Response to submissions on rule change proposals

Report for the AEMC

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1. Background and context

Instructions

1. SFG Consulting (**SFG**) has been retained by the Australian Energy Markets Commission (**AEMC** or **the Commission**) to provide advice in relation to a number of points raised in submissions on its Draft Determination on rule change proposals. In particular, we have been asked to address certain submissions from:

    a) The Energy Networks Association (**ENA**);

    b) SP AusNet;

    c) The Economic Regulation Authority of Western Australia (**ERA**); and

    d) The Australian Pipeline Industry Association Ltd (**APIA**).

2. Definition of post-tax nominal rate of return

2. A number of submissions correctly recognise that the definition of a post-tax nominal weighted-average cost of capital (**WACC**) is not a unique definition. Indeed, there are a number of different WACC formulas that can all be identified as post-tax nominal definitions of WACC. Officer (1994), in the paper that forms the basis for the regulatory rate of return framework, sets out four such definitions in the section of his paper titled "The after-tax cost of capital" (pp. 6-8). Each of these four definitions of the after-tax nominal WACC is coupled with a unique corresponding definition of the cash flows. The definitions of the after-tax nominal WACC differ in terms of whether the tax benefits of (a) the deductibility of interest payments, and (b) the assumed effect of dividend imputation tax credits are incorporated in the WACC or in the cash flows.

3. For example, the Energy Networks Association submits that:

> A secondary requirement in the objective is that the allowed rate of return is to be determined on a nominal post-tax basis. However, the AER's post-tax revenue model (PTRM) uses a nominal "vanilla" WACC to estimate the regulated revenues of electricity networks and gas pipelines. This form of the WACC is distinct from a nominal "Officer" post-tax WACC which is also calculated in the PTRM and used to check the model's cash flows.[1]

and that:

> there should be clarification in relation to the requirement to apply a nominal post-tax rate of return.[2]

4. Similarly, SP AusNet submits that there should be:

> Clarification that the WACC to be adopted is a nominal vanilla WACC, rather than a nominal post-tax WACC as stated in the Draft Rules.[3]

5. Our understanding is that the AEMC intended that, under the draft rule, the Australian Energy Regulator (**AER**) would continue to use the same definition of WACC and would be allowed to continue to use the same post-tax revenue model (**PTRM**) as it currently uses under the National Electricity Rules (**NER**). Specifically, our understanding is that the AEMC intended that the regulator would continue to use the version of the post-tax nominal WACC that has become known as the "vanilla" WACC. To this end, the AEMC adopted the same language in the draft rule as currently appears in the NER.

6. In summary, it appears that:

    a) The AEMC has interpreted the term "post-tax nominal WACC" to mean the vanilla WACC as defined in Equation 12 of Officer (1994); whereas

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[1] ENA Submission, p. 10.
[2] ENA Submission, p. 9.
[3] SP AusNet Submission, p. 2.

b) The ENA has interpreted the term "post-tax nominal WACC" to mean the more complicated definition of WACC as defined in Equation 7 of Officer (1994).

7. Both appear to agree that the post-tax nominal vanilla WACC as defined in Equation 12 of Officer (1994) should be used – consistent with current practice of the AER under the NER. That is, there is no suggestion of a substantive change, only that the AEMC's intentions be clarified.

8. We recommend that the AEMC confirm its intended definition of WACC in the Final Determination.

3. The ERA hybrid approach

Background and context

9. The Economic Regulation Authority of Western Australia (**ERA**) currently employs what it refers to as "a hybrid real post-tax revenue model." Under this model:

    a) The ERA computes a post-tax real WACC for the purposes of determining the return on capital; and

    b) The ERA computes the tax allowance in nominal terms.

10. The draft rule proposed by the AEMC requires that:

> The allowed rate of return for a regulatory year must be determined…on a nominal post-tax basis…[4]

11. The draft rule may prevent the ERA from determining the allowed rate of return on a real post-tax basis, however this is ultimately a legal interpretation question. The recent submission from the AER (summarised below) suggests that the current draft rule may not prevent the ERA from implementing its hybrid approach.

The merits of a common rate of return framework

12. The AER currently uses a post-tax nominal framework for estimating the allowed rate of return for electricity distribution and transmission businesses under the NER. By contrast, a number of gas businesses have historically had their allowed returns determined using a pre-tax real framework.

13. The different approaches for determining allowed returns appear to be a matter of historical accident, rather than reflecting any inherent differences between the two sectors. No stakeholders have submitted that gas businesses have certain characteristics that mean a pre-tax real approach should be used for them and that electricity businesses have different characteristics that mean a post-tax nominal approach should be used for them. Similarly, no stakeholders have submitted that businesses in different states have certain characteristics that mean different definitions of WACC should be used. Rather, historical events have resulted in different approaches being adopted in different sectors and across different geographical regions.

14. In its Draft Determination, the AEMC noted that a "common framework" does not imply that common values or parameter estimates must be used. A regulator would be free to adopt different parameter values for businesses with different characteristics – all within a common framework. With that point clarified, stakeholders have been generally supportive of the objective of a common framework. Indeed, the ERA notes that:

> In its submission on the AEMC's Consultation Paper, the ERA noted that the use of the pretax framework over-compensated service providers for their tax liabilities, and that it

[4] Draft Rule, Clause 6.5.2(c)(2)

> considered that a nominal post-tax framework could address this concern. The ERA was therefore supportive of the AEMC's consideration of this issue.[5]

15. In summary, there appears to be general support for the concept of a common framework being used to determine the allowed rate of return. It seems clear that if a new regulatory system was being developed today, a common framework for determining the allowed rate of return would be used across the gas and electricity sectors and across the distribution and transmission sectors.

The selection of a particular rate of return framework

16. If it is accepted that there is merit in adopting a common framework for determining the required return, the next question is which framework should be adopted. This question must be answered in terms of which framework best achieves the NEO and NGO.

17. The ERA notes that its submission on the AEMC's Consultation Paper was supportive of the proposal to adopt a common framework under which the allowed rate of return would be determined on a nominal post-tax basis.[6] Since that time, the ERA has developed a new approach – its hybrid real post-tax revenue model.

18. The ERA submits that its hybrid real post-tax revenue model has some advantages over the AER's PTRM. The ERA summarises the similarities and differences between its hybrid approach and the AER's PTRM approach as follows:

> • the combined return <u>on and of</u> the capital in the RAB is identical, such that the revenue requirement is the same in each year for this component;
>
> • however, the return <u>of</u> capital through depreciation in the RAB differs;
>
> - however, the return <u>of</u> capital through depreciation in the RAB differs; the return of capital occurs earlier in the ERA's real approach, as compared to the AER's inflation adjusted depreciation approach;
>
> • in consequence, the return <u>on</u> capital in the RAB also differs;
>
> -the present value of the return <u>on</u> capital is smaller in the real approach, as compared to the AER's inflation adjusted approach;
>
> - this smaller return <u>on</u> capital in the real approach exactly offsets the earlier return <u>of</u> capital, such that summing the two components leads to the identical return <u>on and of</u> capital between the two approaches;
>
> • the different profiles for return of capital mean that interest costs, which also impact on the tax calculation, are not identical;
>
> - the earlier return <u>of</u> capital in the real approach leads to an earlier reduction in the opening value of the RAB;

[5] ERA Submission, p.2.
[6] ERA Submission, p.2.

> -this in turn leads to an earlier reduction in the debt requirement given the benchmark for 60 per cent debt;
>
> - this leads to a lower interest cost, and consequently a smaller debt shield for tax purposes, higher earnings before tax, and higher taxes;
>
> - the present value of the tax liability building block is thus higher in the ERA'S hybrid approach than in the AER's model.[7]

19. The ERA further submits that:

> The framework should also allow regulators the ability to adopt a rate of return approach which best reflects the efficiency objectives of the National Gas Objective.[8]

20. The ERA concludes that, relative to the AER's PTRM, the hybrid approach delivers:

> • more regulatory revenue over the life of assets, as compared to the AER's approach;
> • an identical present value of regulatory revenue as the full nominal approach under most circumstances over the life of the assets;
> • revenue that is aligned closely with the service providers 'actual' after tax position [as opposed to the regulatory tax position of the benchmark firm].[9]

21. It is not clear that any of these differences would support the conclusion that the ERA's hybrid approach better meets the NGO or NEO, and the ERA submits only that "there is evidence to suggest that the best form of post-tax model remains open to question."[10]

Alternatives under the rule change process

22. In addressing the ERA's submission, the first question the AEMC must consider is whether the wording in the draft rule prevents the ERA from implementing its newly-developed hybrid regulatory model – is the ERA able to report a post-tax nominal rate of return, but compute required revenues using its regulatory model? This, of course, is a question of legal interpretation. If the draft rule does not prevent the ERA from implementing its current approach, there is no issue to resolve. In this case, the specification in the draft rule of a post-tax nominal approach would be redundant.

23. If the draft rule does prevent the ERA from using its newly developed hybrid approach, there are (logically) two alternatives open to the AEMC:

    a) Alter the draft rule to allow approaches other than a post-tax nominal approach (such as the ERA hybrid approach) to be used; or

    b) Retain the current draft rule.

[7] ERA Submission, p.4.
[8] ERA Submission, p.4.
[9] ERA Submission, p.4.
[10] ERA Submission, p.4.

24. The AEMC's choice between these two alternatives would be driven by the importance it places on having a common framework across sectors. We understand that the AEMC places relatively high importance on this consistency given that:

    a) The AEMC set out a number of reasons in support of having a common framework across sectors in its Draft Determination; and

    b) No submissions have argued that the basis for determining the rate of return should differ across sectors or geographical regions to be consistent with the NEO and NGO (e.g., no one has argued that the NGO requires returns to be computed on a pre-tax real basis and that the NEO requires returns to be computed on a post-tax nominal basis).

25. Consequently, the goal of the AEMC would seem to be the implementation, across sectors, of the single basis for determining the rate of return that best meets the NEO and NGO. The ERA submits that "the best form of post-tax model remains open to question," but does not suggest that its hybrid model better meets the NEO and NGO or that the AER's PTRM is in any way inconsistent with the NEO or NGO. Rather, the ERA submission notes that the outcomes of the two approaches are identical in many respects and very similar in others.

26. The AEMC is not in a position to determine which of these two models best meets the NEO and NGO as part of the current rule change process. Such a determination would require a wide consultation process and a comparative modelling exercise to be conducted, which could only be performed after the conclusion of the current rule change process. The only question remaining, then, is whether the AEMC should:

    a) retain the current draft rule; or

    b) revise the draft rule to allow different approaches to be applied in different cases,

    while that subsequent work is performed.

27. In our view, there are a number of reasons to support retention of the draft rule:

    a) The ERA submission does not suggest that the AER's PTRM is in any way inconsistent with the NEO or NGO;

    b) The ERA submission does not compare and contrast the PTRM against its hybrid approach in terms of consistency with the NEO or NGO;

    c) The ERA has raised this issue late in the current rule change process, meaning that other stakeholders have not had an opportunity to address it. Also, by retaining the current draft rule, the AEMC is not ruling against the hybrid approach – rather it is moving full consideration of this issue to a different process, in which it can be properly addressed;

    d) Retaining the current draft rule achieves the AEMC's objective of a common framework across sectors;

    e) The comfortable majority of affected businesses are already regulated under the PTRM; and

f) The AER has submitted that the current draft rule should be retained, setting out a number of reasons that are summarised below.

28. Under this approach, the ERA would be free to initiate a new rule change request to begin the process of making the case that its hybrid approach better achieves the NEO and NGO. All stakeholders would then have an opportunity to scrutinise the ERA's approach and its illustrative modelling and to make submissions to the AEMC.

AER Submission

29. The AER has recently made a submission to the AEMC that addresses the draft rule requirement that a post-tax nominal rate of return must be used:

> The AER notes the ERA's submission, which commented on the specification of the post-tax nominal rate of return. As highlighted in the ERA's submission, the AER's post-tax nominal approach (as per the existing electricity rules) calculates the sum of the return on and of capital building blocks that equal the sum of these building blocks calculated under the ERA's real post-tax approach. The ERA's submission then went on to state that its modelling of the two approaches identified some revenue differences. However, it appears these revenue differences are driven by the adoption of specific modelling assumptions rather than whether a nominal rate of return or real rate of return framework is applied. For example, the AER considers that the likely cause of the identified revenue differences are the result of employing different tax input modelling and cash flow timing assumptions between the AER's modelling approach and the ERA's modelling approach.
>
> The AER considers there are advantages to maintaining the nominal rate of return framework. These include:
>
> - The AER's previous application of the nominal rate of return framework to all gas and electricity businesses ensures that the rate of return can be compared on a consistent basis. It also avoids the need to direct resources to maintaining different revenue models that deliver the same outcome in terms of the underlying rate of return framework—that is, the sum of the return *on* and *of* capital building blocks.
> - The nominal rate of return is directly comparable with financial benchmarks for other investments. Financial markets are also familiar with such benchmarks as they typically express earnings and rates of return in nominal (post-tax) terms. Using a nominal post-tax rate of return therefore reduces confusion over the interpretation of the regulatory rate of return.
> - The calculation of depreciation in a nominal framework is transparent and there is no confusion regarding the extent of revenue recovery. This is because in a nominal framework accumulated depreciation allowances equate to the change in the asset base valuation over time.[11]

30. We note that the AER's submission sets out a number of reasons in support of the post-tax nominal approach that is specified in the draft rules.

[11] AER Submission, 25 October 2012.

4. Transitional provisions

Background and context

31. APIA submit that they support the Commission's goal of establishing a common rate of return framework across the electricity and gas sectors and across distribution and transmission firms:

> The Commission has determined that there should be a common rate of return framework across gas and electricity transmission and distribution. As indicated in its response to the Directions Paper, APIA considers this to be preferable. APIA has demonstrated that the existing arrangements of the highly prescriptive framework applicable to electricity have had the effect of overriding the flexibility and responsiveness of the gas framework. This appears to be largely because the AER has appeared to feel bound to have all of its decisions on rate of return for energy service providers use the same approach. Inherently the flexible system conforms to the inflexible system. Clearly then, creating a common framework that has flexible features, such as those currently in the NGR, means that the sort of flexible and responsive features that are more likely to result in a reliable rate of return estimate will apply, avoiding the current problems of the NER rate of return provisions in constraining the operation of the NGR.[12]

32. However, APIA have noted that they do not believe that the adoption of a common framework requires the basis of the determination of the rate of return to be specified in the rules:

> APIA's submission in response to the Directions Paper was that there was no need to prescribe the basis of the rate of return. That is it could be on a post –tax or pre-tax basis or a real or nominal basis and the Rules do not need to prescribe this matter.[13]

33. In general, the APIA view can be summarised as follows:

    a) Whereas there are no particular reasons why a different basis for the rate of return (e.g., pre-tax real vs. post-tax nominal etc.) would be more appropriate for an electricity business than for a gas business, or for a distribution business than for a transmission business;

    b) Different businesses are currently regulated on different bases for historical reasons, and the change from one basis for determining the rate of return to another may have unintended consequences.

34. APIA has identified one potential unintended consequence for gas businesses transitioning from a pre-tax real basis to a post-tax nominal basis:

> It is likely that to simply apply the post tax nominal basis to the service providers Capital Base will create a discontinuity in the cashflows, because the implicit tax asset base under the pre-tax real calculations will not be the same as the Capital Base. The effect may be

[12] APIA Submission, p. 1.
[13] APIA Submission, p. 15.

> an immediate confiscation of business value from the particular service provider, simply through the transition from pre-tax real to post-tax nominal.[14]

35. Our understanding is that the Commission does not intend that any business would suffer an unfair one-off expropriation of value as a result of a change in the basis for the rate of return. This is not to say that the allowed revenues must be identical under different bases for the rate of return, because they will not. But rather, the beginning value of a business should be preserved under a change of basis for determining the rate of return.

36. As a particular example, the value to a business of being able to depreciate its regulated asset base over time would need to be maintained to preserve the beginning value of that business. A material decrease in that value would represent an unintended consequence of the change of basis. APIA have submitted that:

> There should be transitional provisions for businesses that have had a basis other than a post tax nominal basis for the rate of return that would avoid the confiscation of value associated with the change in basis.[15]

and specifically that:

> the regulators should be required to calculate the implicit tax asset base implied by the pre-tax real calculations and apply this for post tax modelling at the commencement of the next access arrangement period to be phased out over two access arrangement periods.[16]

37. In our view, it is clearly not the intention of the Commission that a change in the basis of the rate of return would result in an unfair one-off expropriation of value. APIA has proposed a specific method for addressing the specific potential unintended consequence that they have identified. Our recommendation is for the Commission to consider a more general approach. This would involve the Commission confirming that it does not intend the change of basis to result in any one-off expropriation of value, but then leaving it to each regulatory determination for:

    a) The regulated business to identify any potential issues in this regard;

    b) The regulated business to propose a solution (as APIA have done in their submission);

    c) The regulated business to establish that their solution does no more than preserve current value, consistent with the intention of the Commission; and

    d) The regulator to approve the proposal from the business, or to make whatever adjustment it considers to be required to best meet the objective of ensuring that the change in basis does not cause any one-off expropriation of value.

38. The reason for this more general approach is that:

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[14] APIA Submission, p. 15.
[15] APIA Submission, p. 1.
[16] APIA Submission, p. 15.

a) Different businesses in different circumstances may identify more such issues, beyond the potential issue identified by APIA; and

b) The preference of the Commission is generally to specify principles and frameworks, leaving the regulatory process to determine the specifics required to give proper effect to those principles in the particular case at hand.

39. APIA have also submitted that:

> It should also be made clear that the actual tax position of the service provider is not relevant for the purposes of calculating tax.[17]

40. In our view, the draft rule (and the existing rules) clearly require the rate of return framework to be applied to a benchmark firm and not to the particular position of the specific firm being regulated. For example, gearing and credit rating are estimated with reference to a benchmark efficient firm – the particular values for the firm being regulated are not "passed through" the process. In the same way, tax liabilities would be calculated with reference to a benchmark efficient firm – providing the particular regulated firm with an incentive to beat the efficient benchmark and an effective penalty if it does not.

41. In our view, this point is already clear, however, the Commission may consider whether any further explanation is required for the avoidance of doubt.

[17] APIA Submission, p. 15.

References

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