



Department of Primary Industries

Telephone: 03 9658 4160
Facsimile:
ABN 42 579 412 233

22 December 2010

Mr John Pierce
Chairman
Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Our Ref: PD/03/0165

Dear Mr Pierce,

Review Into the Use of Total Factor Productivity (TFP) for the Determination of Prices and Revenues – Draft Report

Please find attached a submission from the Department of Primary Industries (DPI) regarding the Australian Energy Market Commission (AEMC)'s draft report in this Review. As you know, Victoria has taken a leading role in promoting the potential use of TFP based regulatory approaches, and maintains a continuing interest in the progress of the AEMC's Review. DPI welcomes the AEMC's finding that TFP may promote the National Energy Objective, and is keen to ensure that Victorian energy customers are able to benefit from efficiencies arising from an improved regulatory framework.

Thank you for your consideration of these issues. Please contact Raif Sarcich (Principal Policy Officer – National Energy Markets) on (03) 9658 4160 if you have any questions regarding this submission.

Yours sincerely

Mark Feather
A/ Executive Director
Energy Sector Development



Submission – Review of TFP Draft Report

Department of Primary Industries

The Department of Primary Industries (DPI) notes the Australian Energy Market Commission (AEMC)'s draft findings in its *Review Into the Use of Total Factor Productivity for the Determination of Prices and Revenues* (TFP Review). DPI's interest in this matter has been and remains to ensure that Victorian energy customers are assured a secure and reliable supply of energy at an efficient price. TFP offers a potential enhancement to the efficiency of pricing the network component of energy prices, by driving long term dynamic efficiency improvements through stronger incentives to improved network planning and operation.

DPI welcomes the AEMC's confirmation that it believes the use of a TFP based price setting methodology could achieve the National Energy Objective (the Objective). This confirms the view of many other expert bodies in the field of energy regulation, including the Essential Services Commission (ESC), which formerly pursued the development of this approach in Victoria.

The AEMC has concluded, crucially, that a TFP based methodology would provide enhancements to incentives for innovation by network businesses.

[The TFP approach's] additional incentive properties would have a considerable positive benefit through the promotion of innovation.¹

Ensuring that the economic regulatory framework adequately incentivises innovation in the network sector is crucial to its mission to deliver sustainable efficient investment, in a time of rapid technological development. The technologies which are loosely referred to as constituting "smart grid" technology have the potential to reduce costs and capital expenditure compared to the alternative, but businesses must be appropriately incentivised in order to adopt them, taking some technological and planning risks along the way.

A further important observation is that a TFP based approach provides "*more certainty regarding the treatment of future costs and the price cap setting process*".² This, too is of paramount importance to Victoria, as it is important to provide investors in Victoria's fully privatised network sector as much certainty as possible in the regulatory system to allow investment in the businesses.

Finally, the AEMC observes that TFP can cope well with changes in the investment climate for the industry as a whole:

A TFP-based methodology can handle significant changes and adverse cost shocks affecting the industry as a whole relatively well provided there are regular price resets or equivalent safeguard mechanisms in place. With resets every five years, the TFP-based approach can handle even large changes such as a 'wall of wire' effect and produce similar profitability outcomes to the business as usual case.³

Victoria does expect to see the industry move together to address new challenges arising from ageing infrastructure, bushfire risk and climate change in the coming years. Regulatory changes which provide for robust benchmarking of performance and ensure that best practice is incentivised across the industry are important in addressing these challenges efficiently.

In respect of the above, DPI would prefer to see a more specific assessment of the benefits of applying TFP on a jurisdiction by jurisdiction basis. Victoria's network sector is most mature in its adoption of the regulatory regime, most able to move to long term regulatory settings as enabled by the TFP approach, and most likely to benefit from doing so for the aforementioned

¹ Australian Energy Market Commission. *Draft Report - Review of the Use of Total Factor Productivity for the Determination of Prices and Revenues*. [On the web](#), November 2010, p. 32.

² *ibid.*, p. 33.

³ *ibid.*, p. 10.

reasons. This view on Victoria's regulatory maturity was affirmed by the AER's commentary in its recent Victorian electricity distribution price determination.⁴

DPI notes the AEMC proposal that the Australian Energy Regulator (AER) should collect data to underpin a national database on industry productivity, which will take the best part of a decade. Rules for the application of a TFP methodology would be made at a later stage as this data comes in.

While there are certainly benefits to collecting a robust data set covering the whole of the National Electricity Market jurisdictions, and certainly this would be necessary to apply TFP across all of these jurisdictions, this is not necessarily a prerequisite to applying the TFP approach in one jurisdiction.

It would not be out of character for the regulatory regime to provide for jurisdiction-by-jurisdiction regulatory settings. The form of regulatory control under Chapter 6 of the National Electricity Rules is set for each jurisdiction by the AER, and it would not – in DPI's view – be inappropriate for the derivation of the X-factor and other determinants of a TFP or building-blocks approach to be similarly set.

The AEMC should therefore consider the opportunity cost for Victoria of deferring the application of TFP methodology for as long as has been proposed.

There is strong potential for commencing a TFP based regulatory regime in electricity distribution in Victoria in 2016, if it is possible to continue calculating and deriving Victoria's industry TFP on the same basis as pursued by the ESC and Pacific Economics Group (PEG), or to derive an alternate index based on data that is already available. Rules made by the AEMC could facilitate this.

These ideas – that the AER might apply and administer a TFP based regulatory approach in Victoria based on existing legacy data; and collect and develop a national TFP measure on a wider and more thorough basis, are not mutually exclusive. The adoption of an industry TFP specification based on Victorian data could quite conceivably be a prelude to adoption of a national data set and specification at a subsequent price reset.

The AEMC should consider the following points in determining its approach to making rules for TFP:

1. The materiality of the likely divergence between alternate specifications for deriving industry TFP.
2. The implications of the degree of likely divergence for transitioning between TFP specifications at a subsequent price review.
3. The opportunity cost of deferring the adoption of TFP in Victoria until 2021 if such a transition is not facilitated by Rules made by the AEMC.

The point regarding the materiality of divergence between methodologies goes to the question of whether there are deficiencies in the existing data or specification that has been relied on by the ESC & PEG. One methodology or data set may be more conceptually or objectively sound than another, but if the difference between them in measured industry TFP is immaterial, then the issue is immaterial for the making of rules, at least in the short term. The AEMC has the following to say on the matter:

In its submission PEG noted that the impact of erratic year-to-year movements in measured TFP will be reduced once an average growth rate spanning several years is formed and the impact on a resulting price path will be considerably less volatility than indicated by year-to-year movement in the TFP index. While this is true, it remains the case that erratic year-to-year movements may point to specification and/or data problems. (pp. 85-86)

⁴ Australian Energy Regulator. *Victorian distribution determination final decision 2011 - 2015*. [On the web](#), October 2010, p. viii.

The imputation that there is a specification problem in the PEG methodology explaining 'erratic' year to year movements in measured TFP growth is not proven. Indeed, the industry cannot be expected to show smooth and consistent TFP growth from year to year when it is so heavily influenced by throughput/climatic factors that vary markedly by year. Averaging over several years must be accepted as the only feasible way of applying TFP derived data to the energy industry. This does not in any way invalidate the TFP methodology, as the AEMC's own analysis shows.

The inadequacy or unsuitability of data sets is a problem that the reform process has faced before (in the mid 1990s), but despite that, the decision was taken to introduce incentive regulation. This is because the conclusion of policy makers at the time was that the benefits of that regulatory model outweighed any detriment associated with regulatory decisions based on that data.

The point at which the data set is deemed adequate to support a TFP based regime is necessarily arbitrary and subjective to some degree. There is a risk in conceding otherwise; that in future further technical inadequacies may be found by parties that wish to delay implementation of TFP and held to justify indefinite deferral of a regime that broadly serves the interests of energy consumers.

The AEMC's quest for a robust data set is obviously beneficial, but it should be careful not to let the perfect become the enemy of the good in this matter. The AEMC should turn its mind to an adequacy measure, standard or test that balances the benefit of TFP against any detriment associated with regulatory decisions based on data that is argued to be insufficiently robust in some respect.

The second point, regarding the implications of transitioning between one TFP specification and another should be thoroughly examined. Although different specifications for TFP estimates have been advanced by different parties, all TFP specifications attempt to capture the same underlying phenomenon of changing industry productivity. To the extent that one TFP measure deviates from another, any transition would be done at a price review where some adjustment to the industry TFP estimate embodied in the businesses' regulated price path would occur anyway. It seems probable therefore that the difference between specifications would be minor enough that transitioning from one TFP specification to another would be significantly less problematic than the transition from building blocks to TFP itself.

The third point simply highlights that the benefits identified by the AEMC in its draft report would be foregone by Victorian consumers for five years longer if the AEMC's proposed approach is followed. If these foregone benefits are not manifestly outweighed by costs avoided from implementing TFP based on current Victorian data for five years, then it is difficult to see how this achieves the Objective.

In conclusion, DPI urges the AEMC to bring forward the proposed implementation rule design phase of its review to ensure that this is completed by 2013 in readiness for the next Victorian electricity price determination, and to ensure that it is flexible enough to permit the use of different TFP specifications as necessary to contribute to the Objective in relevant jurisdictions.