

**REVIEW OF SUBMISSIONS ON THE AER'S REVIEW OF ITS REGULATORY  
TAX APPROACH**

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## **EXECUTIVE SUMMARY**

The ATO has recently advised the AER that over the 2012-2016 period there appears to have been a discrepancy between the actual tax payments to the ATO by the regulated energy networks and the AER's tax assessments used in price or revenue capping these businesses (before the gamma adjustment). In response to this, the AER has issued a review of its current approach to the regulatory tax allowance, and conducted a public forum on this matter. It has also sought some data from the businesses. In response, the AER has received a number of submissions, and an analysis by PwC of data provided by the businesses. This report reviews these submissions, the data analysis by PwC, and considers a number of related issues. My principal conclusions are as follows.

Firstly, amongst the points raised in the submissions, I agree with the proposition that the TBV uplift arising from a change of ownership at a higher price should remain with the buyer rather than be passed through to consumers, but not because of the consistency argument that has been advanced in many submissions. Instead, I agree with the proposition because acting otherwise would reduce the offer price in the purchase offer, thereby discouraging some changes of ownership from occurring, and this is not socially desirable.

Secondly, in respect of future asset acquisitions, DV depreciation is optimal for stand-alone regulated businesses to use and therefore the AER should adopt the same approach in determining its tax allowances. This conclusion is consistent with the data analysis by PwC. Firms could rationally choose SL depreciation in respect of existing assets acquired under the privatization of a tax-exempt state entity because it would raise their initial TBV but this rationale for SL depreciation does not flow through to the choice in respect of future asset acquisitions. Firms could also rationally choose SL depreciation in situations in which the regulated business was coupled with an unregulated business in a tax loss situation, but this rationale is not relevant to a regulator that acts as if the regulated business is stand-alone.

Thirdly, the life of gas assets is capped at 20 years for purposes of determining depreciation deductions claimed by firms, and this has not been recognized by the AER in determining its tax allowance in some cases. Furthermore, this seems to be a significant issue. Accordingly, the AER should use the capped life in its determination of the tax allowances for all of the gas businesses.

Fourthly, since PwC report that only 1.26% of assets (by value) are in the low value pool, the AER should ignore the existence of this low value pool option when determining the tax allowance.

Fifthly, in respect of expenditures treated as capex by the AER (and therefore depreciated over time) for purposes of determining the tax allowance but immediately deducted by firms in accordance with ATO rules, PwC finds that the absolute level of such expenditures across various regulated businesses is substantial. However, the size of these expenditures relative to the total level of capex expenditures over the same period is not presented. If the extent of these expenditures relative to total capex is material for at least some firms, the AER should revise its approach to align with the superior treatment adopted by firms and this should be done on a firm-specific basis if the opportunity for these immediate deductions differs across firms. Otherwise, the AER should maintain its current approach.

Lastly, in respect of existing assets for which the AER uses SL depreciation in determining the tax allowances, I do not recommend changing to DV depreciation in any of the scenarios examined. In some of these cases, it is because the continued use of SL depreciation is ideal or nearly so, whilst in other cases it is far from ideal but switching to DV depreciation would not materially change the situation.

## **1. Introduction**

The ATO (2018a) has recently advised the AER that over the 2012-2016 period there appears to have been a discrepancy between the actual tax payments to the ATO by the regulated energy networks and the AER's tax assessments used in price or revenue capping these businesses (before the adjustment for gamma). In particular, the aggregate actual payments by the state government owned entities seem to have been consistently more than the AER's allowances, and the aggregate actual payments by the privately-owned entities have been consistently and significantly less than the AER's allowances.<sup>1</sup> These results are unsurprising, and reflect the incentives of owners; the owners of private-sector firms wish to minimize taxes because taxes are a cost to them, whilst the owners of the public-sector entities are indifferent to the tax payments because they flow to themselves and the total receipts (taxes and dividends) are unaffected by any change in the taxes. Furthermore, in respect of the privately-owned entities, the ATO (2018a) has also identified what it considers to be the principal sources of the discrepancy: the use of non-corporate ownership structures, gearing in excess of the AER's level, carry forward of tax losses, and various aspects of the depreciation deductions claimed by the businesses (the use of DV, shorter economic lives, and the low-value pool mechanism).

In response to this, the AER (2018) has issued a review of its current approach to the regulatory tax allowance, and conducted a public forum on this matter. It has also sought some data from the businesses. In response, the AER has received a number of submissions, and a report from PwC (2018) that analyses data provided by the businesses. This report reviews these submissions, the data analysis by PwC, and considers a number of related issues.

## **2. Review of Submissions**

The CCP (2018, page 23) notes the nine options examined by Lally (2018), involving pass-through, capped pass-through, and targeting of specific activities used by firms to reduce their taxes, with each applied at the individual firm level, the sector-wide level or some mixture of the two. The CCP questions whether pass-through and capped pass-through could

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<sup>1</sup> Throughout the paper, all references to the AER's tax allowances for businesses are to the allowances before the gamma adjustment.

be applied at the sector-wide level. However, complete pass through could be applied at the sector-wide level by a regulator, through allocating the total actual taxes paid by those businesses it regulates between the businesses in some fashion. For example, suppose the allocation is in accordance with the tax allowances under the current regime, there are two regulated businesses with actual tax payments of \$100m and \$200m, and the tax allowances under the current regime are \$400m each. In this case, the aggregate tax allowance would be \$300m and it would be split equally between the two businesses, yielding an allowance of \$150m for each business.

The CCP (2018, pp. 24-25) disputes Lally's (2018, pp. 12-13) conclusion that full pass-through is inferior to capping (pass-through only if actual tax payments are less than those allowed under the current regime). In support of this conclusion, Lally (2018, page 12) first argues that full pass-through would lead to higher prices for consumers than those consistent with the NPV = 0 principle, if tax payments exceeded the level allowed under the current regime, and this disadvantage would exist regardless of whether complete pass-through was applied at the individual firm or sector wide level. Such an outcome is not consistent with the long-term interests of consumers. In response, the CCP argues that the current regime produces tax allowances that are in excess of the taxes paid by an efficient business and therefore fails the NPV = 0 test. This comment is unrelated to the point made by Lally. For example, suppose the tax allowance under the current regime is \$100m, and businesses are actually paying \$50m due to adopting various tax minimization schemes. The CCP's point is that the \$100m allowance is too high. By contrast, Lally's point is that complete pass through would lead to an allowance of \$120m if the aggregate payments were at that level. So, the CCP's point is unrelated to Lally's.

Lally's (2018, pp. 12-13) second argument is that full pass-through, if applied at the individual firm level, would encourage firms to undertake actions that raise their corporate tax payments but are not desirable, such as reducing and possibly eliminating all debt financing because the higher corporate tax payments from doing so would be fully offset by the higher regulatory tax allowance whilst the advantages to the firm from doing so (lower personal taxes for investors, no bankruptcy risk, etc) would be retained by the firm. By contrast, with capping, the firm would not be compensated through the regulatory allowance for the higher corporate tax cost, and therefore would not face this perverse incentive to reduce and possibly eliminate all debt financing. In response, the CCP argues that this can be

addressed by limiting pass-through to firms with high gearing. However, high gearing reduces rather than raises tax, so the CCP's proposal addresses a completely different problem to the one identified by Lally. For example, suppose a firm gears to 60% and thereby pays taxes of \$100m, whilst eliminating gearing would raise taxes to \$200m, and raising gearing to 80% would reduce taxes to \$50m. Lally's point is that full pass-through encourages firms to eliminate gearing, whilst the CCP's point is that a regulator might not reduce the tax allowance to \$50m for the firm gearing to 80%. These are completely different issues. Furthermore, if a regulator sought to discourage a firm gearing to 80%, it would do so by using pass-through and therefore reducing the firm's tax allowance and hence revenues rather than by *limiting* pass-through. So, the CCP's point is both unrelated to Lally's point and not correct.

The CCP (2018, page 25) disputes Lally's (2018, page 18) claim that targeting of tax minimization activities involves replicating the ATO's activities but with less chance of success. In particular, the CCP argues that the AER's task is simply to estimate the effect of "known and accepted tax minimization strategies" whilst the ATO's role is to assess the legality of arrangements and challenge those it judges to fail that test. However, if the CCP's use of the word "accepted" means "legitimate", then the AER would be replicating the activities of the ATO in the sense of judging whether tax minimization activities were legitimate or not, and therefore having to employ suitably skilled people for making those judgements. It is only in this sense that I earlier used the words "replicating the ATO's activities". The best example of this is trust arrangements coupled with inter-entity loans. As noted in Lally (2018, section 3), three of the four regulated businesses examined used these arrangements (DUET, AusNet, and Spark), two of these have suffered adverse ATO rulings on the matter, and one of these has since abandoned the use of these arrangements. It is therefore unclear whether some version of these arrangements is legitimate, and the AER would have to form a view on that matter if it did switch to a targeting regime. Furthermore, elsewhere in its submission, the CCP seems to accept that the AER would have to make judgements:

"The boundary line for tax minimization is also not always clear and more aggressive approaches to tax minimization run the risk of crossing that line, resulting in damage to corporate reputation, penalties and litigation costs" (CCP, 2018, page 18)

“..it is appropriate to choose a set of strategies that are inside the frontier of the more aggressive tax minimization strategies.” (CCP, 2018, page 22)

The CCP (2018, page 25) also disputes Lally’s (2018, pp. 21-23) claim that, if the adjustment to the tax allowance for each business for specific tax minimization activities were set at the average level of such activity amongst regulated businesses, businesses engaging in more than the average level of activity would retain some of the benefits of their activity and would therefore be encouraged to continue doing so whilst firms engaging in less than the average level of activity might be driven to increase that level in order to counter the loss in allowed revenues. The result would be an increase in the average level of such activity, and therefore in the size of the adjustment by the regulator, which might lead to even more such activity by firms. In particular, the CCP argues that the incentives to minimize tax come from de-linking actual costs and revenues rather than the specific level of the benchmark chosen. Clearly, incentives to minimize tax will arise from de-linking allowed revenues from actual costs, but I do not agree that the specific level of the benchmark is irrelevant.

To illustrate the point, suppose that the current tax regime applies, that the allowed tax for a firm is \$50m, its actual tax is \$50m, and the firm does not use tax minimization strategies out of a sense of civic responsibility. Now suppose that the tax regime changes to incorporate targeting, and that the firm’s tax allowance falls to \$30m so as to reflect the average level of tax minimization activity by other firms. The firm would then face a revenue shortfall of \$20m arising from its disinclination to adopt tax minimization strategies. Under such circumstances, any firm would be at least tempted to adopt tax minimization strategies and the CCP’s rejection of this possibility is unwarranted.

Doueih (2018, pp. 2-3) also disputes Lally’s (2018, pp. 21-23) claim that, if the adjustment to the tax allowance for each business for specific tax minimization activities were set at the average level of such activity amongst regulated businesses, businesses engaging in more than the average level of activity would retain some of the benefits of their activity and would therefore be encouraged to continue doing so whilst firms engaging in less than the average level of activity might be driven to increase that level in order to counter the loss in allowed revenues. The result would be an increase in the average level of such activity, and therefore in the size of the adjustment by the regulator, which might lead to even more such activity by firms. Doueih presents various arguments on this matter, varying according to the particular



tax minimization strategies adopted. I will therefore focus upon just one of them (changes in ownership structures), which Doueih argues to be costly to undertake and impossible to do so within one year. Doueih's reference to cost is correct but is only crucial if the cost is so great as to make the activity unviable, and this is clearly not the case because trust arrangements have been adopted by three of the four principal private-sector businesses regulated by the AER (Lally, 2018, section 3). Furthermore, as noted by Lally (2018, page 10), one of these business reverted back to a conventional corporate structure within two years of an adverse ATO ruling on its earlier trust structure (and presumably did so in response to that ruling). Doueih's concern with a period of one year presumably derives from the example in Lally (2018, pp. 21-23), in which firms changed their tax strategies within one year. However, the use of an annual period within which decisions were implemented in that example was purely illustrative, and nothing of substance would have been changed if the implementation period had been two years.

On the same issue, Doueih (2018, page 3) argues that "One could also assume that an efficient business is already minimizing its tax as much as possible, leaving it with not much opportunity to further minimize its tax as a result of the price regulator reducing the tax allowance." However, tax minimization is a complex exercise, involving trade-offs in which firms are likely to choose differently. One is the trade-off between the desire to pay one's 'fair share' of tax and to maximize shareholder value, leading firms to choose differently due to differing degrees of civic responsibility. The other trade-off involves risk and expected payoff, arising from the lack of clarity over the boundary line between legitimate and illegitimate activities, the possible downside to crossing it (in the form of penalties, legal costs and damage to corporate reputation), and uncertainty about the probability of being 'caught', leading firms to choose differently according to their risk aversion, concern over corporate reputation, and perception of the probability of being 'caught'. Both points are made by the CCP (2018, page 18, page 22). Furthermore, PowerWater (2018, page 2) contrasts their approach to these matters with other firms: "We do not adopt aggressive tax positions when compared to other networks....We do not have stapled securities or corporate trust loans that affect taxable interest expenses." So, unless a firm is operating at the most 'aggressive' end of the distribution, and some of them clearly are not, there will be opportunities to further reduce tax (but with significant potential downside).

Energy Networks (2018, section 3.2) suggests that SL depreciation should be adopted for determining the tax allowance so as to allocate costs evenly across the lives of assets. However, if SL depreciation were inferior to DV in PV terms, doing so would lower the PV of the depreciation expenses, which would raise the PV of the tax allowance, and therefore raise the PV of the allowed revenues. If businesses in general adopted DV depreciation, the PV of the allowed revenues would then be greater than the PV of the efficient costs, and therefore violate the NPV = 0 principle. Furthermore, the allowed revenues can be smoothed in such a way as to preserve their PV, and therefore it would not be necessary to use SL depreciation in the determination of the tax allowance to achieve that goal even if it were possible. Furthermore, using SL depreciation for determining the tax allowance would aggravate the real decline in revenues that occurs in a typical regulatory situation, and therefore would be undesirable for this reason alone.

To illustrate this latter point, suppose a regulatory asset has a cost of \$100m, a life of 40 years, opex initially equal to 2% of the initial RAB, a WACC of 5%, a cost of equity of 7%, gamma of 0.5, leverage of 60%, and inflation of 2%. The year 1 opex will then be \$2m(1.02), and rises to \$2m(1.02)<sup>39</sup> = \$4.3m in year 39.<sup>2</sup> The regulatory depreciation  $RDEP_R$  (using SL) is \$0.5m in the first year (being 2.5% of the initial RAB less the revaluation of 2% of the initial RAB). Following this process, the regulatory depreciation in year 39 will be \$6m. The year 1 WACC allowance will be \$5m (5% of the initial RAB) whilst that for year 39 will be \$0.6m (5% of the RAB at the beginning of that year of \$11.3m). The year 1 cost of equity allowance  $CE_R$  will be \$2.8m (7% of the initial equity book value of \$100m\*0.4) whilst that for year 39 will be \$0.3m (7% of the equity book value at the beginning of that year of \$11.3m\*0.4). As shown in Lally (2018, section 2), the regulatory revenues are thus:

$$REV_R = WACC_R + RDEP_R + OPEX_R + TAX_R(1 - \gamma) \quad (1)$$

and the regulatory tax allowance in a particular year is

$$TAX_R = \frac{[CE_R + RDEP_R - TDEP_R](0.3)}{1 - 0.3(1 - \gamma)} \quad (2)$$

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<sup>2</sup> Year 39 rather than 40 is used because DV depreciation in the last year spikes due to writing off the residue.

To commence, suppose that DV depreciation is used to determine the tax depreciation *TDEP* in equation (2). The values for *TDEP* would then be \$5m in yr 1 and \$0.7m in year 39. Using equation (2), *TAX* would then be -\$0.6m in yr 1 and \$1.8m in yr 39. The first two columns in Table 1 show the nominal revenues in this case, using equation (1), rising from \$7.2m to \$11.8m. However the real revenues decline from \$7.2m to \$5.5m, using 2% inflation as the deflator. So, the real revenues decline by 24%. The last two columns in the table show the results when SL depreciation is used to determine the regulatory tax allowance in equation (2). The nominal revenues now rise from \$8.0m to \$10.9m, and therefore grow more slowly in nominal terms, as claimed by Energy Networks. However the real revenues decline from \$8.0m to \$5.0m, which is a decline of 38%.

Table 1: Revenues under Different Tax Depreciation Methods

	Yr 1: DV	Yr 39: DV	Yr 1: SL	Yr 39: SL
OPEX	\$2.0m	\$4.3m	\$2.0m	\$4.3m
RDEP	\$0.5m	\$6.0m	\$0.5m	\$6.0m
WACC	\$5.0m	\$0.6m	\$5.0m	\$0.6m
TAX	-\$0.6m	\$1.8m	\$0.9m	\$0.1m
REV	\$7.2m	\$11.8m	\$8.0m	\$10.9m
Real REV	\$7.2m	\$5.5m	\$8.0m	\$5.0m

Energy Networks (2018, section 3.2) also suggests that any change from SL to DV depreciation for determining the tax allowance should lead to a corresponding change for the regulatory depreciation in the interests of consistency. However, the regulator's choice of the regulatory depreciation method has no impact on the NPV of the businesses' net cash flows (because it is offset by the revenue allowance for the cost of capital) whilst the choice for the tax depreciation method does affect the NPV of the net cash flows. Thus, the latter should be chosen to satisfy the  $NPV = 0$  principle and this has no implications for the former.

Energy Networks (2018, section 3.5) argues that, in determining the regulatory tax allowance, any switch from gradual deduction of an expenditure to immediate deduction in recognition of the fact that it is immediately deductible will reduce revenues, and that this is undesirable.

However, if the expenditure is immediately deductible and the AER instead acts as if the expenditure is gradually deductible, the revenues will be set above the NPV = 0 level. Accordingly, reducing the revenues to recognize the true tax situation will satisfy the NPV = 0 principle, and this is desirable rather than undesirable. Energy Networks refers to an example, but it is unnecessarily complex and I therefore present a simpler example as follows.

Suppose a regulated business is established now by purchasing fixed assets for \$100m from a supplier of such assets, that all finance is equity, that the cost of equity is 10%, that all revenues from the assets arise in one year, and that there is no opex. If the revenues are set as if the deduction on the \$100m expenditure is possible only in one year then the revenues that satisfy the NPV = 0 condition will then be \$114m as follows:

$$NPV = \frac{REV - TAX}{1.1} - \$100m = \frac{\$114m - (\$114m - \$100m)0.3}{1.1} - \$100m = 0$$

However, if the deduction is actually immediately available and usable, the NPV of these cash flows would be \$3m as follows:<sup>3</sup>

$$NPV = \frac{REV(1 - .3)}{1.1} - \$100m(1 - .3) = \frac{\$114m(1 - .3)}{1.1} - \$100m(1 - .3) = \$3m$$

So, the NPV = 0 condition would not be satisfied. To satisfy the NPV = 0 condition when the deduction on the expenditure is immediately available, the revenues would have to be \$110m as follows:

$$NPV = \frac{REV(1 - .3)}{1.1} - \$100m(1 - .3) = \frac{\$110m(1 - .3)}{1.1} - \$100m(1 - .3) = 0$$

So, if the expenditure is immediately deductible rather than deductible at some future point, the revenues that satisfy the NPV = 0 condition will be lower. This demonstrates the error in Energy Networks reasoning.

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<sup>3</sup> Deductions that are immediately available cannot in practice be used until the next tax payment, which could be months away. The assumption of immediate usability simplifies the example without affecting the substance.

Energy Networks (2018, section 4) argues that as a matter of consistency the tax consequences of payments that are not included in regulatory revenues should also not be included in regulatory revenues. They commence by referring briefly to four examples: R&D, tax loss carry-forwards from historical circumstances unrelated to the regulated activities, stamp duty on corporate transactions, and interest payments on purchase prices for businesses beyond the RAB. The first two cases are not controversial, but it is useful to identify a general principle using the case of R&D expenditures. These expenditures do not contribute to regulated revenues and the associated tax deduction is not incorporated within the regulatory tax allowance. If the deductions (but not the expenditures themselves) were incorporated within the regulatory tax allowance, the normal operation of the  $NPV = 0$  principle would reduce the allowed revenues of the regulated business and therefore transfer the tax benefit arising from these activities to the customers of the regulated businesses. Accordingly, this would discriminate against R&D activities carried out by firms with regulated activities relative to firms without such activities, and the level of such R&D activity by regulated firms would therefore likely decline. This is socially undesirable. Accordingly, the tax benefit from these R&D expenditures should flow to the party making the expenditures rather than the customers of the regulated business. The same point applies to any expenditures in which the payer is a price taker.

Energy Networks then elaborates upon the issue of interest deductions and links it to TBV uplifts on the transfer of ownership of regulated businesses. I commence by focusing upon the TBV issue. To examine it, suppose a regulated business is established now by purchasing fixed assets for \$100m from a supplier of such assets, that all finance is equity, that the cost of equity is 10%, that all revenues from the assets arise in one year, and that there is no opex. The revenues that satisfy the  $NPV = 0$  condition are then \$114m as follows:

$$NPV = \frac{REV - TAX}{1.1} - \$100m = \frac{\$114m - (\$114m - \$100m)0.3}{1.1} - \$100m = 0 \quad (3)$$

Now suppose that momentarily after the purchase of the fixed assets the business is sold for \$120m, in which case the TBV is raised by \$20m. There are a variety of possible explanations for this additional payment of \$20m, including one referred to by Energy Networks (growth options). If the tax deduction on the additional \$20m is incorporated into

the regulatory tax calculation but not the \$20m expenditure itself, the revenues that satisfy the NPV = 0 condition would decline from \$114m to \$106m as follows:

$$NPV = \frac{REV - TAX}{1.1} - \$100m = \frac{\$106m - (\$106m - \$120m)0.3}{1.1} - \$100m = 0 \quad (4)$$

This is not an NPV analysis in the usual sense, which would involve purchasing assets from a supplier of them for \$100m whilst simultaneously obtaining a TBV of \$120m. Instead, the assets have been purchased from a supplier for \$100m, immediately generating a TBV of \$100m, followed by the ATO raising the TBV to \$120m. If the additional TBV of \$20m were incorporated into the regulatory revenue calculation, as shown in equation (4), the party expending the \$20m (the ‘buyer’ of the regulated assets) would then lose the deduction. However, unlike the R&D example and crucially, they could be expected to *reduce* their offer price. If they did so by a matching amount, and the transaction still proceeded at this lower price, the buyer would then be unaffected by the tax treatment of the payment made beyond the \$100m figure and instead it would be the seller of the assets who would be worse off. Furthermore, even without this benefit of a higher sale price arising from the tax effect of the TBV uplift, the seller would still have received sufficient revenues under the regulatory process to satisfy the NPV = 0 condition because the usual such calculations do not anticipate any TBV uplift from a future transfer of ownership.<sup>4</sup> So the question then becomes who the beneficiary of this tax benefit should be: the customers of the regulated business or the seller of the assets. It is implicit in the NPV = 0 principle that asset owners receive the minimum compensation necessary to induce their supply of the regulated activities, and will only outperform this if they can achieve efficiency gains. This implies that the benefit of this uplift to the TBV should flow to the customers.

This analysis assumes that, if the tax benefit of the TBV uplift goes to the customers in accordance with equation (4), the buyer will reduce their offer price by a matching amount and the seller will still accept that lower price. If these two conditions do not operate, transfers of ownership of regulated businesses will be discriminated against relative to unregulated businesses, some will not then occur, and this is not socially desirable. It is not plausible that both of these conditions would operate. A transaction price of \$120m implies

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<sup>4</sup> The seller also pays tax on the capital gain of \$20, but would still be left with at least enough revenue to satisfy the NPV = 0 condition.

that the buyer concludes that they can raise the value of these assets to something in excess of that (inclusive of the tax effect of the TBV uplift). Suppose for example this figure is \$140m. Thus, the buyer splits the expected value gain with the seller, in recognition that they both have market power in this transaction. If the regulator then transfers the tax benefit of the TBV uplift (call this \$5m) to the customers of the regulated business, the value of the assets in the hands of the buyer falls to \$135m and the transaction price would then be expected to decline, but not by the full \$5m. So, part of the tax benefit transferred to the customers is likely to come from the buyer. So, buyers of regulated assets would face less favourable conditions than buyers of unregulated assets. In addition, the seller may not accept the lower offer. For both reasons, the transaction may not then proceed. So the effect of transferring the tax benefit of the TBV uplift to the customers of the regulated business would be to discriminate against such transactions relative to transactions involving unregulated assets, and to therefore reduce their incidence. This is not socially desirable.

All of this suggests that the tax benefit of the TBV uplift should remain with the buyer, and therefore revenues should be determined in accordance with equation (3) rather than (4). The same principles apply to the question of the interest deductions on the debt used to fund the additional \$20m payment, and also on stamp duty payments arising from such transactions. So, I concur with Energy Networks that the tax consequences of payments that are not included in regulatory revenues should also not be included in regulatory revenues, but I do so after consideration of the impact of the regulator acting otherwise rather than merely out of a desire for consistency. This conclusion about the TBV contrasts with that in my earlier paper (Lally, 2018, pp. 28-29), and reflects further consideration by me of the impact of such a change in regulatory procedure on the frequency of these changes in ownership.

Ausnet Services (2018) argues that the use of SL depreciation for determining the tax allowance smooths the tax allowance over time and therefore smooths customer prices. The claim that the tax allowance is smoothed using SL rather than DV depreciation is correct, as shown in Table 1. However the same table shows that the real revenues decline more slowly over time with DV depreciation, and therefore real prices would decline more slowly over time with DV depreciation. This is inconsistent with Ausnet's claim.

Ausnet (2018) also argues that the choice of SL or DV depreciation merely changes the timing of the deductions rather than the total, and these are not worthy of attention.

However, the regulatory goal is to set prices so that the PV of the net cash flows equals the initial investment (the NPV = 0 principle) and the choice of depreciation method does affect the PV of the net cash flows. Using typical parameter values including a 40 year asset life, and an arbitrary asset cost of \$100m, Lally (2018, page 26) shows that choosing DV rather than SL depreciation for the purposes of determining the tax allowance would raise the PV of the depreciation deductions by 17% (\$8.0m) and thereby reduce the PV of the tax allowance by 30%. This increase in the PV of the depreciation deductions occurs because the switch to DV has two effects. The first effect (the “initial effect”) is to raise the deductions in the first 14 years of the asset’s life by \$16m, which matches the reduction in the deductions by the same amount over the next 18 years. The second effect (the “terminal effect”) is to raise the deductions in the last year of the asset’s life by \$11m, which matches the reduction in deductions by the same amount over the preceding 7 years (the “terminal effect”). The PV of the overall effect is positive because the dollars involved in the initial effect (\$16m) are larger than the dollars involved in the terminal effect (\$11m), and the PV process magnifies this because shifting money forwards or backwards in time has a greater absolute PV effect in the near future than the distant future (due to the compounding effect of time). In particular, the PV gain from the initial effect (changing the timing of \$16m in deductions) is \$8.4m whilst that from the terminal effect (changing the timing of \$11m in deductions) is only -\$0.4m, yielding a net effect of \$8.0m. Table 2 summarises these effects.<sup>5</sup>

Table 2: The Effect of Switching from SL to DV Depreciation

Years	Deductions	PV	Net PV
1...14	\$16.2m	\$12.9	
15....32	-\$15.6m	-\$4.5m	\$8.4m
33...39	-\$11.7m	-\$2.0m	
40	\$11.0m	\$1.6m	-\$0.4m

<sup>5</sup> This analysis presumes that the use of DV depreciation would give rise to a deduction for the TBV residue at the end of year 40. However, if the asset is not decommissioned or sold at this point, the deduction of this residue would be delayed until one of these two events occurs. This delay would reduce the PV of the deductions of \$11m in the last row of the table. However, since their PV assuming deduction in year 40 is only \$1.6m, any reduction in this figure (even down to zero) would not reverse the clear superiority of DV over SL.



In order for the use of DV to produce a lower PV for the depreciation deductions, the deductions shifted to the last year of the asset's life would not only have to be larger than the deductions shifted to the first years of the asset's life before the discounting but sufficiently more so as to compensate for the much less substantial PV effect of the deductions shifted to the final year. This is not possible when the DV rate is double the SL rate, as it is at the present time and has been since 2006 (sections 40-72, ITAA 1997). Changing the discount rate (from 5% in the example) or the asset life (40 years in the example) would change only the extent of the DV advantage over SL but could not overcome it. To overcome this advantage to DV, the DV rate would have to be less than 140% of the SL rate, which is neither the case now nor prior to May 2006 when it was 150% (sections 40-72, ITAA 1997).

The MEU (2018) argues that the AER should use the "effective marginal corporate tax rate" (EMTR) rather than the statutory rate in determining the tax allowance (and hence the allowed revenues) of regulated businesses. The MEU further notes that the EMTR is lower than the statutory rate in Australia (as in countries generally) and that part of the explanation for this is tax avoidance and evasion. However, the effect of doing so would be to penalize firms that acted lawfully, incite tax avoidance and evasion by them, and legitimize such activities. Accordingly, this proposal is highly undesirable.

APA (2018, page 6) claims that Lally (2018) recommends that there should be no change to the regime for government-owned businesses because they appear to be paying more than the required amounts in tax, and that this recommendation fails the Competitive Neutrality policy provisions inherent in the regulatory regime. I am surprised by these claims. Lally (2018, section 5) does not recommend that there be no change in the regime for the government-owned businesses. Instead Lally (2018, section 5) recommended two changes to the regime for these businesses (switch to DV depreciation and raise the TBV if raised by the ATO), and likewise with privately-owned businesses. This is entirely consistent with the Competitive Neutrality regime. Furthermore Lally (2018, section 5) does not base his recommendation concerning the government-owned businesses on the fact that they appear to be paying more tax than required.

### 3. Other Issues

Subsequent to the preparation of my earlier paper (Lally, 2018), some issues have arisen that have not been raised in the submissions received by the AER and therefore have not been addressed in the previous section. The first of these issues is that there are circumstances in which it would be rational for a firm to adopt SL rather than DV depreciation. One such situation is that the firm is in a tax loss situation and expects to remain so for a sufficiently long period that adoption of SL would be superior. Consider the example in Lally (2018, pp. 25-26) in which the asset that is acquired has a life of 40 years. If the tax loss situation is expected to persist for the next 36 years, the deductions received under the SL method would be \$90m in year 36 (the accumulated deductions that could not be used up until that point), followed by \$2.5m for each of the following four years. By contrast, the deductions received under the DV method would be \$83m in year 36 (the accumulated deductions that could not be used up until that point), followed by \$1m for each of the following three years and \$13m in the final year. The SL deductions would have higher PV (\$94m versus \$92m). This scenario is summarized in Table 3.

Table 3: The Effect of Delayed Deductions

Year	1...35	36	37	38	39	40	PV
SL	0	\$90m	\$2.5m	\$2.5m	\$2.5m	\$2.5m	\$94m
DV	0	\$83m	\$1m	\$1m	\$1m	\$13m	\$92m

However, adoption of the SL approach would only be superior if the tax loss situation persisted for approximately 35 years, and this is a very unlikely scenario. Furthermore, and much more importantly, if a firm carrying out regulated activities were in a tax loss situation that was this protracted, this would presumably arise from unregulated activities (now or earlier) and therefore the AER's current approach would be highly favourable to it by raising the revenues of the regulated business *now* to reflect tax obligations that will not actually be paid until the firm emerges from its tax loss situation at some distant *future* point. This PV benefit would be ignored by the regulator, and would therefore flow to the firm rather than the customers of the regulated business, because it springs from the synergistic coupling of the regulated activities with unrelated activities whilst the regulator treats the regulated

activities as if they were a stand-alone business. Consistent with treating the regulated business as a stand-alone operation, the optimal choice of depreciation methodology by the firm would be DV and therefore the same choice should be made by the AER.

A second possibility is that the firm is currently in a tax loss situation, it does not know when it will emerge from this situation, and it is possible that tax losses arising during the period in which the firm is in tax loss could not be used once the firm emerges from the tax loss situation due to (for example) a change in ownership (PwC, 2018, page 72). If it were known now that the tax losses could not be used, the rational choice of depreciation method for an asset acquired now would be SL because it would produce a higher residual tax book value at most points over the life of the asset, and therefore a higher level of deductions once the firm emerges from tax loss. Using the example in Lally (2018, page 26), involving typical parameter values for an asset including a 40 year life, the TBV using SL depreciation exceeds that for DV for all but the last five years of the asset's life. Thus, if the firm emerged from tax loss in 20 years, the TBV under SL would be \$50m whilst that under DV would be \$38m; using SL would then give rise to an additional \$12m in depreciation deductions, and therefore be favoured. The likelihood of a firm choosing SL depreciation would then depend on the probability that the tax losses would be lost. However, if a firm undertaking regulated activities were in a tax loss situation of this type (sufficiently protracted that the losses might not be claimable at some future point), this would presumably arise from unregulated activities (either now or in the past). Clearly, a firm undertaking unregulated activities that is in tax loss because of those activities would be worse off if those tax losses could not be used at some future point. However, given such a situation, the coupling of regulated activities (which give rise to tax obligations) to such a firm would have the result that some or all of these tax obligations arising from the regulated activities during the tax loss period would never be paid despite the fact that the AER raises the regulated revenues to reflect the tax obligations. This PV benefit would be ignored by the regulator, and would therefore flow to the firm rather than the customers of the regulated business, because it springs from the synergistic coupling of the regulated activities with unrelated activities whilst the regulator treats the regulated activities as if they were a stand-alone business. Consistent with treating the regulated business as a stand-alone operation, the optimal choice of depreciation methodology by the firm would be DV and therefore the same choice should be made by the AER.

A third possibility is that a tax exempt state entity (and therefore its assets) are privatized, in which case the buyer would have a choice at the acquisition date between SL and DV for purposes of determining the TBV (under Division 58), they could rationally choose SL, and would be bound to continue doing so over the remaining life of the asset (PwC, 2018, pp. 87-89).<sup>6</sup> In this event it would be appropriate for the AER to assume that the business's choice of depreciation method was efficient and to adopt the same depreciation method for its determination of the tax allowance. So, if the business chooses SL depreciation for its ATO payments, the AER should also choose SL depreciation for determining its regulatory tax allowance. Fortunately, these cases are readily identifiable. This recommendation does not flow through to future asset acquisitions, for which firms would be free to choose DV depreciation, this would be optimal, and the AER should act in the same way in determining its tax allowances.

The second issue is that the life of gas assets is capped at 20 years for purposes of determining depreciation deductions claimed by firms, and this has not been recognized by the AER in determining its tax allowance for some of the gas businesses (PwC, 2018, page 58, pp. 79-84). In cases in which the AER has not recognized the 20 year cap, this is a significant issue. Using the example in Lally (2018, page 26), involving typical parameter values for an asset including a 40 year life, the PV of the SL depreciation deductions is 43% of the asset cost. Shortening the period used to claim the deductions to 20 years, the PV of the deductions rises to 62% of the asset cost. The increment of 19% is a substantial benefit to owners that is not currently being passed on to consumers via lower prices.

#### **4. Review of Data**

PwC (2018) has examined data supplied by the regulated businesses and the following conclusions reached by them are relevant to my earlier analysis (Lally, 2018). Firstly, PwC (2018, pp. 73-77) find that 64% of the assets held by private sector businesses (by value) are depreciated using DV and 36% using SL, and accordingly PwC judges DV to be the efficient methodology. Furthermore, as argued in the previous section, there are two situations in

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<sup>6</sup> SL would be preferred if it led to a TBV that was higher at the acquisition date and sufficiently higher to compensate for the inferior PV of the subsequent deductions per \$1 of TBV at acquisition date (compared to DV). For example, if the acquisition date TBVs for SL and DV were \$50m and \$30m respectively, and the PV of the subsequent deductions per \$1 of acquisition date TBV were \$0.4 and \$0.5 respectively, the PV of the post-acquisition depreciation deductions would be \$20m for SL and \$15m for DV. So, SL would be preferred.

which SL might rationally be adopted by a regulated business but the efficient choice for a stand-alone regulated business would still be DV and therefore the appropriate choice for the regulator would still be DV. This is likely to explain some of the 36% of assets whose owners elect SL depreciation in PwC's analysis, and therefore strengthen the conclusion that the efficient choice for a stand-alone regulated business is DV.

The second issue is the extent to which assets are depreciated under the low value pool. In my earlier paper (Lally, 2018, pp. 27-28), I favoured ignoring the low value pool if most of the assets of a regulated energy network business (in dollar terms) cost more than \$3,000. PwC (2018, Figure 22) do not address this question but they report that only 1.26% of assets (by value) are in the low value pool. This implies that the AER should ignore the existence of this low value pool option when determining the tax allowance.

The third issue is the extent to which expenditures treated as capex by the AER (and therefore depreciated over time) for purposes of determining the tax allowance are immediately deducted by firms in accordance with ATO rules. PwC (2018, Figure 14) presents data on the absolute level of such expenditures across various regulated businesses (averaging \$84m) but the size of these expenditures relative to the total level of capex expenditures over the same period is not presented. If the extent of these expenditures relative to total capex is material for at least some firms, the AER should revise its approach to align with the superior treatment adopted by firms and this should be done on a firm-specific basis if the opportunity for these immediate deductions differs across firms. Otherwise, the AER should maintain its current approach.

## **5. Existing Assets**

The analysis so far has been concerned with the regulatory treatment of assets that have yet to be acquired. However, having concluded that the AER should use DV depreciation for assets acquired in the future, there is the further issue of whether existing assets that the AER currently applies SL depreciation to (being those for all regulated businesses except Jemena) should be switched to DV so as to match the treatment for assets to be acquired in the future. Most of these assets are subject to DV depreciation by their owners for the purposes of their tax payments, and the rest are subject to SL; I therefore consider both cases. Some of these assets have also been subject to DV depreciation for regulatory determination of the tax

allowance up until the current regulatory period, when they were switched to SL, whilst others have always been subject to DV depreciation for this purpose; I therefore consider both cases. So, there are four cases to consider. I also presume that a uniform approach is desired for each business, and three types of businesses are apparent: the electricity businesses (for whom the life adopted by both businesses and the AER for tax purposes is the economic life), the gas businesses for whom the AER depreciates the assets for tax purposes over their economic life but the businesses exercise the ATO option to cap this at 20 years, and the gas businesses for whom both the businesses and the AER depreciate the assets for tax purposes over a capped life of 20 years. I start with the electricity businesses:

Case 1: The asset's owner uses DV depreciation for the purposes of their tax payments whilst the regulator has used SL depreciation since the commencement of regulation. To facilitate the analysis, I invoke the example in Lally (2018, page 25), involving an asset with a life of 40 years and an initial cost of \$100m. The SL depreciation rate is then 2.5% and the DV rate is then 5%. At the current time, the average age of such assets would presumably be about 20 years, and I therefore focus upon that age. At this point, the TBV used by the AER would be \$50m in accordance with the use of SL depreciation up until that point. Switching to DV at this point requires a DV rate, applied initially to the contemporaneous TBV and thereafter to the progressively declining TBV. Since the SL rate relative to the TBV at this point is 5% (SL depreciation of \$2.5m as a proportion of the contemporaneous TBV of \$50m), one possible choice for the DV rate is 10% (twice the SL rate in accordance with the current rules). The DV depreciation for year 21 would then be \$5m, thereafter declining over time in the usual way (apart from the usual spike at the end). The PV of the regulatory depreciation deductions using SL for the first 20 years followed by DV for the remaining 20 years would then be \$44m as follows:

$$\frac{\$2.5m}{1.05} + \dots + \frac{\$2.5m}{(1.05)^{20}} + \frac{\$50m(0.1)}{(1.05)^{21}} + \frac{\$45m(0.1)}{(1.05)^{22}} + \dots + \frac{\$6.8m}{(1.05)^{40}} = \$44m \quad (5)$$

An alternative would be for the regulator to apply the DV rate of 5% used by the firm in accordance with the ATO's rules. The calculations correspond to equation (5) except that the DV rate used is 5%, and the resulting PV is \$41.85m.<sup>7</sup> By contrast, consistent application of

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<sup>7</sup> Both approaches ensure that the total deductions over the life of the asset are equal to its cost, consistent with the AER's approach when it switched from DV to SL. By contrast, changing the TBV to match that applicable

SL depreciation by the AER would have yielded a PV on the depreciation deductions of \$42.9m whilst consistent application of DV depreciation by the firm yields a PV of \$50.9m. Since the purpose of any switch in policy by the AER would be to raise the PV of the deductions from the figure of \$42.9m arising from continuation of the current SL approach to the higher figure of \$50.9m arising from the use of DV by the businesses, only the switch to DV using a rate of 10% would help and even there it would only slightly ameliorate the PV shortfall of \$8m resulting from the regulator using SL rather than DV, i.e., reduce the shortfall by 14%. This is consistent with the analysis shown in Table 2, which shows that most of the benefit from adopting DV rather than SL occurs within the first half of the asset's life. So, whilst the situation is unsatisfactory, there is little to gain from the switch to DV in this case, and continuation of the current policy is then favoured.<sup>8</sup>

Case 2: The asset's owner uses SL depreciation for the purposes of their tax payments whilst the regulator has used SL depreciation since the purchase of the asset. I assume that the owner's use of SL depreciation is rational. As discussed in section 3, there are three scenarios in which this would arise. Two of these arise because the regulated activities are coupled with unregulated activities in tax loss. Whilst this coupling makes it rational for the regulated business to choose SL depreciation, this coupling is irrelevant to the regulator (who assesses the regulated business as a stand-alone operation). So, for the present purposes, the regulator should act as if the asset's owner uses the efficient depreciation method for a stand-alone business, which is DV depreciation, and therefore the situation is the same as Case 1 above, i.e., do not switch (Case 2a). The third situation in which a firm would rationally use SL depreciation involves doing so at the acquisition date of existing assets (so as to maximize the TBV at the acquisition date) and then being bound to continue doing so. In this case, the regulator should continue to use SL depreciation because it is the efficient course of action for the firm when viewing the regulated business as a stand-alone operation (Case 2b).

Case 3: The asset's owner uses DV depreciation for the purposes of their tax payments whilst the regulator has used DV depreciation since the commencement of regulation except for the current regulatory cycle in which the regulator has used SL. Given that the scenario being

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at the switching point had DV always been used would not have this important feature, as noted by PwC (2018, page 49), and is therefore ruled out.

<sup>8</sup> The analysis here involves PV calculations from the beginning of the asset's life rather than from the current point in time (half-way through the asset's life) because the purpose of the decision is to better match the PV of the deductions to the firm's efficient behavior over the full course of the asset's life.

examined involves an asset that is currently 20 years old, the regulator would have used DV depreciation from the first 15 years of the asset's life followed by SL for the following five years. At the end of year 15, the TBV in the regulator's analysis would have been \$46.32m, and switching to SL at that point (involving a remaining asset life of 25 years) would have given rise to SL depreciation of  $\$46.32\text{m}/25 = \$1.85\text{m}$  per year. After five years, the TBV would have been reduced to \$37.06m. At this point, switching to DV gives rise to a choice of using a DV rate of 10% or 5%. The calculations are like those in equation (5) and the PV results from doing so are \$52.2m and \$50.6m respectively. In addition, continued use of SL for the remainder of the asset's life by the AER would give rise to a PV of the deductions of \$51.4m. The latter approach of continuing to use SL closely approximates the result from application of DV over the entire life of the asset, which is desirable, and switching to DV does not materially improve on this. So, I favour continued use of SL by the AER in this case.

Case 4: The asset's owner uses SL depreciation for the purposes of their tax payments whilst the regulator has used DV depreciation since the purchase of the asset with the exception of the last regulatory cycle in which SL has been used. As in Case 2, I assume the asset owner has rationally used SL and there are three such scenarios. For two of them, the regulator should act as if the asset's owner uses DV depreciation, and therefore the situation is the same as Case 3 above, i.e., don't switch back to DV (Case 4a). The third situation in which a firm would rationally use SL depreciation involves doing so at the acquisition date of existing assets (so as to maximize the TBV at the acquisition date) and then being bound to continue doing so. In this case, the optimal course of action would have been for the regulator to have used SL depreciation throughout the asset's life because it is the efficient course of action for the firm when viewing the regulated business as a stand-alone operation. However, the regulator has not done so for the first 15 years of the asset's life. There are three options here for the AER: continued use of SL, switching back to DV using a 10% rate, and switching back to DV using a 5% rate, yielding PVs for the deductions of \$51.4m, \$52.2m, and \$50.6m respectively. All of these are close to the PV from use of DV throughout the asset's life (\$50.9m), and \$8m higher than the PV from use of SL throughout the asset's life (\$42.9m), and the latter is efficient. So, none of the three courses of action that are open to the AER can solve the problem in this case, and therefore the AER should continue to use SL depreciation (Case 4b). This problem is insurmountable because the regulator has used DV depreciation during the first 15 years of the asset's life, and the consequences cannot be counteracted.



Thus, the firm will suffer an \$8m drawback before tax. However, the firm efficiently chose SL rather than DV because it received benefits in the form of a higher TBV at acquisition date that more than compensates for use of SL throughout the period it holds the asset, and this will therefore compensate for the regulator using DV depreciation for part of the asset's life.

These cases are summarized in Table 4 above. Across all six cases, the AER should continue to use SL in all cases. In one of these cases, this occurs because it is the ideal course of action, and is almost ideal in two others. In the other three cases, the situation is unsatisfactory but switching cannot materially improve the situation.

Table 4: Recommendations for Existing Assets of the Electricity Businesses

	Firm	Regulator	Switch Effect	Recommendation
Case 1	DV	SL	Minimal	Don't Switch (Can't Help)
Case 2a	SL (DV*)	SL	Minimal	Don't Switch (Can't Help)
Case 2b	SL	SL	N/A	Don't Switch (Ideal)
Case 3	DV	DV, then SL	Minimal	Don't Switch (Almost Ideal)
Case 4a	SL (DV*)	DV, then SL	Minimal	Don't Switch (Almost Ideal)
Case 4b	SL	DV, then SL	Minimal	Don't Switch (Can't Help)

I now turn to the gas businesses, for whom the AER depreciates the assets for tax purposes over their economic life (of 40 years) but the businesses exercise the ATO option to cap this at 20 years. In Case 1, the firm has used DV over 20 years and the PV of the deductions is now \$68.2m. The regulator has used SL to date, but at half the rate used by the firm because the period used for depreciation is the asset life of 40 years. The regulator's options of continued use of SL, switching back to DV using 10% and switching back to DV using 5% yield PVs for the deductions of \$42.9m, \$44.0m and \$41.85m respectively (as shown earlier). Switching back cannot then materially help. The same applies to Case 2a. For Case 2b, the firm has depreciated using SL over 20 years and the PV of the deductions is \$62.3m. The regulator has used SL to date, but at half the rate used by the firm because the period used for depreciation is the asset life of 40 years. Continued use of SL by the AER no longer replicates the efficient behavior of the firm, and yields a PV of \$42.9m. In addition,

switching to DV yields a PV for the deductions over the asset life of \$44m or \$41.85m depending upon whether the DV rate used is 10% or 5%. Switching to DV then has little effect relative to continued use of SL. In Case 3, the firm has used DV over 20 years, yielding a PV for the deductions of \$68.2m whilst regulator has used DV and then SL, but based on an asset life of 40 years. The regulator's options of continued use of SL, switching back to DV using 10% and switching back to DV using 5% yield PVs for the deductions of \$51.4m, \$52.2m and \$50.6m respectively (as shown earlier). Switching back cannot then materially help. The same applies to Case 4a. Finally, for Case 4b, the firm has depreciated using SL over 20 years yielding a PV for the deductions of \$62.3m. The regulator has used DV and then SL, but based on an asset life of 40 years. The regulator's options of continued use of SL, switching back to DV using 10% and switching back to DV using 5% yield PVs for the deductions of \$51.4m, \$52.2m and \$50.6m respectively (as shown earlier). Switching back cannot then materially help. So, in all cases, switching from SL to DV by the AER would have only minimal mitigating effect and therefore continued use of SL is recommended.

Finally, I consider the gas businesses for whom both the businesses and the AER depreciate the assets for tax purposes over a capped life of 20 years. In this case, since the assets have been fully depreciated by the AER for tax purposes at the point at which the decision arises for the AER (at the 20 year point), the question of whether the AER should change depreciation policy is then meaningless.

## **6. Conclusions**

My principal conclusions are as follows. Firstly, amongst the points raised in the submissions, I agree with the proposition that the TBV uplift arising from a change of ownership at a higher price should remain with the buyer rather than be passed through to consumers, but not because of the consistency argument that has been advanced in many submissions. Instead, I agree with the proposition because acting otherwise would reduce the offer price in the purchase offer, thereby discouraging some changes of ownership from occurring, and this is not socially desirable.

Secondly, in respect of future asset acquisitions, DV depreciation is optimal for stand-alone regulated businesses to use and therefore the AER should adopt the same approach in

determining its tax allowances. This conclusion is consistent with the data analysis by PwC. Firms could rationally choose SL depreciation in respect of existing assets acquired under the privatization of a tax-exempt state entity because it would raise their initial TBV but this rationale for SL depreciation does not flow through to the choice in respect of future asset acquisitions. Firms could also rationally choose SL depreciation in situations in which the regulated business was coupled with an unregulated business in a tax loss situation, but this rationale is not relevant to a regulator that acts as if the regulated business is stand-alone.

Thirdly, the life of gas assets is capped at 20 years for purposes of determining depreciation deductions claimed by firms, and this has not been recognized by the AER in determining its tax allowance in some cases. Furthermore, this seems to be a significant issue. Accordingly, the AER should use the capped life in its determination of the tax allowances for all of the gas businesses.

Fourthly, since PwC report that only 1.26% of assets (by value) are in the low value pool, the AER should ignore the existence of this low value pool option when determining the tax allowance.

Fifthly, in respect of expenditures treated as capex by the AER (and therefore depreciated over time) for purposes of determining the tax allowance but immediately deducted by firms in accordance with ATO rules, PwC finds that the absolute level of such expenditures across various regulated businesses is substantial. However, the size of these expenditures relative to the total level of capex expenditures over the same period is not presented. If the extent of these expenditures relative to total capex is material for at least some firms, the AER should revise its approach to align with the superior treatment adopted by firms and this should be done on a firm-specific basis if the opportunity for these immediate deductions differs across firms. Otherwise, the AER should maintain its current approach.

Lastly, in respect of existing assets for which the AER uses SL depreciation in determining the tax allowances, I do not recommend changing to DV depreciation in any of the scenarios examined. In some of these cases, it is because the continued use of SL depreciation is ideal or nearly so, whilst in other cases it is far from ideal but switching to DV depreciation would not materially change the situation.

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