of the TAB. The assumptions applied in the calculations are reasonable because they:
 - Are consistent with the application of the NGR 87A, in that they estimate the tax calculations for a benchmark efficient entity providing reference services
 - Are not inconsistent with the historical tax treatment of the parameters used in the business providing benchmark reference services, in that they:
 - Incorporate tax depreciation which uses useful lives consistent with the useful lives used for income tax purposes, applying a straight line approach;
 - Incorporate interest deductions which are consistent with the benchmarks set by the regulator (Allowed interest rate, gearing and RAB);
 - Incorporate operating costs as a tax deduction; and
 - Exclude capital contributions from the tax calculation.

These are all consistent with the NGR and the ERA approach as adopted in ACTO Gas Australia, with the exception of the use of straight line depreciation for tax purposes. . Whilst this is different to that preferred by the ERA in the ATCO draft decision, it is consistent with the actual tax treatment of DBP.

- The TAB is based on tax data which is consistent with the actual tax records used to develop the entity tax returns, as adjusted for the regulatory required removal of capital contributions, the inclusion of the BEP Lease and the exclusion of non-depreciating assets. This means the TAB is replicable and representative of the benchmark efficient entity tax position (save for the regulatory adjustments);

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- Are relevant to DBP in that the data applied has been built from DBP records and is therefore representative of the tax position of the benchmark efficient entity providing the reference services delivered under the access arrangement;
- The figures have been prepared without the use of estimates up to 31 December 2013 – reducing the risk of bias in the calculations to 1 January 2016.

3. Approach and high level assumptions

This section describes the method used to determine efficient tax allowance under the NGR for DBP.

3.1 Tax data calculations

The approach to the calculation of the opening tax WDV for assets uses existing DBP corporate tax information as the basis of the data applied, and uses regulatory benchmarks to establish interest rate deductions consistent with generally accepted tax calculations.

3.2 Key assumptions

To ensure that the approach develops a tax allowance that is representative of an efficient benchmark efficient entity providing the reference services under the proposed access arrangement, it is necessary to make a number of assumptions for this calculation. Those assumptions are:

- The revenue from the building blocks, (incorporating a return on assets, a return of assets, the allowed operating costs and an allowance for tax), represents the efficient costs of the business providing reference services.
- All operating costs will be assessed in any regulatory decision to be the efficient operating costs for the business providing the reference services are hence are deductible for tax purposes.
- Customer contributions are excluded from the regulatory tax allowance methodology notwithstanding that they may be included in the actual tax position of the taxable entity receiving those contributions
- Nominal Vanilla WACC is a weighted average of the Post-tax cost of Equity and the Pre-tax cost of debt. The application of this form of WACC is consistent with a Post-tax approach to the calculation of a return on assets and therefore requires a tax allowance in the building block revenues
- There is circularity in the approach to the derivation of revenues such that revenues include an allowance for tax, and the tax is calculated on taxable income which includes the tax allowance. This is consistent with generally accepted regulatory principles of the building block approach under a Post-tax approach.
- Tax is calculated in nominal terms.

4. Tax allowance assumptions

There are three components to the work carried out with respect to the tax calculations used in the tariff modelling for the next regulatory period. They comprise:

- The tax calculation methodology applied in the next regulatory period;
- The calculation of an opening tax asset base as at 1 January 2016; and
- The calculation of a value for tax losses if applicable as at 1 January 2016.

Each of these is considered in more detail below, against the assumptions that were included in the scope of work provided by DBP.

4.1 Estimating the cost of Corporate Income Tax

4.1.1 Introduction

Estimating the costs of corporate income tax for a Post-tax approach to the determination of revenues for the period 1 January 2016 to 31 December 2020

As established in the Background section of this report, the move from a Pre-tax methodology to a Post-tax methodology requires a calculation for the tax allowance within the building blocks used to set the reference tariff for the DBNGP in the next access arrangement period.

We have set out below, the process by which DBP has estimated the cost of corporate income tax for the period, and the assumptions applied in the methodology and how they compare with:

- NGR 87A(1);
- Australian income tax law; and
- Regulatory precedent.

National Gas Rules

The Australian National Gas Rules (NGRs) set out a high level approach for the estimation of corporate income tax for each year of the access arrangement.

Rule 87A (1) sets out that approach as:

$$ETC_t = (ETI_t \times r_t) (1 - y)$$

Where:

- ETC_t is the estimate of allowed tax in year t
- ETI_t is an estimate of the taxable income for that regulatory year that would be earned by a benchmark efficient entity as a result of the provision of reference services if such an entity, rather than the service provider, operated the business of the service provider;
- r_t is the expected statutory income tax rate for that regulatory year as determined by the AER; and
- y is the value of imputation credits.

If we take the components individually, and compare them to the approach adopted by DBP, we can determine if there are any differences between the approach specified in the NGR 87A and

approach applied by DBP's methodology and in particular the "Tax" worksheet we understand will be provided as part of DBP's supporting submission 14.

The approach of the NGR can be broken down as follows:

- Taxable income is specified as the taxable income "earned by a benchmark efficient entity as a result of the provision of reference services if such an entity, rather than the service provider, operated the business of the service provider".
- The tax rate is specified as the "statutory tax rate as specified by the AER" (However in this case it is specified by the ERA).

Therefore, to assess any differences we will deal with the components of the approach as set out in the rules as follows:

4.1.2 Assumptions applied by DBP

a) Allowed revenue is taxable (and leads to an iterative calculation);

Total revenue required for the calculation of taxable income is consistent with the total revenue determined under the building block approach required by NGR 76:

Specifically, the model prepared by DBP incorporates building block components that use:

- a return on the projected capital base;
- depreciation on the projected capital base;
- a forecast of operating expenditure; and
- the estimated cost of corporate income tax .

These components were identified in the version of the tariff forecasting model prepared by DPB and provided to KPMG as part of this exercise.

This methodology meets the requirements of NGR 87A, estimating the cost of corporate income tax.

b) Operating expenditure is immediately and fully deductible (except for Gas Engine Alternators (GEAs) and overhaul expenditure which has been added to the TAB and depreciated consistent with regulatory treatment for the Regulated Asset Base (RAB));

All operating expenditure for the period 2016 to 2020 included in the tax calculation is consistent with the operating expenditure for the purposes of determining total revenue under NGR 76 with the exception of GEAs which are treated differently for tax purposes. DBP have removed GEA and overhaul expenditure from operating costs and instead added them to the TAB and depreciated the expenditure accordingly.

DBP has treated GEA and turbine overhaul expenses as operating costs for its regulatory submission. GEA and turbine overhaul expenditure is treated differently for tax purposes due to it being treated as capital in nature for tax purposes (under the Income Tax Assessment Act 1997) and it therefore being necessary to deduct the expense over the effective life of asset through tax depreciation. These assets have therefore been depreciated for tax purposes over the effective life.

In this regard, an effective life in line with the relevant Taxation Rulings which set out the Commissioner's determination of effective life subject to the relevant statutory caps (for example, 20 years for gas transmission assets) has been used. As such DBP has excluded these costs from the operating expenditure for the purposes of the tax calculation. Accordingly, this approach is

consistent with the tax position for a benchmark efficient entity providing the reference services and meets the requirements of NGR 87A.

The methodology applied, which assumes that “expenditure is immediately and fully deductible” meets the requirements of NGR 74 in that it is:

- a methodology that describes the basis (immediately deductible);
- reasonable for the circumstances of forecasting as it is simple to administer and replicates actual tax treatment; and
- consistent with methodologies employed in tariff models used by the Australian Energy Regulator (AER) and the Independent Pricing and Regulatory Tribunal (IPART) for example.

c) Debt is 60% of RAB which gives rise to tax deductible interest at the Allowable Rate of Return;

In calculating a taxable income, allowances are made for a tax deduction equal to the interest necessary to finance the investment in the efficient assets employed in the provision of reference services.

On the basis that the value of the RAB represents the efficient investment in assets necessary to provide reference services, then an interest expense calculated with reference to the investment in the RAB represents an efficient interest expense for the purposes of calculating the allowed tax deductions where it is based on the benchmark gearing levels and cost of debt.

Rule 87A of the NGRs specifically requires the estimate of taxable income to be based on an efficient benchmark efficient entity providing the reference services. DBP uses two components in the methodology applied to the calculation of interest in the derivation of taxable income. They are:

- Debt interest – which is set at the debt rate applied in the determination of the Allowed Rate of Return; and
- Gearing – which is set at the benchmark gearing rate applied in the determination of the Allowed Rate of Return.

As both of these matters are consistent with the components used in the determination of the benchmark Allowed Rate of Return that is used to calculate the return on capital in the building block revenues (and this is in turn used to derive taxable income), the calculations meet the requirements of NGR 87A for forecasting the calculation of the tax allowance.

We note that the gearing level of 60 per cent is consistent with that contained in the with ERA’s Rate of Return Guidelines (para 67) and therefore is considered to meet the requirements of NGR 74.

There is no specific guidance in NGR 87A on the definition of the RAB on which the interest is to be applied. However, the RAB is assumed to represent the efficient investment of a benchmark efficient entity and therefore represents the investment that is required to be funded by the business for the provision of services. The interest is calculated on the Nominal RAB which is consistent with the approach adopted by the AER in the Post-tax Revenue Model, as published by the AER and therefore meets the requirements of NGR 87A.

d) Excludes the impact of capital contributions;

Capital contributions are received by service providers from users to undertake projects where capital expenditure is required to acquire or augment assets that are outside the reference services (for instance an outlet point constructed by for a single user or “shipper”). We note that under NGR

capital contributions by users can be included in the RAB if it is demonstrated that the service provider does not benefit through increased revenues.

We note DBP have excluded the impact of capital contributions from the derivation of taxable income.

It is noted that other regulators such as the AER, IPART and the Essential Services Commission of SA (ESCOSA) for example incorporate customer contributions in the tax calculations of the regulated business, and therefore pass this cost of tax on to the consumers.

The approach adopted by DBP is to exclude customer contributions from taxable income and the associated investment from the TAB. This is an approach which is internally consistent, as it excludes the impact of the contributions from the income and from the associated expenditure from subsequent tax depreciation. It is also consistent with the approach adopted by the ERA in its draft decision on ATCO Gas Australia [par 1073-par 1079].

It is an approach that meets the requirements of NGR 87A (calculation of tax).

It is also an appropriate approach for forecasting under NGR 74 as the basis of the forecasting is:

- clearly explained;
- reasonable in that the ERA prefers this approach; and
- is internally consistent, and when applied, represents the best estimate for the methodology selected.

It therefore meets the requirements of NGR 74.

e) An opening tax asset base (TAB) is established at 1 January 2016 (refer section 4.2 below). The assets, values, rates and method of depreciation is rolled forward into the 2016-2020 regulatory period without change (including a notional BEP Lease valuation assumed for regulatory purposes);

The opening TAB is established for 1 January 2016, representing the commencement of the next access arrangement period.

In establishing the opening TAB, we have had regard to the NGR and the ERA's recent draft decision on ATCO Gas Australia.

In the ATCO Gas draft decision, ATCO Gas engaged a consultant to establish an opening TAB at 1 July 2014 (the commencement of the access arrangement period). ATCO's opening TAB was established based on:

- The date the business was first subject to tax;
- The tax value of assets in the RAB at that time; and
- The roll forward of the TAB between when tax was first paid and when the post-tax approach was introduced, including adjustments for tax depreciation, actual capex and asset disposals.

In the response to the ATCO submission, the ERA removed from the TAB the value of capital contributions (see above), the value of commercial meters (an issue unique to distribution systems), and instituted a lag in depreciation of 1 year to ensure that assets are only included in the TAB and subsequently depreciated after commissioning.

In DBP's case the opening TAB has been determined using the following assumptions:

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- The date the business was first subject to tax, and thus the date when a TAB was initially determined is the date of privatisation of the relevant gas transmission pipeline. This was early 1998;
- The value for the RAB came into existence in 2000 and the TAB was established on all regulatory assets as at the date of privatisation being 1998;
- The roll forward of the TAB between the establishment of the TAB (1998) and the forecast of a TAB as at 1 January 2016 incorporates adjustments for tax depreciation, actual capex and asset disposals;
- The forecasts for the TAB have been prepared on the basis of a 1 year time lag to allow for tax depreciation to commence only after commissioning of the asset.
- The BEP lease relates to pipeline capacity DBP has contracted for on the Burrup Extension Pipeline. We note this lease was approved as forecast conforming capital expenditure for 2011 and is therefore considered to be included in the regulated asset based for the DBNGP. On this basis DBP has included a BEP asset in the TAB equal to the value of the allowed capital expenditure for the 2011 Access Arrangement. This has been depreciated from that time using a depreciation rate applicable for a gas transmission pipeline.

Commentary on the opening tax loss position is described in more detail in section 4.3 below.

f) Assets added to the TAB during the period are added at their nominal value in year of expenditure;

NGR 87A does not specify a specific whether the calculation of the tax asset base should be in nominal or real terms. However, the income tax law applies the statutory tax rate of 30% to the nominal taxable income each year. (The statutory tax rate is assumed to represent the Australian Statutory Tax Rate for corporations)

As tax is paid in nominal terms, it is consistent that the TAB be carried forward based on additions which are added to the TAB at their nominal historic costs.

This approach is described in the models presented by DBP and meets the requirements of NGR 87A (estimated cost of corporate income tax) and NGR 74 (Forecasts and Estimates) .

g) Assets added to the TAB during the period are depreciated using the straight line method;

NGR 87A does not specify the approach to be used to depreciate the TAB. We note that in the recent draft decision for ATCO Gas Australia, ATCO proposed the use of straight line tax depreciation. The ERA accepted that this was a valid approach as was the diminishing value depreciation approach [ATCO Gas draft decision par 1103].

We note that the ERA preferred the diminishing value approach [para 1104]. However in DBP's case, the straight line depreciation methodology applied to the TAB is consistent with the current (and the historical) income tax position and therefore emulates the actual tax depreciation profile of the entity in that regard. It is therefore not inconsistent with NGR 87A. Straight line depreciation is also consistent with the methodology of depreciation approved by the regulator for assets in the regulated asset base.

In the ATCO draft decision, the ERA stated that "a benchmark efficient entity would seek to minimize its tax liabilities. Accordingly, the ERA has decided to require ATCO to apply the diminishing value method to calculate tax depreciation for capital expenditure over the fourth access arrangement period" (para 1104).

We do not question that there is an incentive to maximise tax deductions where possible, however it is not the only consideration that a benchmark efficient entity would need to consider. Tax cashflow planning and smoothing and the management of the franking account are also other considerations that an efficient entity would consider in developing tax strategies and dividend franking policies over time. We would suggest that it is not correct to expect that the diminishing value approach would in all circumstances, minimise the benchmark efficient entity's tax position without having regard to the other factors. Additionally, it can reasonably be expected that DBP did have regard to all these factors when adopting straight line depreciation. Like the benchmark efficient entity it too would have adopted an approach that would have minimised tax to the extent possible under the relevant law and it chose the straight line method.

We also consider that as straight line depreciation delivers a smooth tax depreciation profile it delivers a more equitable distribution of tax deductions passed on to customers over the life of the assets. Conversely, diminishing value, which may minimise tax at the beginning of an asset's life it increases the cost of tax to consumers in the future. This introduces an intergenerational charging issue. In our view this is not what was envisaged by the National Gas Objective² and it would not be in the long term interest of consumers to increase these biases.

Further, as NGR 87A does not specify a particular approach to be used to depreciate the TAB the approach adopted by DBP is therefore not inconsistent with the NGR. A benchmark efficient entity would seek to manage its overall finance position including those matters influenced by tax. This fact is argued by Vaughan Litchfield in his addendum³ to his report on the AER Draft ATCO decision (Appendix 12.4 dated 27 November 2014 submitted by ATCO) where Mr Litchfield argued a number of points including:

- The use of diminishing value depreciation is not always consistent with tax minimisation and prime cost (straight-line depreciation) is also adopted by entities wishing to minimise tax;
- Adoption of a straight line depreciation methodology for the TAB is not motivated by gas price determination processes;
- The timing of depreciation profiles for tax is not the only deterministic issue for a taxpayer;
- The use of a diminishing value approach for tax depreciation does not reduce the value of the tax asset to zero at the end of its effective life; and
- In their opinion, it was not clear that the ERA's recommendation was in line with the National Gas Objective, and it was noted that the ERA approach was not consistent with the AER's approach to the SP Ausnet decision, operating under the same NGRs.

Further, the fact that straight line depreciation is:

- available to be applied in an access arrangement;
- a legitimate approach under Australian income tax law;
- replicates the actual depreciation profile of DBP

² National Gas Objectives – Section 23 “The objective of this Law is 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.”
[http://www.legislation.sa.gov.au/LZ/C/A/NATIONAL%20GAS%20\(SOUTH%20AUSTRALIA\)%20ACT%202008/CURRENT/2008.19.UN.PDF](http://www.legislation.sa.gov.au/LZ/C/A/NATIONAL%20GAS%20(SOUTH%20AUSTRALIA)%20ACT%202008/CURRENT/2008.19.UN.PDF)

³ Vaughan Litchfield report – Addendum to the Review of the regulated tax assets for ATCO Gas available at:
<http://www.erawa.com.au/cproot/13047/2/20141129%20GDS%20-%20ATCO%20-%20AA4%20-%20Appendix%2012.4%20Review%20of%20regulated%20tax%20asset%20base%20for%20regulated%20revenue%20purposes%20-%20addendum%20to%20the%20report%20of%20Vaughan%20Lindfield,%20Ernst%20-%20Young.PDF>

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- able to provide a smoother tax depreciation profile; and
- used by many existing taxable entities;

indicates that it is an approach that meets the requirements of NGR 87A for the estimate of corporate income tax. It also therefore offers a forecasting methodology that meets the requirements of NGR 74 as it:

- can describe the basis of the assumption applied in the forecasting (NGR 74(1));
- offers a methodology that is reasonable in that it is consistent with methodologies that are applied by other regulators such as IPART and the AER (NGR 74(2)(a)); and
- is capable of providing the best estimate available as it has closely replicated the actual tax guidelines, depreciation rates and tax accounting principles applied by DBP (NGR 74(2)(b)).

It therefore meets the requirements of NGR 74 and 87A.

h) For assets added to the TAB during the period, depreciation starts at the start of the year following addition. Regulatory asset categories are not detailed enough to determine a tax effective life with accuracy, therefore it is assumed additions are those subject to the statutory cap of effective life resulting in depreciation at 5% straight line;

Rule 87A of the NGR does not specify the approach to be used to depreciate the TAB. In the recent draft decision for ATCO Gas, ATCO assumed depreciation commenced at the midpoint of the year of expenditure and depreciated tax assets by half a year's depreciation in that first year.

The ERA dismissed ATCO's approach, noting that there is a time lag between the spending of capital expenditure and subsequent asset commissioning, and adjusted the calculation to maintain a one year lag between the expenditure occurring and the subsequent commissioning (and depreciating) of the asset (par 1102).

DBP has adopted this approach and delayed the start of the application of straight line depreciation by one year after the expenditure is incurred to acknowledge the assumption that there is a delay (of on average one year) in the incurrence of expenditure and the commissioning of a capital asset.

The main classes of assets, in particular the pipeline and the compressors both have a depreciation rate of 5% (representing a tax life of 20 years) and over 90% of the assets (by written value as at 30 June 2014) have an effective life of 20 years. Accordingly, it appears reasonable to use a 5% depreciating rate for the forecast period.

This approach is described in the models presented by DBP and meets the requirements of NGR 87A (estimated cost of corporate income tax) and NGR 74 (Forecasts and Estimates).

i) No tax deductions have been claimed for the cost of raising equity.

We note that DBP does not have equity raising costs during the next access arrangement period.

4.1.3 Conclusion

The approach adopted by DBP in the statements numbered a) through i) meet the requirements of NGR rule 87A in the calculation of the estimated cost of corporate income tax for a benchmark efficient entity providing the reference services as discussed above.

Further, the methodologies applied as listed above meet the requirements of NGR 74 in that they:

- They describe the basis of the assumption applied in the forecasting (NGR 74(1));

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- The methodology is reasonable in that it is consistent with methodologies that are applied by other regulators such as IPART and the AER (NGR 74(2)(a)); and
- The methodology is capable of providing the best estimate available as it has closely replicated the actual tax guidelines, depreciation rates and tax accounting principles applied by the business (NGR 74(2)(b)).

4.2 The opening WDV of the TAB

4.2.1 Calculating the opening TAB

In the move from a pre-tax approach to a post-tax approach, a tax allowance needs to be calculated based on the opening tax position of the Tax Asset Base. This represents the remaining tax depreciation available to the benchmark efficient entity providing the reference services.

The opening tax value has been prepared based on:

- the historical tax records associated with the assets used to provide the reference services; and
- a number of assumptions that are discussed below.

In calculating the opening Written Down Value of the Tax Asset Base as at 1 January 2016 DBP has used the following assumptions:

a) The TAB has been established from actual tax data used in income tax returns, with some adjustment (i.e. for capital contributions);

In DBP's case, the information supporting the opening tax written down value has been prepared based on the data included in the income tax returns which have been lodged with the Australian Taxation Office. For income tax purposes, the expenditure falls into three main categories being depreciating assets, capital works and other tax adjustable amounts, and all three of these have been included in the calculation of the opening TAB as at 1 January 2016. A specific adjustment has then been made to exclude capital contributions from the TAB.

b) The TAB excludes:

- **Capital contributions;**
- **Land, and**
- **Capital Works in Progress (CWIP).**

Rule 87A of the NGR does not specify the approach to be used to depreciate the TAB.

DBP's approach to the development of the TAB excludes land and capital works in progress as these assets are not depreciable for tax purposes.

Capital contributions are discussed in section (4.2) above. The approach adopted by DBP is to exclude capital contributions from the taxable income and the associated investment from the TAB. This approach is internally consistent, as it excludes the impact of the contributions from the income and expenditure from the subsequent tax depreciation. It is consistent with the approach adopted by the ERA in its draft decision on ATCO Gas Australia [par 1073-par 1079].

c) The TAB has been adjusted for the regulatory BEP Lease value (\$19.44m costs – written down value \$14.55m as at 1 January 2016);

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The BEP lease relates to pipeline capacity DBP has contracted for on the Burrup Extension Pipeline. We understand that this lease was approved as forecast conforming capital expenditure for 2011 and is therefore considered to be included in the regulated asset based for the DBNGP.

As above we note that DBP has included a BEP asset in the TAB equal to the value of the allowed capital expenditure per the 2011 Access Arrangement, and depreciated the asset from first use using a depreciation rate applicable for a gas transmission pipeline.

d) Assets in CWIP as at 30 June 2014 and additions for regulatory purposes during the 6 months to 31 December 2014 commenced being depreciated for regulatory purposes during the 2015 calendar year. Additions added during the year ended 31 December 2015 (and onwards) are depreciated in the year following addition;

There is no specific approach defined in Rule 87A of the NGR that sets out the methodology and timing of the additions of Capital Works in Progress (CWIP) and the commencement of depreciation on additions to the TAB.

DBP's approach is to commence tax depreciation applying a one year lag such that tax depreciation commences mid-way through the year after addition. This one year lag after incurring the expenditure allows for an average of 12 months to commission the asset ready for use for tax purposes.

This assumption is consistent with the calculation of tax depreciation under the Income Tax Assessment Act 1997, which allows tax depreciation to commence once the asset is commissioned and held ready for use.

In the recent ATCO draft decision, the ERA argued that the ATO practice is to incorporate new assets into the TAB on an "as commissioned" basis. In particular it required ATCO to adopt the practice of incorporating assets into the TAB and commencing tax depreciation through maintaining a one year lag "between spending capital expenditure and commissioning the relevant asset. The ERA requires that ATCO update the roll forward TAB to ensure that the tax asset register includes commissioned assets only" [par1101-1102].

ATCO incorporated assets into the TAB in the year of expenditure but included half a year's depreciation only in the first year. The ERA advised ATCO in its draft decision that this was not acceptable as it may include uncommissioned assets due to the lag between expenditure and commissioning.

DBP's approach would meet the ERA's requirements if they applied the same principle to DBP as they applied to ACTO.

This approach meets the requirements of Rule 87A of the NGR. It represents a consistent application of the tax depreciation methodology in deriving opening TAB values for the commencement of the next access arrangement period.

Conclusion

The total regulated tax asset based has been calculated at \$1,238,432,632 as at 1 January 2016 and consists of the following:

	Tax values at (\$m)
Initial assets as at 1 January 2000 (excluding capital contributions, land and CWIP)	645,489,242
Add additions (at historic cost in relevant year) for the period 2000 to 2015	2,101,625,088

Depreciation of those assets for the period 2000 to 2015	(1,505,513,800)
Disposals – tax written down value	(3,167,898)
Balance as at 1 January 2016	1,238,432,632
<i>Includes</i>	
BEP lease	14,549,143
<i>Excludes</i>	
Shipper funded works – capital contributions	53,777,806
Land and non-depreciable site works	6,618,918

Note: This includes capital expenditure and depreciation estimates rather than actuals for the period from 1 July 2014 to 31 December 2015.

4.2.2 Methodology applied in the calculation of the TAB

In calculating the above balance of the TAB, we have set out below the methodology used to verify the accuracy and completeness of the tax fixed asset registers provided to support the opening TAB as at 1 January 2016.

4.2.2.1 Documents relied on in the calculation of the TAB

We have been provided with the following documents by DBP as part of our review.

- Detailed tax asset register data for the period February 1998 to 30 June 2014;
- A summarised year on year reconciliation of the tax depreciation data as per income tax returns to tax the tax depreciation claim for regulatory purposes for the period February 1998 to 31 December 2020;
- Forecast tax depreciation data for the period 1 July 2014 to 31 December 2020;
- Income tax returns for the entities that provided the reference services for the period February 1998 to 30 June 2013 and estimates for the year ended 30 June 2014;
- Special purpose financial reports for the entities and/or corporate group that provided the reference services for the period February 1998 to 30 June 2014.

We have also relied on:

- Income Tax Assessment Act 1936;
- Income Tax Assessment Act 1997;
- Taxation Rulings IT 2685, TR 2000/18, TR 2006/15 and TR 2014/4.

4.2.2.2 Assumptions

We have made the following assumptions (in relation to the information provided by DBP) in the review of the value of the TAB as at 1 January 2016.

- The acquisitions and disposal information, including the cost and date of acquisition/disposal, which has been used in the preparation of the relevant income tax returns is complete and accurate. We have performed an additional check to reconcile these to the relevant financial statements;

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- The opening tax cost of the assets of DBP, calculated upon privatisation in 1998 and included in the income tax returns lodged on behalf of the relevant taxable entities, is complete and accurate. We understand that external consultants were engaged at the time to undertake work in respect of the transaction and the opening tax cost base was calculated in line with their advice; and.
- We have accepted the forecast additions and associated depreciation figures provided to us and note that these are consistent with the tariff forecasting model.

4.2.2.3 Procedures undertaken in respect of tax fixed asset register

We have undertaken the following procedures in respect of the tax fixed asset register, and reported findings below:

- Detailed historical tax depreciation data has been reconciled back to lodged income tax returns. In cases where there was insufficient detail in the disclosure in the income tax returns, the figures have been tied back to the underlying workpapers (where available).
- Detailed historical tax depreciation data has been agreed to summary data sheets that feed into the Access Arrangement forecast tariff model.
- Review that the summary of the income tax treatment adopted for the various classes of costs included within detailed historical tax depreciation data is consistent with the relevant provisions of the Income Tax Assessment Act 1936 and the Income Tax Assessment Act 1997;
- Review of the summary of differences between income tax treatment and the calculation of the TAB to ensure the differences have been appropriately reflected.
- A review of the effective lives of the eight main categories of depreciating assets together with project pool expenditure, the BEP lease and leased assets.
- An integrity check of the detailed historical tax depreciation data was performed to identify that there were none of the following conditions:
 - Assets with negative closing written down values as at 30 June 2014;
 - Assets with a high (100%) or low (2% or less) depreciation rates in the register for the year ended 30 June 2014; and
 - Assets with a positive closing written down value but no depreciation charge for the period.
- A review of the historical tax depreciation data as at 30 June 2014 to establish that non-depreciable assets have been excluded.
- A comparison of depreciation claimed to date versus expected depreciation (calculated as cost x depreciation rate x life to date/effective life) as at 30 June 2014.

4.2.2.4 Key findings

In carrying out the aforementioned procedures our key findings were as follows:

- The additions, depreciation and closing written down values of the various classes of assets could be reconciled to the income tax returns which were lodged with the Australian Taxation office.
- The additions could be reconciled with the additions figures in the financial statements which have been subject to an external audit by either PricewaterhouseCoopers or Ernst and Young.
- We have reviewed the effective lives of the assets making up over 91% of the closing written down value of the tax fixed asset register for the year ended 30 June 2014. Based on our review, the effective lives of the assets used by DBP are in line with the Commissioner's effective lives

or the statutory cap of 20 years provided for gas transmission assets as set out in section 40-102 of the Income Tax Assessment Act 1997.

- There were no assets with negative written down values as at 30 June 2014.
- We identified assets with a written down value of \$5.2 million were included in the TAB as at 30 June 2014 and were not being depreciated. On further investigation, it was established that the majority of these assets (\$5.0 million) related to improvement in land and have now been removed from the TAB.
- The assets with a high (100%) depreciation rates related to immediately deductible items such as capitalised interest.
- The assets with very low (less than 2%) depreciation rates represented less than 0.1% of the closing written down value as at 30 June 2014 and therefore are considered immaterial.
- The reconciliation of the expected depreciation of the assets with a written down value as at 30 June 2014 and the actual depreciation produced a variance of less than 0.1% of the closing written down value of all of the assets in the TAB as at 30 June 2014. We consider this difference to be immaterial.

4.3 Calculating the opening tax loss position

Introduction

Developing tax inputs for an access arrangement period where the new period introduces a Post-tax regime for the first time would generally need to consider the opening tax loss position for the benchmark efficient entity providing the reference services.

As the tax position is generally influenced by timing issues, the opening tax loss position and the value of the TAB should be based on a calculation of the historical tax position of the business providing the reference services. It is important however, that the opening tax loss position is calculated with reference to the benchmark entity and incorporates assumptions that are consistent with that applied in the determination of tariffs for reference services in the subsequent access arrangement periods. This section tests the assumptions applied by DBP in determining the opening tax loss position, against the NGR and the ERA's methodology as applied in other decisions.

A calculation of the opening tax loss position as at 1 January 2016 if based on these assumptions should deliver a reasonable estimate of the tax losses that should be considered in assessing the allowance for tax in a subsequent period, if such losses exist and are material.

The assessment of the tax losses as at 1 January 2016 is considered in two parts:

- The assumptions as defined by DBP; and
- The estimate of the tax losses as calculated in a model prepared by DBP.

In calculating an opening tax loss position as at 1 January 2016 DBP has used the following assumptions outlined in the following sections.

a) If a tax loss arises in a given year that loss has been carried forward. It has also been assumed that the loss tests would continue to be passed;

In assessing the ability to carry forward tax losses, it is reasonable to assume that the benchmark efficient entity providing reference services continues to satisfy the various tests applied by the Commissioner of Taxation to ensure that the tax losses (if any) are carried forward from one year to the next such that they can continue to be utilised until fully absorbed.

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The NGR provides no further guidance on this point of detail, however the assumption is not inconsistent with the NGR.

b) A flat tax rate of 30% for the period 2000 – 2015 (noting the tax rate started at 36%, went to 33% then to 30%) has been assumed as tax payable in periods prior to the 2016-2020 regulatory period does not impact the current submission;

As set out above, the NGR set out a high level approach for the estimation of tax for each year of the access arrangement.

Rule 87A (1) sets out that approach as:

$$ETC_t = (ETI_t \times r_t) (1 - y)$$

Where:

ETC_t is the estimate of allowed tax in year t

ETI_t is an estimate of the taxable income for that regulatory year that would be earned by a benchmark efficient entity as a result of the provision of reference services if such an entity, rather than the service provider, operated the business of the service provider;

r_t is the expected statutory income tax rate for that regulatory year as determined by the AER; and

y is the value of imputation credits.

The NGR does not set out the approach to estimating tax in prior years, but given the equation set out above, r_t should be equal to the expected (or in this case the actual) statutory income tax rate for that regulatory year.

The company income tax rate applied in the DBP modelling was 30% for each year in the period 2000 to 2016. It is noted that the actual tax rate has varied during the early part of this period between 36% and 30%, however as the rate change did not impact the quantum of losses under Australian income tax law, it will not impact the calculation of the estimate of the carry forward tax losses as at 1 January 2016. Accordingly, modelling the tax at 30% is appropriate.

c) The DBNGP was commissioned in 1984 and was owned by the WA State Government. The DBNGP was subsequently privatised and sold to Epic Energy in early 1998. The DBNGP was first subject to the regulatory regime from 1 January 2000, and as such notional tax calculations have been determined starting at 1 January 2000, with tax losses calculated and carried forward from that date only. The opening TAB at 1 January 2000 was determined from the actual tax fixed asset register as it stood at that time;

The TAB as at 1 January 2000 was calculated based on:

- the tax values assigned to the DBNGP asset register following privatisation in early 1998;
- increased for additions;
- decreased for disposals; and
- decreased for depreciation;

attributable to the period prior to 1 January 2000, consistent with the treatment of these transactions in the actual tax returns of DBP. This treatment is consistent with the depreciation approach applied for regulatory purposes that determined a RAB as at 1 January 2000, and reduced the remaining lives for assets that existed at that date to take into account the time those assets were used prior to 1 January 2000.

d) Total revenue for prior years has been treated as assessable income in that year (excluding the effect from capital contributions);

It is reasonable to assume that the total allowed revenue for a given regulatory year is treated as assessable income in that year. This is consistent with how a Benchmark Efficient Entity would tax its income under Australian income tax law.

The NGR Rule 87A does not specifically outline how to estimate taxable income but does state that:

ETI_t is an estimate of the taxable income for that regulatory year that would be earned by a benchmark efficient entity as a result of the provision of reference services if such an entity, rather than the service provider, operated the business of the service provider.

It is reasonable to assume that the total revenue derived from the building block approach relevant to the RAB, capital expenditure and operating costs applied to deliver the reference services represents the taxable income of the benchmark efficient entity for the relevant year. It is noted that the exclusion of capital contributions from the taxable revenue is different in approach to that adopted by other regulators in Australia, however it is not inconsistent with the NGR and not inconsistent with the methodology required to be applied by the ERA in the ATCO draft decision.

e) Operating expenditure is immediately and fully deductible in the year incurred (except for GEAs and overhaul expenditure from 2005 onwards which has been adjusted to reflect related expenditure being capitalised for regulatory purposes);

Operating costs are assumed to be deductible in the year incurred. This is consistent with a benchmark efficient entity incurring deductible expenditure, and consistent with NGR Rule 87A. The fact that DBP may capitalise some regulatory operating costs relevant to the Gas Engine Alternators (GEAs) for tax purposes represents an adjustment which is consistent with:

- the current regulatory treatment proposed for the next access arrangement period; and
- the calculation methodologies used to determine the TAB.

This approach is also consistent with the actual tax treatment of the GEA expenditure within the tax returns of DBP.

In calculating the opening tax loss position of the benchmark efficient entity providing the reference services, we consider that an approach that is consistent with the historical income tax position is the most appropriate.

f) Interest is tax deductible in the year incurred, calculated at 60% of debt at the Allowed Rate of Return;

In calculating a taxable income for prior access arrangement periods, allowances are made for a tax deduction equal to the interest necessary to finance the investment in the efficient assets employed in the provision of reference services.

If it can be assumed that the value of the RAB represents the efficient investment in assets necessary to provide reference services, then an interest expense calculated with reference to the investment in the RAB represents an efficient interest expense for the purposes of calculating the allowed tax deductions if based on the benchmark gearing and cost of debt.

Rule 87A of the NGRs specifically requires the estimate of taxable income to be based on a benchmark efficient entity providing the reference services. DBP uses two components in the methodology applied to the calculation of interest in the derivation of taxable income. They are:

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- Debt interest – which is set at the debt rate applied in the determination of the Allowed Rate of Return; and
- Gearing – which is set at the benchmark gearing rate applied in the determination of the Allowed Rate of Return.

As both of these matters are consistent with the components used in the determination of the benchmark Allowed Rate of Return that is used to calculate the return on capital in the building block revenues (and this is in turn used to derive taxable income), the calculations meet the requirements of the NGR 87A.

The gearing level is consistent with the ERA Rate of Return Guideline (para 67), and debt interest is determined by applying the ERA’s nominal cost of debt (nominal risk free rate plus nominal debt margin as per the relevant decision) to the Nominal RAB consistent with the methodology applied by the AER in the published Post-Tax Revenue Mode used for the regulation of electricity network prices in the National Electricity Market.

In calculating the DBP opening tax position, the interest rates applied in the calculation as advised by DBP and as entered into the model are compared to the regulatory decisions are as follows:

Table 4.1: Interest rates

Period	Interest rate applied	Interest rate as defined in the relevant regulatory decision
2000 to 2004	6.48%	6.48% ⁴
2005 to 2010	6.75%	6.75% ⁵
2011 to 2015	7.07%	7.07% ⁶

The interest rates are consistent with the previous regulatory decisions.

There is no specific guidance in NGR 87A on the specific definition of the RAB on which the interest is to be applied. However, the RAB is assumed to represent the efficient investment of a benchmark efficient entity and therefore represents the investment that is required to be funded by the business for the provision of services. The interest is calculated on the Nominal RAB which is consistent with the approach adopted by the AER in the Post-tax Revenue Model, as published by the AER and therefore meets the requirements of NGR 87A.

⁴ Further Final Decision on the Proposed Access Arrangement for the Dampier to Bunbury Natural Gas Pipeline - Page 19, <http://www.erawa.com.au/cproot/3497/2/ACF2C91.pdf>

⁵ The decision refers to a Pre-tax Real WACC of 7.24% (para 236 page 54) in the DPNGP November final decision by the ERA (available at : <http://www.erawa.com.au/cproot/3742/2/Clean%20DBNGP%20Final%20Decision%20%20November%202005%20public%20corrigenda.pdf>). This report does not disclose the debt parameters within the WACC but accepts the DBNGP figures as disclosed in their submission which presents a cost of debt of 6.75% on page 10 of the Final Revised Access Arrangement available at <http://www.erawa.com.au/cproot/3543/2/ACF81C3.pdf>

⁶ Final Decision on Proposed Revisions to the Access Arrangement for the Dampier to Bunbury Natural Gas Pipeline - page 16 <http://www.erawa.com.au/cproot/10894/2/20121018%20-%20DBNGP%202010%20-%202015%20-%20Revised%20Decision%20-%20Amended%20Access%20Arrangement%20Information%20-%20Submission%2077%20from%20DBP%20-%202018%20Oct%202012.pdf>

g) Tax depreciation is based on actual tax data (starting with costs determined as part of privatisation in 1998) and includes lease deductions, excludes capital contributions, accounts for disposals and includes the depreciation of the BEP Lease costs as per regulatory treatment;

In calculating the opening tax losses as at January 2016, the historical tax depreciation taken as deductions against the assessable income started with depreciation on historical cost assets as recorded in the tax returns of the taxable entities and adjusted for the following:

- Tax depreciation under Division 40 of the Income Tax Assessment Act 1997;
- Capital works deductions under Division 43 of the Income Tax Assessment Act 1997;
- Project pool deductions under subdivision 40-I of the Income Tax Assessment Act 1997;
- Immediate deductions for assets capitalised for accounting purposes such as capitalised interest;
- Tax deductions for lease payments; and
- Gains or losses on disposal of assets.

Each of the above reflects adjustments which have been taken for income tax purposes in respect of capital expenditure. These adjustments have been agreed to the relevant income tax return and/or supporting working papers to the income tax return and are considered to be an appropriate estimate of the tax depreciation deductions which DBP would have received had DBP been subject to the post tax regulatory model since 1 January 2000.

h) Tax depreciation is calculated using straight line depreciation and effective lives are consistent with tax life rulings and the statutory effective life cap from 2000/2001 which has been calculated from the time assets were installed ready for use;

We note that DBP has applied a straight line method of depreciation in all tax depreciation calculations. This is not inconsistent with NGR 87R.

With regard to the “effective life cap” we note that a Taxation Ruling is released annually which sets out the Commissioner’s determination for the effective lives of depreciating assets. Whilst this is the starting point in determining the effective life of an asset, consideration must be given to the statutory cap on the effective life of gas transmission assets in section 40-102 of the Income Tax Assessment Act 1997. In particular, gas transmission assets have a capped effective life of 20 years. We have reviewed asset classes which represent over 91% of the written down value of assets as at 30 June 2014 and have observed that the tax depreciation calculations are in line with the Commissioner of Taxation’s effective lives and where appropriate the effective capped life of 20 years has been used.

The ERA noted in its recent draft decision on ATCO that straight line and diminishing value depreciation methodologies are available to a taxable entity (para 1103).

We consider that a straight line tax depreciation approach meets the requirements of the NGR 87A as discussed under assumption g) in section 4.1.2 above

i) No tax deductions are claimed for the cost of raising equity.

The current DBP model calculates an Equity Raising Cost in a separate calculation within the model, representing in part, the ERA’s methodology as outlined in the Rate of Return Guideline. We note that DBP are not proposing to include any equity raising costs in the next access arrangement.

Conclusion in the calculation of the opening carry forward tax losses.

The methodology employed by DBP to calculate a value for the opening tax losses as at 1 January 2016 consistently applies each of the building blocks required in the determination of total revenue under NGR 76 (Total Revenue) to estimate a value of corporate income tax each year, and therefore any tax losses that might be available in the period 2000 to 2015.

The approach includes the following:

- The Regulatory Allowed Revenues are converted to nominal revenues by the relevant CPI;
- Operating costs are immediately deductible (excluding GEA's and overhaul expenditure) consistent with the DBP tax treatment;
- Tax depreciation is calculated on the TAB;
- Interest is calculated on a nominal RAB (as described above) based on the benchmark efficient entity gearing and allowed interest rates; and
- Taxable income is calculated on the revenue less allowed deductions and a 30% tax rate is applied to determine tax payable.

Because of the relatively high tax depreciation on the initial asset base, it is observed in the modelling that tax losses were incurred in the early years up to 2003. However, the modelling estimates that these losses were beginning to be recouped in 2004 and were fully recouped by 2007. The benchmark efficient entity was paying tax in 2008.

It is also noted that the benchmark efficient entity is estimated to receive more than \$500 million in taxable income (based on the assumption that interest is calculated based on a nominal RAB) in the period 2007 to 2015 inclusive. This suggests that there are no tax losses to be brought forward as a carry forward loss as at 1 January 2016.

We conclude that based on the assumptions applied, and the methodology set out in the DBP model, the estimate of the opening tax losses for the benchmark efficient entity providing reference services for the DBP is nil as at 1 January 2016.

The forecasting methodology applied in the development of the carry forward losses is based on principles applied in the definition of a benchmark efficient entity, in that it allows for relevant deductions (operating costs, interest, and tax depreciation) to be deducted from total allowed revenue, and

- have been calculated on a basis that is clearly set out in the assumptions (NGR 74(1));
- is arrived at on a reasonable basis consistent with (NGR74(2)(a)); and
- offers the best forecast possible in that it is replicable, consistent with a benchmark efficient entity, and historical tax depreciation applied by DBP where appropriate (NGR74(2)(b)).

It therefore meets the requirements of NGR 87A and NGR 74.

5. Author's statement

We have prepared this report for the purpose set out in Section 2.1 of this report and it is not to be used for any other purpose without our prior written consent. Accordingly, KPMG accepts no responsibility in any way whatsoever for the use of this report for any purpose other than that for which it has been prepared.

We have made all inquiries that we believe are desirable and appropriate and that no matters of significance which we regard as relevant have, to our knowledge, been withheld from the material set out in this report.

Nothing in this report should be taken to imply that we have verified any information supplied to us, or have in any way carried out an audit of any information supplied to us other than as expressly stated in this report.

Our opinion is based solely on the information set out in this report. If we amend any conclusion on further information, we will amend the report.



KPMG

6. Glossary – terms used

Terms applied in this report

Term	Meaning
AEMO	Australian Energy Market Operator, administrator of the National Gas Rules
AER	The Australian Energy Regulator
Allowable rate of return	This is the weighted average cost of capital allowed in the determination of tariffs in the next access arrangement period
ATCO Australian Draft Decision	Draft decision issued by the ERA in October 2014 on ATCO Australia's revised Access Arrangement
BEP	Burrup Extension Pipeline
Capital contributions	Represents contributions in cash and kind made by customers to complete a connection or augmentation to the business to provide reference services
CWIP	Capital Works In Progress. Capital additions under construction but not commissioned
DBP	The business running the Dampier to Bunbury Natural Gas Pipeline (DBNGP) and providing the relevant reference services for gas transmission in Western Australia on that pipeline
DBNGP	The pipeline providing the relevant reference services and defined as the Dampier to Bunbury Natural Gas Pipeline
ESCOSA	Essential Services Commission of South Australia – the economic regulator in South Australia
ERA	Economic Regulatory Authority of Western Australia
GEA	Gas Engine Alternator. A motor to produce power to operating the pipeline services
IPART	Independent Pricing and Regulatory Tribunal, the economic regulator in New South Wales
NGR	National Gas Rules – available at Australian Energy Market Commission (AEMC)
Next regulatory period	The next regulatory period is the period 1 January 2016 to 31 December 2020
RAB	Regulated asset base. Those assets that are defined to be used by the business for the provision of the reference services, and at their written down regulatory value

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Term	Meaning
Rate of return	The allowed rate of return as defined in a regulatory decision. The Nominal Vanilla Weighted Average Cost of Capital
Rate of Return Guidelines	Guidelines issued by the ERA
TAB	Tax asset base. Those regulated assets that are defined to be used by the business for the provision of the reference services, but at the relevant tax written down value
User	Customer defined in the NGR or “shipper” of gas through the transmission system,

Appendix A: Terms of Reference

The relevant components of the terms of reference are presented below.

1. Scope

The purpose of the Engagement is to assist you with:

- Part 1 – a report in the form of an Independent Report Style that considers the approach adopted by DBP in estimating the corporate tax inputs as required by the National Gas Rules (NGR) 87(A) in a way that meets the requirements for forecasts and estimates under NGR 74 in support of a Post-Tax approach to the derivation of revenues for an access arrangement.

Part 1 – estimate of corporate tax

In determining if DBP has estimated corporate tax consistently with the NGR we will test the assumptions identified in Appendix 2 as follows:

a) Are the various assumption employed in the calculation of the opening Written Down Value (WDV) of the Tax Asset Base (TAB) consistent with:

- The National Gas Law & Rules; and
- Australian Income Tax law.

b) Are the various assumption employed in the calculation of the opening tax loss position (if any) is consistent with:

- The National Gas Law & Rules; and
- Australian Income Tax law .

In determining the any applicable consistency with the National Gas Rules, we may also consider:

- ERA benchmark regulatory tax assumptions applied in the regulatory tax calculations used in a post-tax regulatory decision;
- Other regulators benchmark regulatory tax assumptions applied in the regulatory tax calculations used in a post-tax regulatory decisions applied in Australia.

Appendix B: Curriculum Vitae of experts



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Function and Specialisation

Economic Regulation

Certifications & Professional Memberships

- Bachelor of Arts in Accounting (University of SA)
- Chartered Accountant (Institute of Chartered Accountants in Australia)

Profile/Overview

Robin works on regulatory and industry reform matters in the utilities industries, and advising government in related matters, having previously worked in Corporate Finance, Corporate Insolvency and Audit. He specialises in advising governments, utilities and other economically regulated industries on matters of industry reform, economic regulation and pricing and funding arrangements. He has worked almost exclusively in this area since 1998 and has maintained a particular focus on the pre-tax and post-tax modelling methodologies in building block revenue calculations.

Experience

- *SA Power Networks* - Robin provided the technical modelling experience to a review of regulatory models for SA Power Networks as part of the support for a regulatory proposal being prepared in 2014.
- *SA Water* - Robin was engaged by SA Water to conduct an examination on the revenue models used by the Essential Services Commission of SA in SA Water's last reset decision, and to be utilized in the next determination. The review will consider the approach to modeling, assessment of best practice and a technical review of the calculations applying a Post-tax revenue methodology.
- *Ergon Energy* - Robin reviewed a number of Post-tax Revenue Model issues for Ergon Energy as they considered the impact of changes to the rate of return calculations being considered by the Australian Energy Regulator.
- *Networks NSW* - Robin project managed the development of a report that considered the pricing methodologies for Ancillary Network Services as prepared by Ausgrid, Essential Energy and Endeavour Energy.
- *Jemena* - Robin provided the regulatory technical support to the audit team performing an audit of a Regulatory Information Notice for Jemena. That work included matters within the Roll Forward Model (calculating the opening asset base for the RAB) that required technical support for the audit process and consideration of the rules and the Basis of Preparation as required by the RIN guidelines and the instructions and Definitions.
- *ATCO Gas Australia* - Robin advised ATCO Gas Australia on the modeling methodology and tariff design presented in a required revenue building blocks calculation, and a tariff control document for a Gas Access Arrangement revision in Western Australia.
- *APA Allgas* - Robin managed a process of developing corporate cost benchmarks to support APA Allgas Networks, a Queensland Gas Distribution business in support of a new access arrangement being submitted to the Australian Energy Regulator. The work supported an Independent Expert report submitted as part of the documents prepared for the regulator.
- *APA Goldfields Gas Transmission Pipeline* - Robin managed the process of preparing operating cost benchmarks for the APA Goldfields Gas Pipeline business corporate costs in support of a submission to the Economic Regulatory Authority in Western Australia. The report was prepared in an expert witness style format for presentation as part of the regulatory submissions supporting the access arrangement amendments.
- *Envestra* - Robin provided the quality assurance role on a tariff model developed for allocating costs across different customer segments and calculating the tariff revenues for those customer segments. The model provided a tool to test tariff design for gas distribution tariffs for Envestra.
- *Envestra* - Robin was part of a team that provided expert witness support to the derivation of an efficient cost model for a benchmark efficient entity operating gas networks across three regions for a gas access arrangement.

- *APA Group* - Robin managed the preparation of a Corporate Cost Benchmarking report for the APA Group with respect to the Victorian Transmission Pipeline, for submission to the Australian Energy Regulator in March 2012 as part of a revised access arrangement.
- *APA Group* - Robin managed the preparation of an independent corporate cost benchmarking report for the Roma to Brisbane gas pipeline in support of an expert witness style report that formed part of a submission for the access arrangement for the Australian Energy Regulator.
- *SA Power Networks* - Robin provided the technical assistance associated with a revenue modeling theory to a technical review of the SA Power forecasting models adopting the PTRM approach and the RFM approach to revenue forecasting. The objective was to ensure that the PTRM methodology had been appropriately applied in a 15 year forecasting model for the electricity distributor.
- *State Water* - Robin assisted a modeling team examine a consultant prepared model for State Water in NSW that was attempting to follow the ACCC PTRM approach. Robin identified a number of methodological issues with the regulatory approach adopted in the modeling of the allowed revenues and reported these back to the client for subsequent assessment or correction.
- *Ausgrid* - Robin examined models and processes for the calculation of metering and ancillary services charges for Ausgrid. The engagement involved the examination of models and the compliance with the AER Framework and Approach guideline, plus documentation of the processes, resulting in an expert witness styled report under the Federal Court Guidelines.
- *Electricity transmission* - KPMG was engaged to prepare an expert witness style report for an electricity transmission business on issues relating to an opex forecasting approach in support of a regulatory reset submission. Robin led the regulatory and methodology section of that report.
- *ETSA Utilities (SA Power Networks)* - Robin managed the process of reviewing ETSA Utilities' compliance with the National Electricity Rules with respect to the tariff submission prepared as a result of the final determination on revenues published by the Australian Energy Regulator.
- *SA Water* - Robin developed a number of pricing model options for SA Water to consider in their application of an approach to the state based regulator as they entered economic regulation for the first time. The options allowed for consideration of different asset values, different price paths and different risk profiles depending on different WACC and tax approaches going forward.

**Matthew Popham****Partner**

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Function and Specialisation

Corporate Tax

Certifications & Professional Memberships

- Bachelor of Economics in Business Economics (Cardiff University)
- Chartered Tax Advisor
- Fellow, Tax Institute of Australia
- WA State Committee member, Tax Institute of Australia
- Institute of Chartered Accountants in Australia

Profile/Overview

Matthew is a Partner in the Perth Tax Practice with over 20 years' experience in advising on a variety of corporate income tax matters. Matthew is experienced in advising infrastructure clients, including DBNGP (WA) Pty Ltd and also has significant experience in advising clients with respect to the tax treatment of fixed assets and capitalised expenditure and availability of tax losses.

Experience

- *Large International Gold Mining Group* – Matthew was engaged to assist with the preparation of a fixed asset register on acquisition of an interest in a large gold mining operation. This involved identification of appropriate assets and determining the correct tax depreciation policy.
- *Large International Iron Ore Group* – Matthew assisted with the initial creation of a substantial tax fixed asset register involving the identification of appropriate assets and determining the correct tax depreciation policy.
- *Listed Mining Equipment Company* - Matthew was engaged to assist with an ATO risk review into the fixed asset and capitalisation policy of the company. This involved reviewing the appropriateness of the current policy with regard to initial expenditure and subsequent repairs, maintenance and refurbishment of assets and corresponding with the ATO on the client's behalf.
- *Large International Oil & Gas Group* – Matthew was engaged to review the Group's tax fixed asset register to ensure capitalised expenditure was being appropriately treated.
- *International Equipment Company* - Matthew was engaged to review the Group's tax fixed asset register to ensure capitalised expenditure was being appropriately treated.
- *Various* – As part of ongoing tax compliance engagements with his other clients, Matthew routinely reviews tax fixed asset registers and considers the appropriateness of capitalisation policies.
- *Various* – As part of ongoing tax compliance engagements with his clients, Matthew regularly advises on the availability of tax losses, including with respect to:
 - Continuity of ownership testing
 - Analysis of whether companies have maintained the 'same business' for the purposes of the same business test
 - The implications of losses moving into tax consolidated groups including modified same business testing and available fraction calculations

Appendix C: References

National Gas Rules – Version 22, From the Australian Energy Market Commission, available at <http://www.aemc.gov.au/energy-rules/national-gas-rules/current-rules>

National Gas Law - National Gas (South Australia) Act 2008
[http://www.legislation.sa.gov.au/LZ/C/A/NATIONAL%20GAS%20\(SOUTH%20AUSTRALIA\)%20ACT%202008/CURRENT/2008.19.UN.PDF](http://www.legislation.sa.gov.au/LZ/C/A/NATIONAL%20GAS%20(SOUTH%20AUSTRALIA)%20ACT%202008/CURRENT/2008.19.UN.PDF)

Economic Regulatory Authority, *Rate of Return Guideline* – December 2013 available at <http://www.erawa.com.au/cproot/11953/2/Rate%20of%20Return%20Guidelines.PDF>

Draft Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South-West Gas Distribution 14 October 2014 - (The ATCO GAS decision) by the Economic Regulatory Authority, available at:
<http://www.erawa.com.au/cproot/12938/2/20141014%20D129552%20%20GDS%20-%20ATCO%20-%20AA4%20-%20Draft%20Decision%20-%20PUBLIC.pdf>

The Current Regulatory Period Model, *DBNGP 2010 – 2015 – Revised Decision – Final Model for Publication.xlsx* 5 October 2012 as published by the ERA and available at <http://www.erawa.com.au/cproot/10864/4/DBNGP%202010%20-%20202015%20-%20Revised%20Decision%20-%20Final%20Model%20for%20Publication.XLSX>

Economic Regulatory Authority's 2014 Access Arrangement Guideline – March 2014

Final Decision on Proposed Revisions to the Access Arrangement for the Dampier to Bunbury Natural Gas Pipeline – ERA November 2005 available at :
<http://www.erawa.com.au/cproot/3742/2/Clean%20DBNGP%20Final%20Decision%20%20November%202005%20public%20corrigenda.pdf>.

DBNGP Final Revised Access Arrangement – June 2005 available at:
<http://www.erawa.com.au/cproot/3543/2/ACF81C3.pdf>

Access Arrangement Information for the Dampier to Bunbury Natural Gas Pipeline – Amended by DBNGP (WA) Transmission Pty Ltd – 18 October 2012 available at:
<http://www.erawa.com.au/cproot/10894/2/20121018%20-%20DBNGP%202010%20-%20202015%20-%20Revised%20Decision%20-%20Amended%20Access%20Arrangement%20Information%20-%20Submission%2077%20from%20DBP%20-%202018%20Oct%202012.pdf>

The addendum to Vaughan Linfield's report of 18 December 2013, dated 27 November 2014 on the review of ATCO Gas' regulated tax assets; available at:
<http://www.erawa.com.au/cproot/13047/2/20141129%20GDS%20-%20ATCO%20-%20AA4%20-%20Appendix%2012.4%20Review%20of%20regulated%20tax%20asset%20base%20for%20regulated%20revenue%20purposes%20-%20>

[%20addendum%20to%20the%20report%20of%20Vaughan%20Lindfield,%20Ernst%20%20Yong.PDF](#)

Information supplied by DBP

- Detailed tax asset register data for the period February 1998 to 30 June 2014;
- A summarised year on year reconciliation of tax depreciation data per income tax returns to tax the tax depreciation claim for regulatory purposes for the period February 1998 to 31 December 2020;
- Forecast tax depreciation data for the period 1 July 2014 to 31 December 2020
- Income tax returns for the entities that provided the reference services for the period February 1998 to 30 June 2013 and estimates for the year ended 30 June 2014;
- Special purpose financial reports for the entities and/or corporate group that provided the reference services for the period February 1998 to 30 June 2014.

We have also relied on:

- Income Tax Assessment Act 1936;
- Income Tax Assessment Act 1997; and
- Taxation Rulings IT 2685, TR 2000/18, TR 2006/15 and TR 2014/4.