



## **Regulatory treatment of accelerated tax depreciation**

A paper prepared for GPU Gasnet

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## Summary

This paper notes that the Net Present Value (NPV) benefits arising from accelerated tax depreciation were introduced by the Government as an incentive to investment activity.

The paper argues that the benefits arising from accelerated tax depreciation were intended by the Government to be retained by investors and that Government action to leave access to the benefits in place following the removal of accelerated tax depreciation supports this contention. If the Government intended that the benefit be passed directly to customers it would have implemented different arrangements.

The paper argues that the continued recognition of the benefit of accelerated depreciation for existing pipelines is consistent with the outcomes that would be expected if the pipelines were operating in a competitive market. This is because the grandfathering of the accelerated depreciation provisions provides pipelines that benefit from the arrangements with a cost advantage that would be secure even if the pipelines operated in a competitive market.

Consequently, the paper argues that there is no economic basis for the assignment of the benefits of accelerated depreciation for such pipelines to consumers.

## 1 Introduction

Tariffs for GPU's Principal Transmission System are currently based on a real pre-tax WACC, as set out in the Access Arrangements and not subsequently changed in the two revisions to those arrangements which have occurred since.<sup>1</sup>

The ACCC's Draft Decision on Access Arrangements for the Moomba – Sydney Pipeline System<sup>2</sup> (MSP) signalled the regulator's intent to move instead towards a post-tax framework, and to institute a range of adjustments to the permitted revenue that have the effect of transferring to pipeline customers the full benefits of accelerated taxation depreciation.

This paper examines the basis of the accelerated depreciation provisions in the Income Tax Assessment Act, and notes that they were intended to provide incentives for investment in such long-lived assets as natural gas pipelines by passing the tax benefits to the investor. To transfer the benefits of accelerated depreciation entirely to pipeline customers, as the ACCC appears to intend, would entirely negate the intention of these tax provisions. This is because the original purpose of these arrangements was to attract investment to Australia in internationally competitive capital markets.

The structure of this paper is as follows. First, accelerated depreciation is explained and the intended benefits are noted by reference to documents produced during the Ralph Inquiry. Second, the mechanism by which the ACCC's new approach to taxation benefits, involving a post-tax framework and writedowns to the ICB to reflect deferred taxation benefits, transfers them to consumers is outlined. Third, it is demonstrated that the ACCC's approach is inconsistent with the outcomes that would be expected if the pipeline was operating in a

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<sup>1</sup> The 28/4/00 revision was to incorporate Interconnect assets. The 29/6/01 revision was to incorporate the Southwest Pipeline.

<sup>2</sup> ACCC Draft Decision, Access Arrangements by East Australian Pipeline Limited for the Moomba to Sydney Pipeline System, 19 December 2000.

competitive market. Finally, the impact of the ACCC's new approach on investment incentives is described, with particular attention to regulated assets and the conclusions are drawn.

## 2 Accelerated depreciation

Accelerated depreciation is a legislated mechanism by which investors are entitled to claim depreciation-related tax deductions at a rate faster than the asset's economic life is actually consumed. This accelerated deductibility does not increase the total nominal value of depreciation deductions over the life of an asset, it simply affects the timing. The net effect is that tax payments can be deferred until later in the asset life—a process that conveys net present value benefits to the asset owner.

Some capital expenditure in the mining and petroleum sector, including natural gas pipelines, can be depreciated for tax purposes over 10 years, even though the life of a pipeline may exceed 50 years. This tax treatment provides an incentive to investors in long-lived projects as it defers cash tax payments to the later years of a project's life, at which time the project is more likely to have a steady income stream from which the tax can be paid. In so doing, investors gain a NPV benefit from a deferral in tax liabilities afforded by accelerated depreciation.

It is recognised that accelerated depreciation provides significant benefits to capital intensive industries such as in the resources sector, that effective tax rates for investments in mining are generally low, and that most jurisdictions provide tax benefits for such investments.

Over many years governments have used accelerated depreciation as a policy instrument to encourage investment in long-lived projects. A few selected quotes illustrates the point well:

“I conclude by dealing with the question of incentives for business.... For example, 5/3 depreciation, as mentioned by the Treasurer....provides a significant incentive to invest in the modernisation of Australian industry.” *John Button – Minister for Industry, Technology and Commerce, National Tax Summit – Record of Proceedings, Thursday 4<sup>th</sup> July 1985, p189*

“The Government has decided to provide substantial acceleration of depreciation deductions for plant and equipment for tax purposes....The tax preference....will encourage [domestic plant and equipment] investment relative to alternatives, including foreign investment abroad...The acceleration of depreciation for plant and equipment will be focussed particularly on assets with long lives.” *Paul Keating, Prime Minister. One Nation, 26 February 1992, pp71-72*

“A significant consideration for the Government in making the change [to accelerated depreciation] is the observation that many competitor nations provide a similar preference for such items and that investment in some of these (eg those forming part of infrastructure) should be encouraged.” *Greg Smith – First Assistant Secretary, Taxation Policy Division, Treasury 1992 Conference of Industry Economics, ANU, 16-18 July 1992, pp125-126*

More recently, discussion papers from the Ralph Committee’s review of business taxation explains the motivation for accelerated depreciation as it stood prior to the implementation of the Ralph recommendations.<sup>3</sup>

The following rationales are made for accelerated depreciation:

- “industries using assets eligible for accelerated depreciation may produce externalities, such as benefits for other industries, the introduction of new technology or other benefits not directly accruing to the owners;
- investments in wasting assets are inherently riskier than other investments and so accelerated depreciation is justified as a rough offset for other tax system biases against risk; and
- other countries provide such concessions and so we need to match them in order to remain internationally competitive.”<sup>4</sup>

“Mining, manufacturing and some infrastructure provision industries, such as power generation, are probably the largest beneficiaries of the accelerated depreciation provisions. Arguments could be made that there are possible

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<sup>3</sup> “A Platform for Consultation”, Discussion Paper 2, Volume 1, ([www.rbt.treasury.gov.au/publications/paper3](http://www.rbt.treasury.gov.au/publications/paper3)) February 1999.

<sup>4</sup> Ibid, paragraph 2.14.



externalities associated with these industries such as technology spin-offs and the importance of high quality infrastructure in attracting further industry.”<sup>5</sup>

More specifically, the report focuses on the role of accelerated depreciation in respect of long-term investments.

“.....in the absence of such treatment [accelerated depreciation], the tax system would be biased against long-term investment. Several reasons put forward as to why this bias arises are as follows:

- Long-term projects cannot utilise income tax deductions in the start-up years before projects produce income. This cash flow disadvantage can be partly offset by providing accelerated depreciation once the project is operational.
- Long-term investments require higher before-tax rates of return (and hence higher project discount rates) relative to short-term investments because their pay-back periods are longer and hence they are inherently more risky.
- Such investments offer higher social rates of return (more externalities) and should be encouraged. For example, infrastructure projects facilitate lower input costs on other investment activities.

“There is a possibility that if accelerated depreciation were not available, or it was made less generous in regard to long-life assets, significant prospective investments may be located in other countries in preference to Australia.”<sup>6</sup>

It is clear from the above quotes that accelerated depreciation provisions were intended to overcome factors which might otherwise have biased investment away from certain long-lived asset types in Australia upon which other industries depend.

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<sup>5</sup> Ibid, paragraph 2.15.

<sup>6</sup> Ibid, paragraphs 2.17 – 2.19.

Post-Ralph, accelerated depreciation is removed for assets acquired or commenced to be constructed from 21 September 1999.<sup>7</sup> However accelerated depreciation remains in force for assets constructed or acquired prior to the effective date.

Again, this highlights the Government's commitment that the recognition of accelerated depreciation benefits represents a property right that is vested in infrastructure owners. In this light it is curious that the Federal Government has recently affirmed this position (despite curtailing future opportunities for accelerated depreciation), yet regulatory bodies appear set to reassign it to another group.

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<sup>7</sup> "Minerals & Energy Tax", A brief covering taxation issues affecting the Minerals & Energy Industry, Issue 1, November 1999, Ernst and Young.

### 3 How ACCC transfers tax benefit to consumers

The new ACCC approach to accelerated depreciation is set out in their Draft Decision on the MSP Access Arrangements. It contains two elements that deserve careful attention:

1. the initial capital base is adjusted downward by the value of the accumulated deferred company tax liabilities; and
2. the permitted return is calculated by adding actual tax paid to the post-tax return derived by applying a post-tax nominal Weighted Average Cost of Capital (WACC) to the asset value.

Regarding the first point, on deferred company tax liabilities, the Commission noted:

“The deferred tax liabilities, which represent the difference between prima facie tax expenses (based on the statutory tax rate) and actual tax payable, occurs because of accelerated depreciation concessions for tax purposes.

“The deferred tax liabilities represent a precompensation of future tax liabilities and as such constitute a return of capital. Therefore, the capital base should be reduced by the value of accumulated deferred tax liabilities.”<sup>8</sup>

Whether or not the Commission is correct that the deferred tax liabilities constitute a return of capital, they do create financial value for the investor. By adjusting the capital base downward in this way, the Commission is transferring the financial benefit of accelerated depreciation from the investor to its customers. The customer pays less for the infrastructure services because the capital base to which WACC is applied is reduced by an amount which is intended to compensate exactly for the tax benefit the investor receives through accelerated depreciation.

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<sup>8</sup> ACCC Draft Decision, Access Arrangements by East Australian Pipeline Limited for the Moomba to Sydney Pipeline System, 19 December 2000, p. ix.

The approach of deducting deferred company tax liabilities potentially creates a dangerous precedent. Deferred company tax liabilities are created because the company did not earn sufficient profit in the early years of an asset's life to gain the full benefit of accelerated depreciation.

Accordingly, the approach of taking deferred company tax liabilities from the asset base penalises a regulated entity from having prices that have been historically *too low*. It is therefore completely at odds with a process that is designed to protect customers against the extraction of monopoly profits. For a regulatory body to pursue such an approach is not only perverse but brings a dangerously retrospective element to the regulatory process.

Regarding the second point, on preferring a post-tax framework, the Commission noted:

“Hence, under a pre-tax framework, which provides for tax compensation by adding a constant ‘wedge’ to the permitted rate of return whose magnitude does not vary with the timing of tax payments, the market value of the asset will generally be below the regulatory asset value. In a post-tax framework compensation for taxes is included in cash flows when they are expected to become due therefore the divergence of value does not occur. Because tax is compensated for in cash flows directly, any additional allowance for tax provided, for example through the application of a tax wedge, is excess to the required post-tax return required. It is essentially a costless source of cash flow. Since such funding is costless for the firm it must not earn the regulatory rate of return on the accumulation of such funds.”<sup>9</sup>

Based essentially on this reasoning, and supported by expert opinions provided during a WACC forum conducted as part of the Victorian decision, the Commission now considers that a post-tax framework is appropriate for regulatory decisions. Under such an approach, tax payments would be included in the cash flows as a cost in a similar manner to operating costs. This approach is considered by the Commission to simplify the relevant WACC formulae, and to treat taxation in a transparent manner.

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<sup>9</sup> Ibid, pp. 42-43.

Although it remained unsaid in the Commission's Draft Decision on MSP, this transparent handling of taxation has the effect of transferring all the taxation benefits earned by the investor to consumers. The Commission's post-tax framework, combined with the writedown of the capital base to excise benefits obtained through deferred tax liabilities, would make it impossible for an investor in a regulated pipeline to obtain the benefit from the accelerated depreciation allowances contained in the Income Tax Assessment Act.

The concern is not with the formulation of the WACC that is ultimately applied by the regulatory body, but rather the treatment of the benefit of accelerated depreciation. The recognition of accelerated depreciation can be completely consistent with the post tax WACC formulation so long as there is appropriate recognition of the tax benefit the Government clearly intended remain with the owner of the infrastructure in the underlying cash flows. Applying particular WACC transformations should not circumvent the issue of how the benefit should be assigned. This will be demonstrated in the next section which considers the economic rationale for allowing existing pipelines that continue to qualify for accelerated depreciation to retain the benefit from the incentives.

## 4 Accelerated depreciation in a competitive market

The National Third Party Access Code for Natural Gas Pipeline Systems indicates that the objectives underpinning the setting of reference tariffs and reference tariff policy, are amongst other things, to replicate the outcomes of a competitive market.<sup>10</sup> As the ACCC has itself emphasized on numerous occasions, prices ought to be set in ways that “mimic” those that would prevail absent the market power incumbent service providers possess.

This section considers the practical application of these principles in the context of accelerated depreciation. In summary, the section shows that in a competitive environment where an incumbent enjoys an advantage relative to entrants, the competitiveness of the underlying market will not affect the incumbent’s ability to retain that benefit. This is because prices in such a market are set by the efficient costs of a new entrant. Since the benefit of accelerated depreciation is available to the incumbent but not new entrants the concessions available to the incumbent will be retained by it even in a competitive market.

When the Federal Government recently removed accelerated depreciation for new projects, it did so in a way that recognised the continued benefits to be provided to those that had invested in response to the previous arrangements. The effect of the grandfathering arrangements is therefore to entrench the accelerated depreciation benefits for recipients to the extent that they would endure for pipeline owners (and not be passed to customers) even if the pipelines operated in a competitive market (that is, in replicating the outcomes of a competitive market).

To see the distinction, first we will consider a process whereby the competition is for the market. In other words, consider the pricing of the use of the pipeline that would emerge under a competitive tendering process in which firms tender to be the exclusive supplier of the gas transmission service as currently provided by the incumbent.

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<sup>10</sup> Refer clause 8.1(c). Attachment A considers the consistency of the approach contained in this paper with the other principles contained in clause 8.1.

Suppose the auction is such that firms put forward an access pricing rule by which they are willing to be the exclusive supplier of the gas transmission service, and the regulator selects the firm with the access pricing rule that has the lowest NPV equivalent. In this case, the outcome of such a competitive tender is that the winning firm will supply at exactly the total long run incremental cost of providing the gas transmission service.

To see this note that if a firm bids more than this amount it will not win the auction, since another firm can supply the service at this price and still recover costs. If any firm other than the incumbent (which may already have some sunk costs) bids less than this amount it will not earn a sufficient return on its capital. Thus, the incumbent will not need to bid (materially) less than the total long run incremental cost of providing the gas transmission service to undercut all other firms.

Furthermore, the incumbent will want to bid the total long run incremental cost of providing the gas transmission service and win the tender process if it has some sunk costs from past investments. If it does not participate, its alternative is to sell its assets to a rival firm. The most it can sell them for is the total long run incremental cost of providing the gas transmission service, which suggests it can only be worse off by not participating in the auction.

Moreover, at the time of the auction the incumbent will not only want to bid an access pricing schedule which implies a NPV of payments consistent with the total long run incremental cost of providing the gas transmission service, but it will want to use precisely the schedule determined by that approach.

If it does not, and it wins the bid, it must face the possibility in the future the regulator will call another auction at a point where the firm's NPV of future payments is greater than implied by the total long run incremental cost of providing the gas transmission service, and it will as a result of the auction face a reduction in its NPV of payments to the total long run incremental cost of providing the gas transmission service level at that point in time.

In order to avoid such a capital loss, it will choose the total long run incremental cost of providing the gas transmission service schedule of access payments from all possible schedules with the same NPV. This is the only time consistent schedule for the bidding firm. Thus, the result of the competitive tender process is that the winning firm will supply according to the total long run incremental cost of providing the gas transmission service at stand-alone costs.

Since the competitive tender process mimics competition over the right to supply the gas transmission service, this ensures that the least cost firm supplies the market. It also ensures the interests of access seekers and access providers are taken into account.

In this framework, where the competitive tender process mimics competition over the right to supply the gas transmission service, any infra-marginal cost advantage enjoyed by the incumbent (say resulting from access to a grandfathered tax allowance that is not available to current investors) is preserved for the incumbent.

This is because that cost advantage will have no effect on the outcome of the auction, as no challenger can build a substitute asset that captures that cost advantage. Knowing this, the cost advantage will be completely ignored in the bidding process. Any regulatory process which seeks to mimic the outcomes of effective competition should therefore set allowed revenues in a manner consistent with this result.<sup>11</sup>

Alternatively, consider competition in a market – to the extent that a new entrant will not be able to replicate an incumbent’s cost advantage, again, that cost advantage will be irrelevant to the outcomes of the competitive market. In other words, in such a case, the competitive price would be set for the marginal supplier (that is, the new entrant), that does not have the benefit of the cost advantage. In this environment, any infra-marginal cost advantage

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<sup>11</sup> As is well known, complexities can arise from strategic behaviour in the modelling of a Chadwick-Demsetz auction for the exclusive right to provide the service in a situation where sunk costs have been incurred. These complexities occur because a challenger can “hold up” the incumbent by bidding an amount close to forward looking cash costs, effectively forcing the incumbent to sell the sunk assets for their scrap value. However, it can be shown that if the regulator wants to ensure efficient investment (in terms of timing and amount) in the presence of this risk of hold-up, it must do so by using a default rule that transfers the assets for the forward looking **long run** cost – that is, for the new build cost of the challenger. This means that again, even in the auction structure that prevents strategic behaviour, a welfare maximising regulator will ensure that the inherited advantage of an incumbent owner (in this case, the benefit of the grand-fathered provision) is fully preserved.



enjoyed by the incumbent (say resulting from access to a grandfathered tax allowance that is not available to current investors) again would be preserved for the incumbent.

In effect, it is the **differential** treatment of accelerated depreciation that ensures that it will continue to be enjoyed by the incumbent provider irrespective of the competitiveness of the market in which it operates. The result is general and applies to any such cost advantage that is enjoyed by one of more market participants other than the marginal provider (the supplier who effectively sets the equilibrium market price).

In summary, in a competitive environment, the benefit received by an incumbent via an absolute cost advantage, such as that provided by differential recognition of accelerated depreciation, is not affected by the competitiveness of the underlying market. Rather, prices in such a market are set by long term costs, which will naturally not reflect the infra-marginal value of the concessions.

Since this result must prevail in all markets in which there is any new supply, it is obvious that the Government expected and would consequently have intended the benefit of the concession to remain with the owner(s) of facilities securing that concession.

## 5 Conclusions

Accelerated depreciation provisions were introduced to taxation law in order to overcome biases that would otherwise adversely affect investments in certain long-lived assets of national importance, such as natural gas pipelines. While the Ralph review has led to changes to the accelerated depreciation provisions, they remain in force for assets constructed or acquired prior to September 1999.

The ACCC has signalled a new approach to taxation in tariffs for regulated pipelines, which involves a series of measures designed to transfer in full these taxation benefits to consumers.

If the ACCC persists with this initiative, so far not applied to GPU GasNet's Principal Transmission System, but advocated in the context of the Draft Decision on the MSP Access Arrangements, the investment incentives intended through accelerated depreciation will be entirely negated retrospectively.

The provision of the subsidy occurred in an environment where pipelines were in a position to extract virtually all of the benefit of the subsidy. It is these benefits that encouraged the investment in the pipeline in the first place. The approach proposed by the ACCC will offset the incentives that accelerated depreciation was extended to impart. The result is even inconsistent with the outcomes one would expect from a competitive or contestable market.

This in turn suggests a significance that goes well beyond accelerated depreciation because it goes to the heart of the credibility of the regulatory arrangements. The transfer of the benefit of accelerated depreciation to consumers sends an unfortunate signal to potential investors in these assets. This is because it inevitably strains the credibility of any commitment by a regulatory body to adopt outcomes that would be consistent with those expected in competitive or contestable markets.

This credibility is critical to providing confidence to investors in the consistent application in regulatory arrangements. The mere perception on the part of potential investors that regulatory outcomes lack this credibility must ultimately stifle socially desirable investment in infrastructure industries.

## Attachment A - Clause 8.1 of the National Gas Code

Clause 8.1 of the National Third Party Access Code for Natural Gas Pipeline Systems (the National Gas Code) sets out general principles for the setting of Reference Tariffs and the Reference Tariff Policy. These principles are set out below. Beneath each principle is a brief analysis explaining how the arguments presented in this paper are consistent with the relevant principle.

- a) *providing the service provider with the opportunity to earn a stream of revenue that recovers the efficient costs of delivering the Reference Service over the expected life of the assets used in delivering that Service;*

Consistent with the outcomes expected in competitive or contestable markets, the efficient costs of delivering the Reference Service should be considered from the perspective of the efficient new entrant. Accordingly, the proposal that the incumbent receives the benefit of its inframarginal cost advantage as explained in section 4 is consistent with it being compensated for the efficient costs of delivering the Reference Service if a new entrant is unable to avail itself of this opportunity. This is clearly the case here since the Federal Government has removed the concession on accelerated depreciation.

- b) *replicating the outcome of a competitive market;*

Section 4 of this paper explains how the proposed outline is consistent with replicating the outcome of a competitive market. In summary, if there was competition for the market based on the lowest price for the provision of the gas transmission service, bidders would submit bids based on the long run forward looking costs and hence would be unaffected by any differential tax concessions enjoyed by the incumbent.

- c) *ensuring the safe and reliable operation of the pipeline;*

The issues outlined in this paper are unlikely to affect the safe and reliable operation of pipelines.

- d) *not distorting the investment decisions in pipeline transportation decisions are in upstream or downstream industries;*

The ACCC's proposed approach, as outlined in its Draft Decision on Access Arrangements for the Moomba – Sydney Pipeline System<sup>12</sup>, must have at least the tendency to distort investment decisions in pipeline transportation systems.

This is because the effect of the approach is to transfer to customers the benefit of accelerated depreciation when those entitlements are not available to new entrants. Consequently, it would create a situation where an efficient provider could not enter the market and result in a price that is lower than would result from an auction to provide the gas transmission service as outlined in section 4. Moreover, adopting an approach that is inconsistent with mimicking the outcomes of competitive markets may affect potential investor's perceptions about the credibility of the regulatory arrangements, which, in turn, could distort and discourage future investment.

- e) *efficiency in the level and structure of the reference tariff.*

Section 4 outlines why the approach outlined in the paper generates a level of reference tariffs that is consistent that an efficient level of reference tariffs. The issues discussed here do not bear upon the structure of reference tariffs.

- f) *providing an incentive to the Service Provider to reduce costs and develop the market for Reference and other Services.*

The approach proposed in this paper provides an incentive to the Service Provider to reduce costs and to develop a market for Reference and other Services. However, since the ACCC's proposed approach sends conflicting signals about its commitment to mimicking the outcomes of competitive markets, it is potentially inconsistent with providing incentives to developing markets and hence could be inconsistent with this principle.

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<sup>12</sup> ACCC Draft Decision, Access Arrangements by East Australian Pipeline Limited for the Moomba to Sydney Pipeline System, 19 December 2000.