Submission
to the
Queensland Competition Authority
(QCA)

Response to Draft Determination on WACC

Submission by ENERGEX Limited
19 February 2001

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1. INTRODUCTION

ENERGEX Limited is submitting this paper to the Queensland Competition Authority (QCA) in response to its call for submissions and comments on the *Draft Determination on Regulation of Electricity Distribution.*

One of the most significant issues for regulated network owners to be addressed by Regulators is the determination of the allowed rate of return. ENERGEX has previously made a number of submissions to the QCA on this issue, including:

- a response to the QCA's Issues Paper, *Electricity Distribution: Asset Valuation, Depreciation and Rate of Return*, published December 1999;
- a supplementary submission, *The Cost of Capital*, lodged on 7 November 2000; and
- a response to the QCA's Issues Paper, *Access Arrangements for Queensland Gas Distribution Networks*.

ENERGEX has two main concerns with regard to the QCA's approach to WACC in the Draft Determination, namely

- use of post-tax WACC with actual tax payments; and
- the method for determining the risk free rate.

These are discussed below.

2. POST-TAX FRAMEWORK

The QCA has made clear its intention to apply a post-tax nominal framework. This means that estimates of tax on operating and debt cash flows are an explicit component within the revenue cap.

ENERGEX has previously submitted that the cost of capital should be treated on a pre-tax real basis. However, if the QCA treats the cost of capital on a post-tax basis, ENERGEX submits that the tax effects should be allowed for in a simple, transparent way.

ENERGEX has significant concerns about the QCA's use of the tax cash flows to be included in the revenue cap allowance. These are described in subsequent sections.

Also, ENERGEX understands that the QCA has been inconsistent in its treatment of tax by using carry forward tax losses for DNSPs unlike the approach adopted for other regulated entities, as shown in the QCA's *Draft Decision on QR's Draft Undertaking*[1].

ENERGEX submits that the QCA should be consistent between regulated entities in its treatment of tax.

[1] QCA, *Draft Decision on QR's Draft Undertaking*, *Volume 4 - Working Papers*, p.164

2.1 Complexity in forecasting actual tax payments

There are a number of aspects of a post-tax framework using actual tax forecasts that increase the level of complexity associated with determining the AARR:

- there is circularity in the calculation of tax. Tax is dependent on the level of revenue allowed which in turn relies on the forecast of actual tax.
- The post-tax framework is extremely information intensive, which in itself could lead to material errors in forecasts. Forecasting actual tax payments requires estimates of permanent and timing differences. These estimates therefore necessitate additional modelling of tax asset balances, actual cost asset balances in addition to the regulated asset balances.
- Tax is derived after making estimates of operating cash flows therefore material errors in the operating cash flows will be magnified through the inclusion of tax.
- A detailed tax forecast also requires views to be taken on legislative changes and the impact on the network business. The new tax consolidations legislation is likely to have a significant impact on the network business which is not fully known at this time.

2.2 Additional Administrative Requirements

ENERGEX's existing tax position is affected by:

- non-regulated activities outside the jurisdiction of the regulatory determination;
- outside South-East Queensland; and
- from previous Group activities.

Further, assessment of taxes relating to each of these activities has not previously been made as each activity formed / forms part of the one legal entity. However, tax assessments are made on a legal entity basis.

Hence a consequence of the level of complexity is additional administrative costs to the business. Any additional costs arising from the QCA's approach will have to be passed through to customers.

2.3 Impact of Consolidations legislation

The introduction of the new Consolidations legislation will further add to the complexity of collecting this information.

The Federal Government's proposed Consolidations legislation (start date of 1 July 2001) has a dramatic impact on the way tax liabilities of businesses and entities are calculated. First, income tax will no longer be the liability of every company, only the parent or "head" entity of the group will be liable for income tax. This raises the issue of whether a regulated business owned by a subsidiary will be compensated for income tax in its revenue cap allowance despite it having no tax liability at law. Alternatively if the regulated business is the "head" entity, will the revenue cap compensate for the tax liabilities of the group? it should be noted that ENERGEX Limited (owner of the network) would be considered the "head" entity.

Secondly, the depreciable cost base of the assets of a regulated business is liable to change (either up or down) with a consequent change in claim for depreciation for income tax purposes to that previously calculated. Accordingly, forecasts of future tax payments are already likely to be inaccurate.

Thirdly, tax losses of subsidiaries are now tax losses of the head entity and subject to complex rules concerning the amount that can be carried forward and how much of those losses can be used from year to year. This raises the issue of whether the QCA will allow a regulated business to carry forward its tax losses notwithstanding that they may now be owned by another entity and subject to a restriction on the amount that can be used in any one year.

Finally, the tax payable by the head entity will reflect the tax liability on the entire group's business activities and for multi-faceted businesses such as ENERGEX its final tax liability will bear no correlation with the activities of the regulated business. Accordingly, as actual tax cash outflows for the regulated business are no longer identifiable nor determinable, the only workable solution is to have the regulated business calculate a notional tax liability based on its own identifiable revenues and costs. This is also less than optimal, as it will necessitate compliance with another tax regime adding to the administrative burden and costs of the ENERGEX to provide the QCA with relevant information. This cost will have to be passed on to the customer (through increased prices) or shareholders (through reduced returns).

The QCA's approach is inconsistent with the Government's intention of bringing simplicity to an otherwise burdensome and expensive task of managing inter-group companies' tax.

2.4 Inconsistent with a Benchmark approach to determining elements of the revenue cap

Chapter 6 of Part D of the National Electricity Code (NEC) states objectives of the Code which include:

- an efficient and cost-effective regulatory regime; and
- an incentive based regulatory regime which provides for a sustainable commercial revenue stream which includes a fair and reasonable rate of return to distribution network owners on efficient investment, given efficient operating and maintenance practices.

To determine what are efficient operating and capital costs extensive benchmarking of both Australian and US utilities has been undertaken to establish these costs. In relation to derivation of WACC, consideration of the optimal capital structures, borrowing and equity costs are considered on the basis of an efficient network owner.

Further, in modelling the cost of tax, the QCA has combined forecasts of actual costs with forecasts based on benchmarks:

- ENERGEX has provided the QCA with an estimate of actual tax depreciation and historical cost depreciation on regulated assets. These forecasts are used to determine the permanent and timing differences that arise between accounting profit and tax profit.
- an allowance for finance charges has been included based on a benchmark capital structure and benchmark cost of debt (consistent with the WACC).

The QCA has also indicated that it would undertake a comparison at the end of each financial year to compare the actual cost of tax with the forecast cost of tax. Given that ENERGEX's actual capital structure (affected by other aspects of the business) and cost of debt differ from the benchmark, the actual cost of tax will also differ. In addition, as mentioned above, the new Consolidations legislation may also have an impact on the actual cost of tax. As a result, ENERGEX may begin to pay tax within the regulatory period but may not compensated for the cost.

ENERGEX submits that the QCA's proposed approach of considering the actual tax position of each network owner is an aberration, clearly inconsistent with the approach to the other elements of the Draft Determination. Further, if an actual tax forecast is to be adopted, ENERGEX submits that the QCA should adopt ENERGEX's actual capital structure and actual cost of debt.

2.5 Inequitable pricing impacts

The inclusion of actual tax in the revenue cap will result in a revenue profile that will initially be low when the firm takes advantage of tax concessions such as accelerated depreciation for its assets but becomes much higher as those concessions expire and tax liabilities become payable. This has been described by many as the "S-bend" problem.

This feature of the post-tax nominal framework gives rise to a regulatory problem in that customers of the network at different points in time will pay different charges for the same set of assets as a result of the asset's changing tax position. This is an inter-generational equity issue. It raises the concern that different economic signals are being generated to users merely due to a timing issue which does not reflect the underlying value of the service provided.

Further, customers of similar networks in different regions will be subject to differing charges as a consequence of each owners tax position. Customers will be subject to opaque price changes due to the impact of changes in tax cash flows. This position is clearly not what was intended by the original architects of the Code.

2.6 Asset Sales / Other Structural Changes

Changes in ownership of regulated networks may have material impacts on network charges within a region. Currently ENERGEX has substantial tax losses resulting from accelerated tax depreciation allowances created as a result of corporatisation on 1 January 1995. Clearly our tax position would be different if the date of the corporatisation was different, eg:

- prior to 1 January 1995, so that most timing differences had started to reverse; or
- post Ralph reforms, when accelerated depreciation was no longer available.

A subsequent asset sale, company restructure, or certain financing transactions could potentially remove both accumulated tax losses and future accelerated depreciation allowances thereby impacting network charges to customers. Hence, use of actual tax creates a perverse incentive to restructure and increase tax payable.

ENERGEX submits that use of actual tax creates perverse incentives.

2.7 Timing Difference / Regulatory Risk

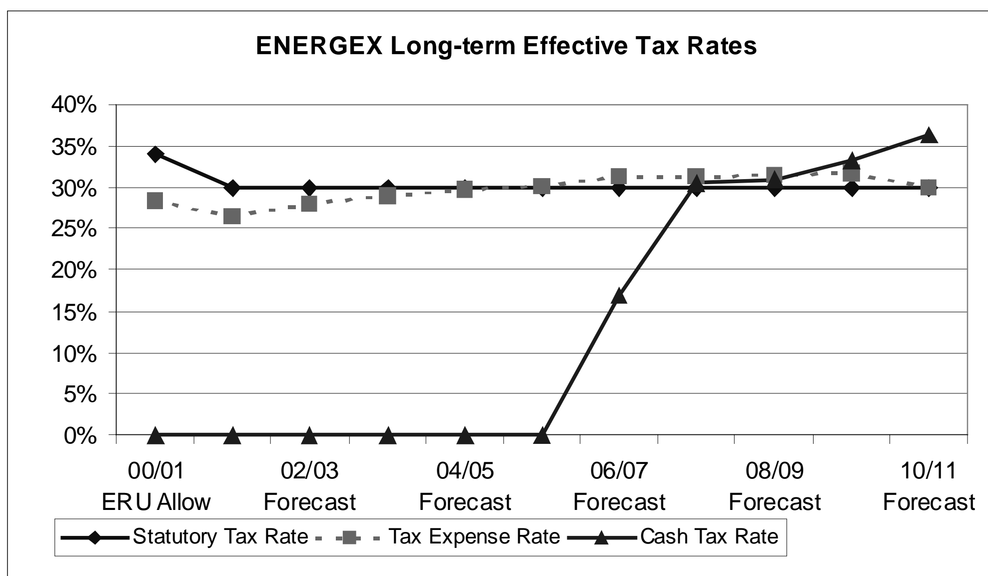
Accelerated depreciation allowances have been the single most influential factor in regard to regulators' arguments that a network owners effective tax rate is lower than the statutory rate.

This argument was appropriate where a network owner continually adding to its portfolio of assets continued to maintain a spread between accounting depreciation

and tax depreciation thereby resulting in effective tax rates lower that the statutory rate. However, the abolition of accelerated tax depreciation allowances will result in the further diminution of the difference between the effective rate and the statutory rate. In the long-term it is expected that the effective tax rate will equal if not exceed the statutory rate.

Figure 1 shows ENERGEX's forecast of indicative forecast long-term effective tax rates. In particular, it shows the reversal of timing differences expected to occur in the next regulatory period.

Figure 1 ENERGEX indicative long term effective tax rates



Some may argue that customers should not pay for tax that the network owner is currently not paying. This argument takes a very short-term view that is not appropriate for infrastructure assets with long lives. Investors in competitive markets with long-term assets expect their return over the life of the investment with pricing often being smoothed to adjust for variability in cash flows over time. This is the approach that should also be adopted for regulated networks.

Tax losses and accelerated depreciation are merely timing differences which will reverse in the short-term and hence give rise to price shocks. There is a risk however that future regulators may "change the rules", thus not passing on the cost of tax to customers. This is a very real risk for network owners resulting in a significant loss of value of these businesses.

There is already a precedent in the QCA's application of straight line smoothing to the Queensland DNSP's raw AARR, where a regulator has perverted economic principles to achieve a lower priced outcome.

ENERGEX submits that the QCA must commit to allowing tax above the statutory rate in future determinations, if it applies actual tax to this determination.

2.8 Rate of Return Regulation

ENERGEX considers that the QCA's application of the post-tax framework is at odds with the concept of an incentive regulation regime promoted under the National Electricity Code ("NEC"). The post tax framework is more akin to the rate of return style regulation that applies in the US.

Incentive regulation should encourage the business to deliver productivity gains, translating into lower prices for customers and in the long-term lead to increased profitability. An environment however, that focuses on constraining profitability provides few incentives for network owners and in some cases perverse incentives.

The post tax framework proposed by the QCA fails the test of an effective incentive regulation regime on two key tests:

- it minimises revenue / prices by regulating profit rather than creating incentives for the Queensland DNSPs to achieve productivity gains; and
- it involves a high degree of regulatory intrusion and scrutiny over business costs, which reduces the degree of flexibility available for the business to conduct its operations.

The post-tax framework clearly provides perverse incentives to network owners by:

- rewarding network owners for the cost of tax when incurred thereby discouraging the standard commercial practice of managing tax; and
- encouraging decisions that would not otherwise be made in a normal commercial environment.

2.9 Australian and Overseas Precedents

While there has been a move by both Australian and overseas regulators towards a post-tax framework, there is no evidence to suggest that other regulators have considered the existing tax position of a regulated network owner. In particular, no major determinations appear to have used carry forward tax losses for businesses when taking account of tax.

2.9.1 Queensland DBs

Previous determinations for Queensland electricity DNSPs used pre-tax WACC and so did not seek to estimate tax payable for the businesses.

2.9.2 Victorian DBs

The Victorian Office of the Regulator General (ORG) applied a post tax cost of capital in its recent regulatory determination for Victorian electricity DNSPs. However the ORG estimated the tax component based on effective tax rates, not taking into account current tax losses or other timing differences.

2.9.3 Transmission

The Australian Consumer and Competition Commission (ACCC) has been leading the trend towards post-tax cost of capital. In its determination on revenue for NSW and ACT electricity transmission companies, the ACCC finally adopted post-tax nominal despite presenting its initial draft determination in pre-tax terms.

The ACCC noted a number of difficulties and concerns with post-tax approaches, including:

- perverse incentives, in that determining revenue on the basis of individual tax circumstances might provide incentives for entities to manipulate their tax position; and
- increase in the regulatory burden.

The ACCC discounted these concerns on the grounds that "businesses should keep such (tax) information for other purposes". However, this overlooks the fact that most regulated businesses are structured differently to the way they are regulated, for sound commercial reasons. Hence businesses are not neutral to the approach to taxation, which runs counter to the widely accepted principle that tax should not be an issue in business structure.

2.9.4 Regulatory treatment of tax in Queensland

In its *Draft Decision on QR's Draft Undertaking*, published in December 2000, the QCA applied cost of capital on a post-tax basis:

- tax is included on the basis of the QCA's estimate of tax including timing differences arising from accelerated depreciation; but
- the QCA has not taken into account carry forward tax losses.

ENERGEX does not understand why the QCA insists on the same regulatory approach for electricity as for rail in respect of post tax nominal WACC but applies a different approach in use of actual tax.

ENERGEX submits that the QCA should not be arbitrary in regulatory treatment.

2.10 Summary of Concerns regarding a Post-tax Framework

Based on the above concerns, ENERGEX is of the view that the application of a post-tax framework detracts from the light-handed, price based, incentive regulation regime that was proposed under the NEC. Further, the approach is unnecessarily complex and lacks transparency.

2.11 ENERGEX's Proposal for application of a Post-tax Framework

ENERGEX proposes that the QCA should apply the statutory tax rate to accounting profits, ignoring both permanent and timing differences.

The benefits of this approach are:

- it is consistent with the approaches taken to set service quality standards, allowable operating and capital costs, regulated asset base and the weighted average cost of capital;
- it supports the basic principle set by the Code that regulation creates incentives to owners of the regulated network;
- customers will not be subject to price shocks over the life of the assets as a consequence of asset sales, company restructures and reversal of timing differences; and
- audit of a DNSP's performance can be focused on the key operational and capital aspects of the business.

3. COMPARISON BETWEEN POST-TAX AND PRE-TAX

While the Draft Determination uses a nominal post tax WACC of 8.92%, it quotes a pre-tax WACC of 7.02% calculated using the 'forward transformation' method. ENERGEX has previously submitted that neither forward nor reverse transformation should be used to derive equivalent real pre-tax WACC. Rather, the appropriate real pre-tax WACC is that which gives similar outcomes to a real post-tax WACC (calculated using the Fisher equation). This is essentially the method used by ORG, in calculating a 'tax wedge' from tax depreciation.

The appropriate equivalent real pre-tax WACC for ENERGEX, calculated as EBIT / net capital employed is 6.7% not 7.02% as quoted by the QCA.

Following is a restatement of ENERGEX's arguments in favour of pre-tax WACC.

3.1.1 Australian and Overseas Precedence

While there has been significant discussion about the application of a post-tax framework as opposed to pre-tax, most final Australian decisions to date have been based on a pre-tax framework. Further, overseas regulators who have been operating in a more mature market have applied a pre-tax framework in decisions to date.

3.1.2 Simplicity

Pre-tax WACC requires less complicated modelling of cash flows. Under the post-tax methodology, if actual tax is used estimates of permanent and timing differences are necessary. These estimates require additional modelling of tax asset balances, actual cost asset balances in addition to the regulated asset balances as well as numerous balance sheet accounts to determine the actual tax differences.

3.1.3 Price Shock

Application of post tax WACC requires an allowance for tax in the revenue cap. If tax allowances are based on estimated actual tax cash flows then customers may be subject to opaque price changes due to the impact of changes in tax cash flows caused by:

- changes in taxation legislation;
- the reversal of tax and accounting depreciation timing differences; or
- privatisations and asset sales.

3.1.4 Inter-regional Price Differences

Assessment of actual tax cash flows will vary with each network owner thereby creating differences in the cost of service as a function of the network owners approach to tax management.

3.1.5 Consistent with an Incentive based Regime

As mentioned above, the intrusion of a Regulator into a company's tax affairs is inconsistent with incentive based regulation and the inclusion of actual tax cash flows creates perverse incentives with regards to tax management.

3.1.6 Consistent with Benchmark approach to determine the cost of service

Application of a pre-tax rate implies that a network owners tax cost is equivalent to the statutory rate. This approach is no different to the application of operating cost and asset benchmarks used to determine reasonable operating costs, capital costs and the asset base.

4. MEASUREMENT OF THE RISK FREE RATE

ENERGEX has concerns about the approach used by the QCA in determining the risk-free rate as a component in the WACC.

The QCA has considered the methods available for measurement of the risk free rate, namely it may be measured as either an ‘on the day’ rate or an average of rates for a period leading up to the regulatory decision.

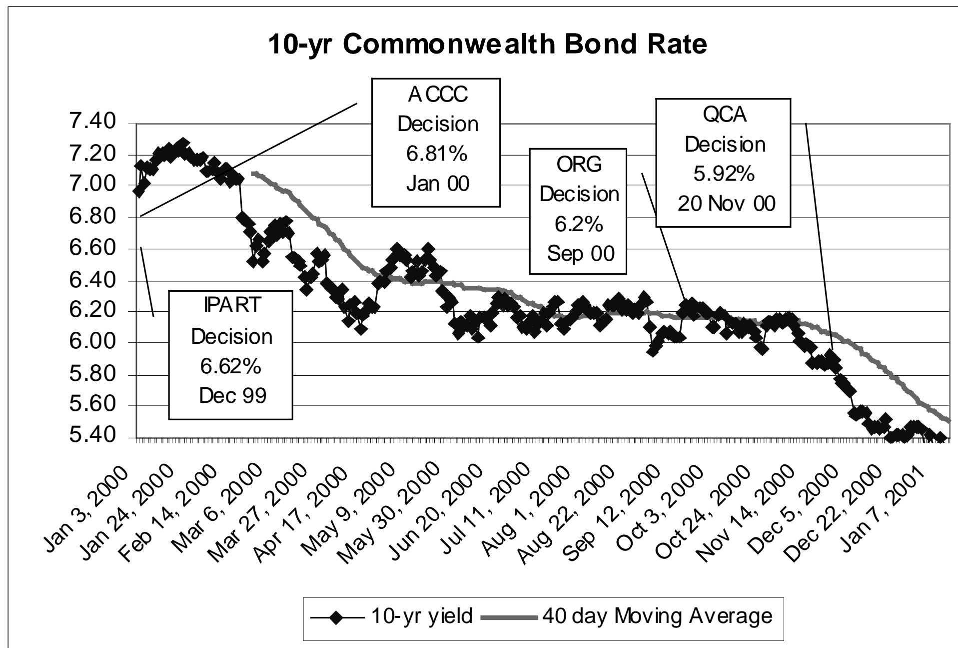
ENERGEX considers that the application of an ‘on the day’ rate is not appropriate as it creates a significant level of risk for regulated network owners.

An averaging approach is proposed on the basis that:

- It removes some of the potential volatility in interest rates (see graph below).
- The adoption of a single spot rate may also lead to investors establishing hedging / re-financing strategies based on the timing of the regulatory reset. This may lead to an excess demand for re-financing at the time of the regulatory reset, which has a potential to drive up re-financing costs. The use of a medium term average may alleviate this pressure to some extent.
- The use of an average rate produces a smoother price path and removes the potential for price volatility from one regulatory period to the next solely due to random movements in spot interest rates.

Figure 2 shows the movement in the 10-year Nominal Bond yield over the period of the most recent electricity regulatory determinations.

Figure 2 Movements in the 10-year Nominal Bond yield



The bond rates as shown in the above graph have a direct impact on regulated rates of return and benchmark allowances for the cost of debt.

Given that bond rates are so variable, a review of the revenue cap should be undertaken when changes in long term bond rates have a greater than 5% impact on revenue. This is likely to occur if bond rates move by more than 85 basis points.

ENERGEX submits that the QCA should set a threshold of 85 basis points and adjust the WACC if 10 year bond yields move beyond this pre-defined threshold.

The current regulatory determination is occurring at a very low point in the cycle that has three major impacts:

4.1 Customer price shock

Customers could be subject to a rate shock in the next regulatory period if rates increase, particularly given the low base at which they are. Analysts' views are that bond yields fell through most of last year and into this year in anticipation of slower economic growth and lower official cash rates from the Reserve Bank. As the RBA lowers cash rates (the US Federal Reserve has already started doing so), bond yields are likely to rise again, pricing in the next re-acceleration of economic growth.

4.2 Interest Rate Risk / Cost

The bond rate forms the basis of the benchmark cost of debt used in determining the allowable rate of return. Selection of the bond rate at such a low point in the economic cycle will create significant interest rate risk for DNSP's unless borrowed funds can be locked in for the regulatory period. As mentioned above, there would be a significant impact on the cost of funds for DNSP's if they are forced to re-finance at the beginning of each regulatory period.

4.3 Regulatory Risk

Regulators are quick to move on downwards adjustments to DNSP's revenue requirements, however as bond yields rise regulators are less inclined to pass these increases through to customers due to rate shock.

22 February 2001

Private & Confidential

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Ernst & Young Taxation Opinion

1. Introduction

This document of opinion ("our opinion") was prepared at the request of Energex Limited ("Energex") for inclusion in its submission, to the Queensland Competition Authority, to be issued in February 2001. The submission is in response to the "*Draft Determination on Regulation of Electricity Distribution*" ("the draft determination") as issued by the Queensland Competition Authority ("QCA") on 20 December 2000.

2. Scope of our involvement

The purpose of our opinion was to review Energex's submission concerning the effect of pre-tax and post-tax weighted average cost of capital ("WACC").

We have considered the submission prepared by Energex, which was in response to the QCA draft submission and make the following comments in respect of its contents.

3. Our Opinion

We reviewed Energex's submission from a taxation perspective and consider it to be a logical and accurate summation of the taxation implications affecting WACC. We confirm that a post-tax methodology of calculating WACC is likely to lead to a more complex monitoring process and a less accurate overall estimation of WACC.

In performing our review, we also provided advice, which outlined the various issues relating to the use of a pre-tax or post-tax framework, as well as the merits and complexities associated with each of them. As a consequence of this, our advice was incorporated into Energex's submission to the QCA.

It should be noted that the Government's intention, in introducing the Consolidation Regime, was to bring an element of simplicity to the task of ensuring that all group entities remain tax compliant. Despite this directive from the Government, it seems that should the QCA require a post-tax approach, it would be seen to be adopting compliance requirements that run contrary to that of the Government's intention.

We confirm our position with the following points, to illustrate the relative difficulties associated with the imposition of a post-tax methodology for calculating WACC, as compared with the relative simplicity of the preferred pre-tax approach.

They include:

- The imposition of a post-tax methodology may distort the calculation of the WACC, when compared to the relative simplicity of the pre-tax methodology.

- The numerous assumptions required to incorporate all material factors makes it difficult for customers and interested parties to follow, essentially creating a non-transparent model which cannot subjected to meaningful scrutiny.

- An accurate forecast of the annual tax position is required in order for a post-tax methodology to work. As forecasts and projections are frequently inaccurate, a distortion may occur should the post-tax approach be adopted.

- The numerous and subjective assumptions made for the operation of a post-tax methodology, require the QCA to take a view on what it considers to be 'reasonable'. As such, the scope for bias and the need for regulatory judgement is not significantly reduced.

- The recent upheaval of the Australian Taxation System is far from complete and thus, an accurate calculation of the tax benchmark would be difficult to obtain. Again, this adds to the distortion factor discussed above.

- Where, the availability of an accelerated depreciation allowance, was a major influential factor in the Regulator's arguments for the imposition of a post-tax methodology, the subsequent abolition of accelerated depreciation may result in a further diminution of the difference between the 'effective' rate and 'statutory' rate. The use of an 'effective life' on an unaccelerated basis for calculating a tax write-off will, therefore, now have a significant impact on the timing of tax deductions.

4. Disclaimer

This opinion has been prepared expressly for Energex and for the purpose of annexing it to Energex's submission to the QCA. Ernst & Young and its staff cannot be held responsible for the consequences of the actions of any party other than Energex and then, only to the extent of whether the tax advice that was provided was accurate under the laws at that time.

Declaration

Ernst & Young is providing taxation advice to Energex in relation to the submission, in response to the draft determination of the QCA. Ernst & Young has no interest in Energex, other than in connection with the provision of tax advice for Energex's submission.

The use of this opinion is strictly limited to the matters contained herein and is not to be read as extending, by implication or otherwise, to any other matter.

Ernst & Young consents to the inclusion of this opinion in Energex's submission in the form and content in which it is included.

Yours faithfully

Leigh Devine

Leigh Devine
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