

28 October 2009

Dr John Tamblyn
Chairman
Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Dear John,

Review Into The Use Of Total Factor Productivity: Design Discussion Paper

SP AusNet welcomes the opportunity to participate in the AEMC's review into the use of total factor productivity (TFP) for the determination of prices, and provides this submission in response to the Design Discussion Paper.

The AEMC's review has the potential to contribute to the development of a lighter-handed and progressive approach to economic regulation and deliver substantial benefits to customers and industry through strengthened incentives and lower regulatory costs.

This submission sets out SP AusNet's response to the "Straw Man" TFP model and provides answers to specific questions set out in the Discussion Paper.

SP AusNet would be pleased to discuss the attached submission in further detail with you at your convenience.

Yours sincerely,



Alistair Parker

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1. Overview

SP AusNet is open to considering alternative approaches to the economic regulation of revenue and prices, including TFP. In principle, there should be no reason to limit the regulatory framework to one single approach. It is our view that if the right TFP model could deliver equally good outcomes for businesses and consumers as the building blocks approach, then having two alternative models would advance market objectives under the National Energy Laws.¹ Further, there may be optional value in providing TFP as an alternative as it would apply different incentives and drivers which may suit different circumstances or businesses better than building blocks.

On 28 August the AEMC published a Discussion Paper on TFP design which includes a “Straw Man” TFP model. The AEMC has stated that its Straw Man model is not a preferred model but is simply a model to stimulate discussion amongst stakeholders. The model addresses a number of key design elements related to providing TFP as an option, such as the development of a TFP index and a TFP formula, the operation of a TFP approach and flexible arrangements for individual businesses.

SP AusNet participated at the AEMC’s workshops held on 28 September and 2 October on the Straw Man model. This was useful in providing insights into the AEMC’s thinking behind the design elements featured in the Straw Man model and allowed stakeholders to discuss the broad concepts underlying TFP.

This submission provides SP AusNet’s comments on the various design elements of the model, and raises issues in relation to:

- applying a TFP methodology;
- calculating a TFP growth rate;
- setting initial prices;
- firm-specific design terms; and
- establishing a price path.

The structure of this submission is consistent with that of the Discussion Paper. Responses to the specific questions posed by the Discussion Paper are provided at [Appendix 1](#).

2. Applying a TFP methodology

The design elements featured in the Straw Man model to provide for the application of a TFP approach are generally appropriate, particularly the model’s provision for:

- the principles, procedure and mechanics (specification of TFP growth rate, inputs and outputs, weightings, definitions) of the TFP approach to be prescribed in the NER and NGR. This would provide a good degree of regulatory certainty and provide clarity for the market on the regulatory framework;

¹ The objective of the National Electricity Law is to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to— (a) price, quality, safety, reliability and security of supply of electricity; and (b) the reliability, safety and security of the national electricity system. The objective of the National Gas Law is to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas.

- the use of AER guidelines to provide clarity on technical matters for which there will be regulatory discretion and aspects of the approach which could be adapted to the individual circumstances of a business. SP AusNet considers that such guidelines should be binding, similar to those published by the AER under Chapter 6A and 6 of the NER for electricity transmission revenue resets and in distribution price resets;
- individual business to opt in and out of TFP. This is a key element of a workable TFP approach as businesses should be able to be forced down a TFP regulation path;
- the application of the TFP methodology used throughout a regulatory period once a regulatory determination is made under that methodology; and
- continued use of the current established and well understood regulatory processes.

These design elements would assist in preserving regulatory certainty. This is particularly important given that the TFP approach is new and untested in the Australian energy sector and any compromise of regulatory certainty would diminish confidence in a TFP approach.

The only aspect of these design features which SP AusNet queries is the scope and role of the AER's TFP guidelines. Making the guidelines wider in scope would strengthen the certainty provided under the model TFP regime. As such, the guidelines should be able to provide guidance on:

- the areas in which the Regulator will have discretion under the Rules, including technical matters;
- how that regulatory discretion will be exercised, particularly in relation to in how data is treated and used, and a TFP index developed;
- how businesses may propose firm-specific arrangements; and
- regulatory decision-making in considering and approving firm-specific arrangements.

Further, the guidelines should be legally binding, as this would reflect the legal status of the AER guidelines published under Chapter 6 and 6A of the NER which are key elements of the building blocks approach and broader regulatory framework.

3. Calculating a TFP growth rate

The majority of the principles in the Straw Man model setting out how a TFP growth rate should be developed are sensible and appropriate, including:

- only an index number approach is to be used;
- the specification for calculating the TFP growth rate (inputs, outputs and weightings) will be embedded in the Rules;
- all regulated DNSPs to provide data for TFP, even if not applying it;
- the longest period of data available should be used to build the TFP index. A minimum of 8 years data would be required before TFP could be applied;
- making the data-set available for all stakeholders to conduct their own modelling;

- only audited historical data is to be used, with adjustments allowed only where they are required to address:
 - structural differences to improve the consistency of the data (eg, classification of services); and
 - exceptional circumstances for specific years of a firm;

These adjustments would be transparent and in accordance with guidelines. Normalising data for differences in operating environments would not be allowed; and

- updating the TFP growth rate annually for the determination of a rolling X-factor.

In considering how best to define the industry group, the preferable option would be to determine a single TFP growth rate factor that would be based on the average productivity across the whole regulated sector. It would be unnecessary to split the sector into four subgroups based on operating environments if the different circumstances of firms could be accommodated by:

- their individual initial prices; and
- firm-specific arrangements such as cost pass throughs and off-ramps (which could reset the firm's price if they fall outside a predetermined rate of return).

Further, it would be undesirable to use different TFP growth rates for different kinds of firms as this undermines the rationale behind benchmarking which is to find a way of comparing performance across the whole industry sector, rather than subsets of it. A danger of creating small sub-groups is that it could potentially embed an acceptable level of productivity for different kinds of firms. Rather than drive all businesses towards an efficiency frontier, some firms would have weaker incentives to improve productivity. This would limit the ability of a TFP approach to deliver efficiency benefits to customers.

The model considered in the Straw Man leaves the choice between adopting an average growth rate or regression-based method to the AER to decide. However this key aspect of a TFP approach needs to be known before any business can choose to adopt TFP. As such, the approach to calculating the growth rate should be decided prior to implementing TFP and once decided, codified in the Rules to provide regulatory certainty.

4. Setting initial prices

In its Straw Man model the AEMC has outlined an approach to setting initial prices under TFP. The approach is intended for not only the first revenue determination under TFP but also all consequential price resets. SP AusNet has considered the AEMC's approach to setting initial prices and has some concerns in relation to a number of aspects of this design.

The AEMC's model would have the AER determine initial prices (P_0) at the start of each regulatory period based on actual opex and capex costs in the most recent year of historical data. This would include using cost information from other recent historic years to mitigate the potential of NSPs loading up the benchmark year. An estimate of load growth across the most recent regulatory period may also be used to inform the estimate.

The AEMC is concerned about continuing with a price path which provides excessive/inadequate returns to firms. The AEMC states in its Discussion Paper that:

The periodic alignment of prices to costs does detract from the incentive properties that are gained from breaking the link between prices and costs within a period under a CPI-X framework. However, if the gap between prices and costs becomes significant and/or exists for some time, then the service provider would earn either more or less than a reasonable rate of return. This would impact on the ability of investors to earn a reasonable rate of return. For these reasons, a periodic resetting of prices to costs is a desirable feature of a regulatory regime.²

While this approach would be appropriate for setting prices in the first TFP period, where it would be necessary in the absence of a TFP-based price level, it would be unnecessary and inappropriate to do so in consequential periods for a number of reasons.

SP AusNet would not support a proposal to regularly reset prices back to cost (regardless of how the price path is tracking) as it would undermine the aims of a TFP approach to delink prices from costs and the incentives that flow from that. Regular P_0 adjustments at the start of every period would significantly weaken the incentives for businesses to deliver efficiency savings under TFP as these would be automatically clawed back at every period. Given that stronger cost-management is an intended benefit of TFP, this design feature compromises the ability of TFP to drive efficiencies and deliver savings to customers. In fact, regular price resets within a TFP context would result in weaker efficiency incentives than what is currently provided under a building blocks approach as firms will no longer have the guarantee of a fixed glide path for prices.

The inclusion of an assessment of the efficiency of actual costs would expose firms to an unacceptable level of risk and uncertainty in a TFP regime. A degree of risk is already inherent in a TFP price setting approach from a firm's point of view, as it commits to a price path based on a TFP growth rate which it has little or no control over. Given that any business opting into TFP would be accepting this risk, it would be unacceptable to have the additional uncertainty of the Regulator performing a form of 'prudency' assessment of its actuals costs to reset its prices. While the AEMC has expressed in public workshops that the Regulator would not be able to 'optimise' expenditure out of the RAB, it is possible that the Regulator could determine some expenditure to have been inefficient and adjust the P_0 downwards in the next period to achieve the same outcome as optimisation. The risks associated with allowing for such regulatory discretion would be unacceptable for businesses and would likely deter any business from adopting TFP.

Having an efficiency assessment of historic actual costs performed by the Regulator every period will be unlikely to reduce regulatory costs as it is not dissimilar to having forecast costs assessed for efficiency. Incurred costs will need to be explained and justified, and resources used to support this process. SP AusNet considers that such an approach would not reduce regulatory costs. Further, it would not represent a lighter handed, true alternative to what currently exists under the building blocks approach.

SP AusNet questions the implication of the Discussion Paper that regular price resets are the only means of addressing the issue of excessive/inadequate returns. Risks associated with prices deviating too far from actual costs can be managed through an off

² AEMC, *TFP Review -Design Discussion Paper*, August 2009, p 36

ramp. This would allow for an automatic price reset if a pre-determined set of factors was triggered. The triggers could be based on an acceptable 'band' on returns or price levels. If this mechanism operates effectively, there should be no need for a price level reset at each period. Indeed, it is questionable if fixed regulatory periods would even be required in these circumstances.

Other elements of the AEMC's contemplated arrangement are appropriate as they provide for:

- use of the same RAB roll forward and treatment of tax approaches used for building blocks;
- WACC to be determined under the current approach and process in the Rules; and
- service and demand management incentive schemes to continue under TFP.

However SP AusNet does not agree with the AEMC's assessment that an efficiency carry-over mechanism (ECM) is inconsistent with the form of TFP considered in the Straw Man model. Where there are regulatory periods and prices resets, there would still be a need for an ECM as the incentives to make cost savings towards the end of the period diminish, and an ECM would address this by allowing firms to retain the benefit of their cost reductions for a certain period (currently five years). SP AusNet notes that under a regime without automatic price resets (ie: prices continue indefinitely) an ECM would not be required, and that any required changes in the price path could be accommodated via the X factor rather than through P_0 adjustments. The AEMC has stated that for practical reasons an ECM scheme could not operate under TFP in the absence of forecast opex figures. SP AusNet suggests that opex benchmarks/historic actuals might be used in this case, as a proxy for forecast opex.

5. Additional design terms

The AEMC's outlined suite of firm-specific design elements are appropriate and useful to address the individual circumstances of firms and the various sources of, and appetite for, uncertainty. These include providing for:

- the flexibility for businesses to propose whatever length of regulatory period it would like beyond the minimum 5 years for AER approval;
- the use and design of mechanisms to be adapted for individual businesses including: cost pass throughs, off ramps and capital modules; and
- the ability to choose a fixed or rolling X-factor;

These elements provide for flexibility in a TFP regime allowing firms and the Regulator to address risks and uncertainties. Allowing firms to choose the form of their X-factor and regulatory period lengths, as it provides individual firms freedom to obtain a regulatory arrangement which suits their appetite for risk and need for certainty.

Off ramps could be useful in triggering price resets so that prices may be aligned back to actual costs. A capital module would also be useful for firms facing significant yet uncertain investment programs (such as the mandated roll out of smart meters).

As previously stated, it would be useful if binding AER guidelines were required to set out:

- how businesses can propose firm-specific arrangements; and
- the Regulator's process for consideration and basis for decision-making on these proposals.

6. Establishing a price path

The AEMC's Straw Man specifications as to how a price path will be set and its preferred TFP formula are appropriate. The formula is well expressed as:

$$\Delta \text{ allowed prices for regulated business} = \Delta \text{ consumer prices} - \{[\Delta \text{ industry TFP} - \Delta \text{ economy TFP}] - [\Delta \text{ industry input prices} - \Delta \text{ economy input prices}]\}$$

Any further breaking down of the components of this equation or simplifying them into more general items would be undesirable as it would affect the good balance which has been struck in providing a clear yet workable equation which reflects a number of known data sets yet succinctly captures the main elements of industry productivity. This would be supported by including a separate measure for industry input prices growth into the determination of the X factor and using the producer price index for the economy input price growth term. Prescribing these parameters into the Rules would enhance the certainty around the equation and confidence in a TFP approach.

For the reasons explained in section 3 above, of the AEMC should avoid providing for an additional term in the formula for determining the X factor to permit the regulator to make business specific adjustments.

7 Conclusion

The AEMC's Straw Man model provides a generally sound basis upon which to build a workable TFP approach for use as an alternative form of regulation in the NEM. The following specific design features of the outlined model are supported:

- businesses may opt in and out of TFP without AER approval at the start of each regulatory period;
- businesses may choose between a fixed and rolling X-factor;
- the longest period of data available will be used to build a TFP index, with at least 8 years of data required for making a regulatory determination under TFP;
- the use and design of cost pass throughs, off ramps and capital modules to accommodate individual business circumstances and manage risk; and
- the TFP formula to be used would state TFP as:

$$\Delta \text{ allowed prices for regulated business} = \Delta \text{ consumer prices} - \{[\Delta \text{ industry TFP} - \Delta \text{ economy TFP}] - [\Delta \text{ industry input prices} - \Delta \text{ economy input prices}]\}$$

However a model which involves regular price resets at the start of every regulatory period based on a building blocks-based assessment by the Regulator of actual costs, particularly if it involved some kind of assessment as to efficient costs would be

inappropriate. This would be likely to lead to a form of ex post prudency assessment and would not provide a true lighter-handed regulatory approach to the current building blocks approach. Further it would be unnecessary in light of the firm-specific arrangements such as cost pass throughs and off ramps which would be available to help align prices back to actual costs where necessary.

APPENDIX 1

| AEMC QUESTION | SP AUSNET RESPONSE |
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| Inputs and outputs | |
| <ul style="list-style-type: none"> • What should be the correct specification of inputs and outputs to be used to calculate the TFP growth estimate? • Is the proposed set of criteria to identify the correct specification appropriate? | <p>In the absence of expert advice, SP AusNet cannot make statements as to which approach to specifying inputs and outputs is the best. However, Economic Insights' approach appears to be sensible from a practicality and accessibility perspective. It would be useful if the AEMC conducted further consultation on this aspect of a calculating a TFP growth rate.</p> <p>The AEMC's criteria are a reasonable set of principles to lead consideration of this issue.</p> |
| Defining the industry group | |
| <p>Is a single X factor for all regulated service providers in the sector appropriate? Or, would it be necessary to divide the sector into four subsets according to operating environment conditions or customer density?</p> | <p>While a single X-factor for a whole sector is simpler, that there may be particular circumstances which make it difficult to deal with firms which do not fit easily into a constructed model of a homogenous industry with standard performance indicators. Given this, SP AusNet recognises that the AER may require means of managing firms' differences. SP AusNet considers that instead of dividing the industry group into four separate sub-groups to form four difference benchmarks, firms could be classified into sub groups and provided with an appropriate 'stretch factor' to set the parameters for triggering off ramps and manage earnings volatility.</p> |
| Setting the initial cap | |
| <p>What would be the impact on service providers' incentives to improve performance under this design example?</p> <ul style="list-style-type: none"> • What would be the impact on service providers' ability to recover efficient costs under this design example? • Should the regulator have the discretion | <p>Regular P_0 adjustments at the start of every period would significantly weaken the incentives for businesses to deliver efficiency savings under TFP as these would be automatically clawed back at every period. Given that stronger cost-management is an intended benefit of TFP, this design feature compromises the ability</p> |

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| to refer to other information, such as forecast costs, when setting the initial price or revenue cap? | <p>of TFP to deliver savings to customers and rewards to good performers. It would be possible for any risks associated with prices deviating too far from actual costs (including inability to recover efficient costs) can be managed through an off ramp. Allowing the regulator to consider forecast costs, in setting price levels would render a TFP approach meaningless as it would replicate the environment of a building blocks approach where costs will need to be explained and justified, and resources used to support this process. SP AusNet considers that such an approach would not reduce regulatory costs. Further, it would not represent a lighter handed, true alternative to what currently exists under the building blocks approach.</p> <p>Please see section 4 of the main submission for further discussion.</p> |
| Length of regulatory period | |
| Should a regulatory period longer than five years should be set in the NER and NGR for a service provider using a TFP methodology? | SP considers it is sufficient to leave the choice of a longer period than 5 years to individual firms to propose. |
| Cost pass throughs | |
| <ul style="list-style-type: none"> • Are any amendments to the current provisions required to ensure compatibility with a TFP based framework? • How can the possibility of double counting cost pass through events under a price path with a rolling X be addressed? | <p>It is unclear what consequential amendments may be required to pass through arrangements to enable the current pass through arrangements to operate in a TFP context.</p> <p>SP AusNet is uncertain as to how double-counting may be avoided where a pass through operates in conjunction with a rolling X-factor. The Regulator may find the two design options to be mutually exclusive.</p> |
| Capital module | |
| • Is a capital module required and, if so, how should such a module be designed for Australia? In particular, should the module | In SP AusNet's view, a capital module is preferable, rather than required. Any capital module should be based on agreed |

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| use agreed (and prudently assessed) forecast or actual expenditure amounts? | forecast expenditure as it will concern future costs for an uncertain future event. |
| Off ramps | |
| Is there a need for an off ramp mechanism to be included in a TFP methodology? Does its use inappropriately reduce incentives? | A mechanism to bring prices and costs back into alignment is required if the divergence becomes too great and SP AusNet considers off ramps based on reasonable triggers would be a valid method for managing the risk of price-cost divergence. It balances, rather than reduces incentives. |
| Form of X | |
| Should a service provider be able to select the form of the X factor? Or, does this provide a level of uncertainty that is undesirable in the operation of a TFP methodology? | SP AusNet supports the ability for firms to choose the form of their X-factor. This would not create unacceptable uncertainty in the regime as it allows firms to adopt a rolling X-factor if they accept the risks that come with it. In contrast, SP AusNet would oppose a proposal to mandate the use of rolling X-factor as this places substantial risk on the DNSP because it exposes the company's revenue to annual assessments of the X factor which will not be mechanistic but complex and possibly contentious. Any compulsion to adopt an unpredictable regulatory factor of this kind is not desirable within the context of a TFP framework. |
| Business specific adjustments | |
| Is the rationale for allowing business specific adjustments to the X factor correct? | SP AusNet disagrees with this approach. Please see the main submission for supporting reasons. |