
Australian Energy Market Commission

REVISED STATEMENT OF APPROACH

Review into the use of total factor productivity for
the determination of prices and revenues

Commissioners

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REVIEW

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About the AEMC

The Council of Australian Governments, through its Ministerial Council on Energy, established the Australian Energy Market Commission (AEMC) in July 2005 to be the Rule maker for national energy markets. The AEMC is currently responsible for Rules and policy advice covering the National Electricity Market. It is a statutory authority. Our key responsibilities are to consider Rule change proposals, conduct energy market reviews and provide policy advice to the Ministerial Council as requested, or on AEMC initiative.

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1 Introduction

1.1 Background

A rule change proposal from the Victorian Minister for Energy and Resources was submitted to the Australian Energy Market Commission (AEMC) on 18 June 2008. This proposal sought to amend the National Electricity Rules (NER) to allow the use of a total factor productivity (TFP) methodology as an alternative approach for the determination of prices for electricity distribution determinations.¹

The AEMC decided to conduct this review following consideration of preliminary submissions to the Victorian rule change proposal. The purpose of this review is:

- to advise the Ministerial Council on Energy (MCE) on whether there are circumstances in which a permitted application of a TFP based methodology would contribute to either the National Electricity Objective (NEO) or the National Gas Objective (NGO); and
- where appropriate, recommend for consideration by the MCE draft rules to allow a TFP based methodology for any individual or group of service providers.

The review is not considering whether a TFP based methodology should replace the existing framework but rather whether allowing the use of TFP in addition to the existing building block approach would provide benefits to users, service providers and the regulator in the relevant decision making processes.

1.2 Progress to date

On 12 December 2008 the AEMC released a Framework and Issues Paper (Issues Paper) to commence this review. Written submissions were requested by 27 February 2009. Sixteen submissions were made. These are listed in Appendix A to this document and are available from the AEMC's website.

The AEMC also conducted a public forum on 11 February 2009 to discuss the Issues Paper. Presentations and notes of the forum are available from the AEMC's website.

Following the public forum and receipt of submissions, AEMC staff also met with a variety of stakeholders.

At the time of the release of the Issues Paper, the AEMC also released a report by The Brattle Group.² This report provided information on the use of TFP by energy regulators in a selection of overseas jurisdictions.

¹ Victorian Minister for Energy and Resources, Rule change proposal to allow use of total factor productivity methodology in distribution, 18 June 2008.

² The Brattle Group, *Use of total factor productivity analysis in network regulation: case studies of regulatory practice*, October 2008.

The AEMC also commissioned:

- from Economic Insights – a report on the current availability of data suitable to support the calculation of a TFP index; and
- from The Brattle Group – a report on the extent and role of incentives under a TFP methodology.

1.3 Future approach

The AEMC has considered the comments it has received via the public forum, the submissions received in response to the Issues Paper, and at meetings with various stakeholders. Many stakeholders have proposed that the AEMC conduct additional public consultation on TFP issues. In particular, it has been suggested that the AEMC adopt a co-operative approach to exploring further a design of a TFP methodology that may be feasible for use in the regulation of the provision of electricity and gas services.

An interactive approach to the development of a TFP methodology will:

- allow an open discussion of varying views between stakeholders;
- provide an opportunity for stakeholders to improve their understanding of TFP; and
- allow consideration and discussion of the technical features within a TFP methodology as well as the operation of a TFP approach.

The AEMC has concluded that more open consultation and discussion on TFP issues before the release of its draft report would be beneficial to the operation and outcomes of this review. Accordingly, the AEMC has prepared this document to inform stakeholders of the revised approach that it will be undertaking.

2 Submissions to Issues Paper

The AEMC released an Issues Paper on 12 December 2008 and sought written submissions by 27 February 2009. Sixteen submissions were received (see Appendix A). All submissions received are available from the AEMC's website.

In summary, the key points raised in submissions were:

- The AEMC should understand and identify the deficiencies with the current building block arrangements before considering changes to the existing framework.
- The current arrangements should be provided with more time to be applied to more service providers before this review is continued.
- The AEMC should consider other alternatives (in addition to TFP) to the current building block approach as part of the review.
- The detailed design issues of a TFP approach could be addressed through greater consultation with stakeholders and the use of a working group. A number of stakeholders stated that further specification of a TFP approach would assist them in the consideration of the value of TFP for revenue and pricing determinations.
- The Victorian Department of Primary Industries (VDPI), Essential Services Commission of Victoria (ESC) and SP AusNet expressed support for the use of TFP for the determination of revenues and prices. However, considerable doubt has been expressed by other stakeholders that the use of a TFP method would ensure the recovery of efficient costs and appropriate returns for service providers.
- Service providers sought to ensure that any alternative to the building block approach accommodates new policy developments such as climate change and the introduction of 'smart meters'.
- Opinions differed on whether a TFP methodology can (or is necessary to) improve the strength of incentives of service providers. Some parties suggested alternative measures that they considered would achieve similar results to TFP. The question of whether stronger incentives are desirable was also raised.
- Service providers considered that the introduction of a TFP methodology would increase their regulatory costs and that savings that may arise from not using a building block methodology would not be significant. In particular, service providers expressed concern about any additional reporting requirements that may arise.
- Many stakeholders stated that the necessary conditions to implement a TFP methodology do not presently exist in the distribution sector. However, VDPI, ESC and SP AusNet did not agree.
- It was claimed that the required necessary conditions for TFP do not exist at all for the transmission sector. In particular, the nature of transmission capital expenditure was not consistent with the use of TFP.

- It was requested that further consultation be undertaken on the details of a TFP approach. Stakeholders did note that outputs, inputs, setting X and setting P_0 were matters that required specification.
- It was acknowledged that using TFP for benchmarking may be beneficial to the Australian Energy Regulator's (AER) regulatory processes. No parties expressed a desire for any amendments to the current benchmarking provisions of the National Electricity Rules (NER) or National Gas Rules (NGR).

3 Responses to submissions

3.1 Understanding the deficiencies with the building block approach

A number of submissions stated that they did not consider that the AEMC's Issues Paper identified or established the deficiencies of the current building block approach. It was suggested that the deficiencies should be clearly identified to enable an assessment of whether the use of TFP could address the building block deficiencies.

The AEMC agrees that the issues and concerns that various parties have expressed about the building block approach should be clarified. This will assist in establishing the correct counterfactual for the review's assessment. That is, whether a TFP methodology would better contribute to the achievement of the national electricity and gas objectives and also be consistent with the revenue and pricing principles. To undertake this assessment an understanding of the advantages and disadvantages of the current building block approach is required.

Accordingly, the AEMC will carry out work on the matters of:

- the identification of the deficiencies of the building block approach as seen by various stakeholders including:
 - the information asymmetries facing regulators in applying a building block approach to service providers' proposals
 - its firm specific, rather than industry, focus in setting prices to recover efficient costs
 - the adversarial nature of the decision making process and its impact on the behaviour of parties and the outcomes of the process
- the costs (to all parties) of conducting and participating in an assessment of a revenue proposal or access arrangement proposal; and
- the frequency, likelihood and costs of reviews and appeals of regulatory decisions under the building block approach.

3.2 Other alternatives to the building block approach

Some stakeholders suggested that TFP may not be the best solution to the deficiencies of the building block approach and that, as a result, the AEMC should expand the scope of this review to consider alternatives to the building block approach other than TFP.

In particular, the AEMC notes that Jemena proposed that the AEMC consider a glide path approach to setting the price path over a regulatory period for a service provider.

However, the AEMC has concluded that it would not be appropriate to extend the current review to the broader scope of what other possible regulatory methodologies could be used instead of the building block approach. In forming this view, the AEMC has had regard to the following:

- this review has emerged from the Victorian Government's proposed rule change to the NER to make TFP available to electricity distribution service providers and the question of the use of TFP should be the focus of the review;
- to include a well considered assessment of other possible revenue and price methodologies would extend the scope of the review and the necessary resources considerably; and
- both the National Electricity Law (NEL) and National Gas Law (NGL) refer specifically to the making of rules in regard to the building block approach and TFP and no other methodology.

This review may find that TFP could provide benefits and address some concerns about the application of the building block approach. The review may also identify incremental amendments that could be made to the building block approach to improve its operation.

While TFP remains the focus of this review, it should be acknowledged that this does not necessarily mean that TFP is the only, or most suitable, response to the identified building block approach issues. Whether TFP, or the building block approach, should then be assessed against other regulatory methodologies is a matter within the jurisdiction of the MCE.

3.3 Delay the review

Submissions from some electricity distribution service providers suggested that the AEMC delay this review until the AER has implemented the current provisions of the NER to more (or all) of the relevant service providers.

The AEMC acknowledges that the current building block provisions in the NER have not been applied to many service providers. It also notes that the relevant provisions of the NGR have yet to be applied at all. Nevertheless, all these current provisions have been built on the previous building block regime and do not represent a wholesale change in regulatory approach to the determination of revenues and prices (although incremental changes have been made).

The AEMC considers this review is one step in the incremental improvement and development of the regulatory regime. Necessarily, the review has a long term view to any possible implementation and changes to the current approach.

The AEMC does not agree that a delay in this review is appropriate. A delay until all relevant service providers have been the subject of an AER decision under the NER or NGR would be considerable. In addition, it appears that there is always at least one service provider that is involved in, or preparing for, a revenue determination or access arrangement proposal with the AER. Accordingly, the AEMC considers that it

would be beneficial to service providers, the AER and the review in general, if the review process is extended. This provides more time for stakeholders to consider and respond to issues as they emerge throughout the review process.

3.4 Greater consultation during the review process

The AEMC also received suggestions that it should carry out more extensive consultation with stakeholders during the review process. A number of stakeholders suggested that they would like a greater understanding of the details of a TFP methodology and its operation to be able to evaluate TFP and its associated issues.

The AEMC acknowledges that there are numerous choices or options that can be made when designing a TFP methodology. This makes designing a form of TFP somewhat technical in nature. The AEMC also notes that while TFP has been used in some overseas jurisdictions, a greater understanding of the application of TFP would assist stakeholders in considering whether TFP may be suitable for Australian energy regulation. Of particular interest are jurisdictions, such as Ontario, where it appears that TFP has been applied with some success.

In response to these points, the AEMC has amended its approach to carrying out this review. In brief, the AEMC proposes to:

- release consultant reports for consideration by stakeholders as they are concluded;
- prepare and release for consultation a 'strawman' TFP design; and
- conduct more (and focused) discussions with stakeholders on TFP design issues.

That is, the AEMC will adopt a more interactive consultation process with stakeholders prior to the release of its draft report. The AEMC considers that it would be valuable to the review to use a co-operative approach to discuss and evaluate the various design possibilities for a TFP methodology. It proposes to form a strawman design to commence this process. This strawman will be developed in part using information on the use of TFP in overseas jurisdictions (particularly, Ontario) and take into account the Australian energy sector context.

In addition to the design of a strawman, the AEMC considers that the release of Brattle Group's report on incentives and Economic Insights' report into the availability of data for TFP purposes will also assist stakeholders develop a greater understanding of the practical operation of a TFP methodology. The AEMC expects to release these reports in May 2009.

3.5 Cost recovery and incentives under TFP

Some submissions from service providers expressed concern that they may not be able to recover the 'efficient costs' under a TFP methodology. In particular, service providers expressed concern about the recovery of:

- large step changes in capital expenditures;

- step changes in capital (and/or operating) expenditures to meet regulatory requirements (such as increased reliability standards); and
- unexpected capital expenditures (for example, expenditure arising from the implementation of climate change policies).

Service providers were also interested in what, and the extent of, incentives to improve cost efficiencies and business practices there would be under a TFP approach.

To address the concerns on incentives under a TFP methodology, the AEMC has commissioned the Brattle Group to prepare a report. This will discuss the incentives under a TFP methodology and the current building block approach. Of particular interest will be the influence of the process and frequency in determining the initial price for a regulatory period. This report will be released upon its completion in May 2009.

The AEMC anticipates that the Brattle Group's report will assist stakeholders in forming a view on the operation of a TFP methodology and allow them to provide informed comments to the AEMC on this issue.

In regard to a TFP methodology's ability to manage increasing capital expenditures and increased capital expenditures, the AEMC is proposing to carry out additional work on:

- the long term operating and capital expenditure profiles of service providers;
- differences between actual and forecast operating and capital expenditures of service providers; and
- the impact of jurisdictional differences on operating and capital expenditures.

The AEMC will also consider the implications for emerging policy changes such as the roll out of 'smart meters' and climate change. It also anticipates that one important matter for further discussion and consultation with stakeholders will be to understand the implications for cost recovery under a TFP methodology.

3.6 TFP and benchmarking

It was acknowledged by stakeholders that benchmarking may assist in the application of the current building block approach. Benchmarking provides greater information to the regulator and to service providers. It can be useful as a sanity or reality check for the assessments carried out under the building block approach. The Energy Users Association of Australia (EUAA) suggested that the AER make greater use of benchmarking information in its decision making process.³

³ EUAA submission, 19 March 2009.

The AEMC notes that under the current provisions of both the NER and the NGR the AER is able to carry out benchmarking. As TFP can be used in this manner, the AER is able to use TFP, and any other approach, as a benchmarking tool to aid in its building block approach based decisions.

The AER suggested that TFP benchmarking could be implemented to aid in decision making under the current framework and as an 'interim step' to using TFP to determine revenues and prices.⁴

The AEMC agrees that use of TFP for benchmarking could be a valuable interim step in the evolution of regulatory decisions on revenues and prices. It provides the opportunity for all parties to become familiar with the required data collection process and the calculation of the TFP index. It also provides time to develop a TFP index suitable for determining revenue or price paths.

Although the task of collating data to form a TFP index for benchmarking purposes is likely to be similar to the task of developing a TFP index to determine revenues or prices, there may be some important differences. Accordingly, the AEMC is conscious that trialling TFP in the manner suggested by the AER should be done with a view to the ultimate goal – using TFP to determine revenues and prices. If this goal is in mind, the data collection process and the particular design of a TFP methodology can be formed from the start of the benchmarking phase.

Nevertheless, to conclude whether TFP could and should be adopted as a benchmarking approach, it must first be clear whether a TFP methodology can, and should, be formed for the purpose of determining revenues and prices. For this reason, the focus of this review is on TFP as a methodology for determining revenues and prices.

3.7 Applying TFP to the transmission sector

Considerable doubt was expressed by some stakeholders that the electricity and gas transmission sectors would be suitable for the application of a TFP methodology to determine the regulated revenues and prices of service providers. Of particular note was the tendency of transmission service providers to carry out lumpy capital expenditure programs. It was also suggested that there would be difficulty in measuring outputs.

However, some parties suggested that TFP may be feasible for transmission service providers.

If the matter of a lumpy capital expenditure profile can be resolved during the course of this review to some satisfaction of stakeholders then it remains possible that a TFP methodology could be relevant to transmission service providers. For the purposes of further consultation and discussion on TFP, the AEMC will initially focus on its possible application to the electricity and gas distribution sectors. The views formed

⁴ AER submission, 6 March 2009.

in these discussions will assist in assessing the possible application of TFP to the transmission sectors at a later stage in the review process.

4 Revised approach

As noted in the previous chapter, the AEMC's key response to the various issues raised by stakeholders in their submissions is:

- to extend the timeframe for the review; and
- carry out greater, and focused, consultation with stakeholders.

In particular, the AEMC will focus on informing parties about TFP and on encouraging a high degree of participation during the review process. By taking more time and engaging in more focused, frequent discussions, the AEMC will be able to conduct a more thorough and effective review into the use of TFP.

4.1 Timeframe

The revised timeframe for this review is set out below:

Month	Key events
April 2009	Release AEMC's response to submissions and revised statement of approach Meetings with stakeholders
May	Release the Brattle Group and Economic Insights reports for comment Release of TFP design paper (strawman)
June	Release reports on operating and capital expenditure and the deficiencies and costs of the building block approach Workshops and consultation
July	Workshops and consultation
September	Draft report and public forum
December	Final report to MCE
January 2010	Consultation on draft rules (if required)
February	Report on draft rules to the MCE (if required)

4.2 Consultation

As indicated by the revised timeframe above, the AEMC proposes to carry out greater and more interactive consultation with stakeholders. Primarily, this will take the form of:

- additional written submissions on certain specific issues. For example, commenting on Economic Insights' report on TFP data issues;
- discussion of significant issues and concerns (such as specifying outputs and inputs) at workshops; and
- meetings to discuss particular concerns as required.

It is intended that each of these consultation 'events' will focus on certain specified issues. A series of focussed, interactive discussions should:

- provide an opportunity for stakeholders to improve their understanding of the design and operation of a TFP methodology;
- allow stakeholders to air their views on the particular topics; and
- provide a forum conducive to making a decision about what could be suitable TFP design features relevant to the Australian electricity and gas sectors.

The AEMC acknowledges that stakeholders are involved in numerous regulatory matters at any one time. However, it considers that the revised approach to the review provides stakeholders with the opportunity to fully participate in this review in an informed manner.

A List of submissions

The following stakeholders provided submissions in response to the AEMC's Framework and Issues Paper released on 12 December 2008.

Australian Energy Regulator (AER)

Energex

Energy Networks Association (ENA)

Energy Users Association of Australia (EUAA)

EnergyAustralia

Envestra

Ergon Energy

Essential Services Commission of Victoria (ESC)

ETSA Utilities-Citipower-Powercor

Grid Australia

Integral Energy

Jemena

SP AusNet

Total Environment Centre

Victorian Department of Primary Industries (VDPI)

Watts Utilities