Ref.: Review into the Use of Totally Factor Productivity for the Determination of Prices and Revenues, Consultation on 2nd Interim Report – Expert Reports, EMO0006



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31 July 2009

Australian Energy Market Commission AEMC Submissions PO Box A2449 Sydney South NSW 1235

Dear Sir / Madam

Review into the use of Total Factor Productivity for the determination of prices and revenues – Second Submission

Ergon Energy Corporation Ltd (Ergon Energy) welcomes the opportunity provided by the Australian Energy Market Commission to comment on its Review into the use of Total Factor Productivity (TFP) for the determination of prices and revenues (the Review).

This submission is made by Ergon Energy in its capacity as electricity Distribution Network Service Provider in Queensland. It is the second submission made by Ergon Energy in the current phase of public consultation for the Review. The first submission provided responses to the matters raised in the December 2008 Framework and Issues Paper. This submission provides comments on the April 2009 Revised Statement of Approach and the three expert reports by Economic Insights and The Brattle Group published in June 2009. Ergon Energy's comments are set out in the attached submission document.

As with its previous submissions, Ergon Energy's preferred position is a Review should only occur after the new provisions of Chapter 6 of the National Electricity Rules (Rules) have been in operation for some time, and industry and regulators have an opportunity to 'work through' the practical application of these provisions.

If you have any questions or require any further information on the matters raised please do not hesitate to contact me on (07) 3228 7711.

Yours sinderely

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Ergon Energy Corporation Limited

Review into the use of Total Factor Productivity for the Determination of Prices and Revenues Submission on 2nd Interim Report

> Australian Energy Market Commission 31 July 2009

Review of Total Factor Productivity – Second Submission Australian Energy Market Commission 31 July 2009

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TABLE OF CONTENTS

EXE	CUTIVE Summary	3
1.	Introduction	5
2.	AEMC Revised Statement of Approach	6
3.	Energy Network Total Factor Productivity –Sensitivity Analysis (Economi Insights)	ic 7
3.1 3.2	. Report Conclusions . Ergon Energy's Comments	7 .7
4.	Assessment of Data Currently Available to Support TFP-based Networ Regulation (Economic Insights)	′k 0
4.1 4.2	. Report Conclusions1 . Ergon Energy's Comments1	0 0
5.	Incentives Under Total Factor Productivity Based and Building-Blocks Typ Price Controls (The Brattle Group)1	ю 7
5.1	. Report Conclusions1	7

EXECUTIVE SUMMARY

- This is the second submission made by Ergon Energy Corporation Limited (Ergon Energy) in the current phase of public consultation on the Australian Energy Market Commission's (AEMC) Total Factor Productivity (TFP) Review.
- As a general comment, Ergon Energy considered it would be appropriate that the optimal TFP specification is firstly identified, and then the data requirements for that specification are commented on, not vice-versa. The TFP specification should drive the data requirements, rather than current data availability dictating the TFP specification.
- Ergon Energy supports the intention of the AEMC's Revised Statement of Approach to the TFP Review. This reflects Ergon Energy's previous comment to the AEMC that the policy problem that the introduction of TFP is attempting to solve must be articulated before it can be investigated. Ergon Energy would also support the extension of the Review to other approaches to incentive regulation, such as 'menu' or hybrid approaches.
- Ergon Energy believes that the fact that materially different outcomes can arise from different specifications makes it particularly important that if the proposed TFP Rule Change is adopted the AEMC considers the costs and benefits of methodology prescription when drafting the new NER provisions.
- Ergon Energy believes it would be instructive to follow the course of the New Zealand experience, including the success of leaving the specification of TFP to the Rule enforcer to develop via its own public consultation processes.
- Ergon Energy believes that the success of TFP regulation is directly correlated to the ability of the regulator to collect like-for-like data across a sufficient number of businesses.
- The development of a national accounting (and service performance) reporting system in Australia appears to be decades behind leading TFP jurisdictions such as the United States. In the United States, electric public utilities & licensees and natural gas pipeline companies within the Federal Energy Regulatory Commission's (FERC) jurisdiction are required to maintain their books and records in accordance with FERC's Uniform System of Accounts (USOA).
- The major hurdles to achieving a nationally consistent and robust input data set appears to be a major weakness in the ESC's proposition that Victorian TFP estimates could be the starting point for national TFP estimates, and additional data could be rolled into calculations over time.¹

¹ Essential Services Commission, Submission to the AEMC Review into the Use of Total Factor Productivity for the Determination of Prices and Revenues – Framework and Issues Paper, March

- Ergon Energy believes that, due to time constraints within the reset process combined with the vast number of constituent decisions required of a revenue determination, the AER is (rightly) more concerned with establishing prudent and efficient cost forecasts rather than backcasting cost information.
- Ergon Energy notes that the AER's ability to implement a uniform Regulatory Information Order (RIO) across NEM businesses, or even a Regulatory Information Notice (RIN) across only a handful of DNSPs has had mixed success.
- The implementation and operating costs of TFP data collection needs to be considered, and the requirement for a building block process to reset process may offset some of the claimed costs savings.
- Distribution businesses have indicated significant problems with the breadth of the draft RIO as it stands, so contemplation of an extension to its scope to allow for the possibility of TFP is likely to be strongly opposed by the industry.
- The AEMC's review of incentive properties not be limited to a discussion of incentives under only the TFP and building blocks approaches. The approach to defining workable TFP mechanisms in other countries should also be considered.
- The incentive to businesses to 'cherry-pick' the profit-maximising regulatory mechanism should be considered as part of the current Review.

2009, p 26; Essential Services Commission, Second Supplemental Submission to the AEMC review into the use of Total Factor Productivity for the Determination of Prices and Revenues - ESC Response to the Consultant's Reports, June 2009, p 13

1. INTRODUCTION

This is the second submission made by Ergon Energy Corporation Limited (Ergon Energy) in the current phase of public consultation on the Australian Energy Market Commission's (AEMC) Total Factor Productivity (TFP) Review. The first submission provided responses to the matters raised in the December 2008 Framework and Issues Paper. Ergon Energy's comments can be summarised as:

- The 'policy problem' that the introduction of TFP is attempting to 'solve' has not been articulated;
- TFP may be contrary to the objectives of the National Electricity Law (NEL);
- The industry can not be considered to be in a steady-state;
- There is a lack of 'comparability' between Distribution Network Service Providers (DNSPs); and
- The use of TFP for a DNSP is only feasible if the input and output measures are truly reflective of the provider's inputs and outputs.

This second submission provides Ergon Energy's comments on:

- The AEMC's Revised Statement of Approach;
- The report titled Energy Network Total Factor Productivity Sensitivity Analysis, authored by Economic Insights;
- The report titled Assessment of Data Currently Available to Support TFP-based Network Regulation, authored by Economic Insights; and
- The report titled Incentives Under Total Factor Productivity Based and Building-Blocks Type Price Controls, authored by The Brattle Group.

As a general comment, Ergon Energy considered it would be appropriate that the optimal TFP specification is firstly identified, and then the data requirements for that specification are commented on, not vice-versa. The TFP specification should drive the data requirements, rather than current data availability dictating the TFP specification.

As an electricity distribution business, Ergon Energy's comments are mainly focussed on the arguments and results pertaining to economic regulation of distribution businesses. However, many of the comments could be generalised to electricity transmission and gas pipeline regulation. Throughout its responses to these reports, Ergon Energy also takes the opportunity to highlight and discuss (where relevant) the submissions made to the Review by other stakeholders up until to 14 July 2009.

2. AEMC REVISED STATEMENT OF APPROACH

Ergon Energy supports the intention of the AEMC's Revised Statement of Approach to the TFP Review. This reflects Ergon Energy's previous comment to the AEMC that the policy problem that the introduction of TFP is attempting to solve must be articulated before it can be investigated. Ergon Energy would also support the extension of the Review to other approaches to incentive regulation, such as 'menu' or hybrid approaches.

Ergon Energy also endorses the AEMC's intention to undertake further investigation of the investment incentives created by TFP regulation, particularly when there is a bow-wave of capital investment expected to be required by individual firms. Ergon Energy discusses this issue further in its response to the Brattle Group's report.

While Ergon Energy supports a review of the merits of adopting TFP as an alternative regulatory mechanism, its primary position remains that the review should only occur after the new provisions of Chapter 6 of the National Electricity Rules (NER) have been in operation for some time. It is likely that the first round of electricity distribution building block reviews under the AER will be more costly than the final round of reviews. Only then can an estimate of the true costs and benefits of this form of regulation as applied by the AER be made.

3. ENERGY NETWORK TOTAL FACTOR PRODUCTIVITY – SENSITIVITY ANALYSIS (ECONOMIC INSIGHTS)

3.1. Report Conclusions

The objective of this report is to determine whether the specification of TFP studies is likely to have a material impact on the outcome of productivity-based revenue and price cap regulation. To address this issue a sensitivity analysis of TFP results was undertaken using aggregate Victorian data for both electricity and gas distribution.

Based on its findings for electricity and gas distribution in Victoria, Economic Insights concludes that TFP analyses of Australian energy distribution systems will be relatively sensitive to:

- The output and input specifications chosen;
- The time period examined; and
- The method used to calculate growth rates.

3.2. Ergon Energy's Comments

While the objective of this report is to determine whether TFP specification 'matters', the underlying purpose is to determine the degree of National Electricity Rules (NER) prescription required to ensure that TFP regulation is implemented in the manner intended, and does not create confusion for the DNSP (or to the contrary allow the DNSP to game or find loop-holes in the NER description of the specification).

Ergon Energy does not intend to take this opportunity to discuss the strengths and weaknesses of the different TFP specifications. Ergon Energy believes that this stage of the consultation process should be driven by more 'high level' policy and pragmatic considerations, such as the incentives created in the current regulatory framework, the requirements of the National Electricity Objective (NEO), as well as general indications as to the availability of comparable TFP data across jurisdictions. Ergon Energy notes that the terms of reference for this report was not to analyse the two specifications, but rather determine whether their 'vanilla' application would result in materially different price/revenue outcomes. It is within this context, and the underlying purpose of establishing the appropriate degree of direction in the NER, that Ergon Energy makes its comments.

Transparency is important

The two specifications that are presently being debated are the Lawrence/Economic Insights and Kaufman/PEG specifications. Lawrence's approach includes physical measures of capital in TFP measurement rather than only using financial measures (the PEG approach). On the output side, PEG recommends revenue share output weights, while Lawrence argues for cost share weights.

Lawrence's specification has been preferred in New Zealand. The PEG approach has been adopted in Ontario, Canada. It is perhaps unsurprising that different TFP specifications can lead to material differences regarding revenue (and price) outcomes via the regulatory process. The Brattle Group has also commented on the sensitivity of TFP outcomes to the particular design choices and that a wide range of X factors can result:

Technical choices in the design of the method can have significant impacts on the results. For example, in the Ontario case two different methods were proposed which resulted in X factors that differed by about 2%. In the TFP analysis for gas distribution (a case in which there was no detailed time series data for the regulated sector), Ofgem's consultants recommended using a TFP growth rate in the range of 0.1%–4.8%, in part because different TFP methods gave rather different results. This range is rather wide compared to the typical magnitude of X factors adopted by regulators.

Ergon Energy believes that the fact that materially different outcomes can arise from different specifications makes it particularly important that if the proposed TFP Rule Change is adopted the AEMC considers the costs and benefits of methodology prescription when drafting the new NER provisions.

For stakeholders relatively unfamiliar with TFP methodologies, the ability to test and comment upon a TFP model that has strong foundations in the NER (in much the same way those businesses can test and comment on the AER's Post-Tax Revenue Model) will make those businesses more willing to consider the merits of opting for TFP regulation.

Another example may be the method by which 'differences' are accounted for. For example, for a network with relatively high customer density, its evaluation of the risks associated with moving to TFP is likely to be influenced by whether the NER 'locks-in' the means by which adjustments might be made to account for its difference from the 'average' distribution business.

Alternatively, the NER might set out a list of factors or criteria that the AER must consider when determining the methodology for adjusting or 'cleansing' data. This follows the approach to the assessment of capital and operating expenditure forecasts under the NER. It would ensure that the AER's decision-making power is similar across both building block regulation and TFP regulation. If too much 'work' is left to the AER's individual reset guidelines, the role of Rule 'enforcer' may shift into the AEMC's sphere of Rule 'maker'. This may reduce the incentive for businesses to consider TFP.

New Zealand experience

As the AEMC is likely to be aware, the New Zealand Commerce Commission is currently undertaking consultation on the interpretation and application of the New Zealand Commerce Amendment Act 2008 which came into force on 14 October 2008. The Act provides for a new regulatory instrument in the form of default/customised price-quality regulation. It is one of the two price-quality control options

(the other being individual price-quality regulation). The main features of default/customised pricequality regulation, are:

- Default price-quality paths (DPP) that apply to regulated suppliers for a regulatory period and that are set by the Commission in a 'relatively low cost way' using readily available information; and
- Individual suppliers may make proposals to the Commission for a customised price-quality path, which propose alternative price and/or quality paths to better meet their particular circumstances.

Sections 53P(5) to (7) of the Act deals with rates of change in prices for default price-quality regulation. Section 53P(6) provides that:

The rate of change must be based on the **long-run average productivity improvement rate** achieved by either or both of suppliers in New Zealand, and suppliers in other comparable countries, of the relevant goods or services, **using whatever measures of productivity the Commission considers appropriate**

Section 53P(8) provides that the Commission may set alternative rates of change for a particular supplier if it is necessary or desirable to:

- Minimise any undue financial hardship to the supplier; and/or
- Minimise price shock to consumers; and/or
- Provide an incentive for the supplier to improve its quality of supply.

The legislation leaves a vast majority of the specification 'work' to the Commerce Commission. The Commission is given significant power as to the approach it can take to calculate the "long run average productivity improvement rate". The only stipulated limitation is that it cannot undertake comparative benchmarking (i.e. multilateral TFP) to inform starting prices or rates of change. The Commission sets out its preliminary views to the TFP specification in a Discussion Paper, which is currently subject to public consultation.²

Ergon Energy believes it would be instructive to follow the course of this debate, including the success of leaving the specification of TFP to the Rule enforcer to develop via its own public consultation processes.

² New Zealand Commerce Commission, *Reset of Default Price-Quality Path for Electricity Distribution Businesses – Discussion Paper*, 19 June 2009

4. ASSESSMENT OF DATA CURRENTLY AVAILABLE TO SUPPORT TFP-BASED NETWORK REGULATION (ECONOMIC INSIGHTS)

4.1. Report Conclusions

The main finding of this report is that currently available regulatory data for the electricity and gas distribution and transmission industries are not sufficiently robust to support TFP analysis of the rigour required to be the primary determinant of regulatory pricing and revenue decisions. The key problems include:

- Current regulatory reporting is generally concerned with financial data whereas physical data on both outputs and inputs are of key importance for productivity measurement;
- Definitions are often not specific enough, vary across jurisdictions or are left to the regulated business's discretion and exclusions or inclusions often change from one regulatory period to another;
- Regulatory reporting requirements are not uniform between jurisdictions though migration to the AER may result in greater uniformity;
- Regulatory reporting is often a matter of dispute between the utility and the regulator, with regulators on occasion making 'adjustments' (sometimes without explanation) so that the regulated business has little 'ownership' of the resulting data; and
- Current reporting generally does not allow consideration of differences in activities between utilities (e.g. differences in transmission/distribution boundaries and system structure).

The report concludes that there remains a strong case for developing a well specified and robust national TFP database for at least the electricity and gas distribution industries. It suggests that consultation commence with network businesses and other stakeholders on the data variables required for TFP analysis and their detailed definition.

4.2. Ergon Energy's Comments

A major conclusion of this report is that the regulatory data currently available is not "fit for the purpose"³ of the robust TFP analysis that would be required for revenue determination. This conclusion is consistent with Ergon Energy's previous comments to the AEMC on TFP regulation, as well as submissions made by a number of other stakeholders.

TFP regulation requires a robust method for undertaking estimates of TFP trends, and a consistent and transparent approach to collecting input data. Key issues are the veracity of the time series and the sample size of data available. As a result TFP regulation requires that regulators define consistent and sustainable accounting procedures across the sample set. Ergon Energy believes that the

³ Economic Insights, p 38.

success of TFP regulation is directly correlated to the ability of the regulator to collect like-for-like data across a sufficient number of businesses.

For information and comparison purposes, the data available to the Ontario Electricity Board (OEB) to implement TFP in Ontario is available at: <u>http://www.oeb.gov.on.ca/OEB/_Documents/EB-2006-0268/Comparison_of_Distributors_20081203.xls</u>. In the Ontario context, Ergon Energy draws the AEMC's attention to:

- The OEB's working group comments that the standard TFP approach should be based on at least a 10-year series of data^{4;} and
- While the PEG approach was adopted by the OEB (as noted by the ESC in its submission to the Review), the data relied upon by PEG was from the United States as there was insufficient Ontario data for setting a productivity factor.

US System of Accounts

To ensure that major disputes over data reliability and applicability are minimised, a necessary precondition for robust TFP regulation in any country is a strong, national system of regulatory accounting practices. At the very least, where differences in accounting policies do arise, they must be clearly specified to ensure the regulator can reconcile differences across time and the sample set. This precondition is touched upon at section 2.2 of Economic Insights' report.

The development of a national accounting (and service performance) reporting system in Australia appears to be decades behind leading TFP jurisdictions such as the United States. In the United States, electric public utilities & licensees and natural gas pipeline companies within the Federal Energy Regulatory Commission's (FERC) jurisdiction are required to maintain their books and records in accordance with FERC's Uniform System of Accounts (USOA). The USOA was developed in the 1930s and has provided a strong basis for regulators to implement TFP. As noted by Malkholm:

This rarely leaves US Energy Utilities and their regulators in major dispute over financial issues (like profitability, depreciation, expenses, customer contribution, the admissibility of particular costs, or the treatment of unregulated affiliates)⁵.

Interestingly, as intimated by Malkholm and further described by McGrew, even after 60 years of operation the USOA data has occasionally been subject to costly disputes:

Occasionally the [FERC] audit uncovers a needle in a haystack that causes the pipeline to expend a lot of time, money, and frustration.⁶

⁴ Ontario Energy Board, Staff Discussion Paper on 3rd Generation Incentive Regulation for Ontario's Electricity Distributors, 28 February 2008, p 63

⁵ NERA, *Evidence of Jeff D. Makholm on behalf of UtiliCorp Networks Canada on its proposed PBR plan.* London, National Economic Research Associates, 2001.

⁶ J McGrew, *Federal Energy Regulatory Commission*, Best Practice Series, American Bar Association, 2002-03

Ergon Energy also notes that the degree of advancement in the uniform regulatory reporting framework in the United States has allowed a market to develop for IT systems which translate business data into FERC compliant data sets.

Ergon Energy believes that making progress on the issue of regulatory accounting synthesis across businesses is fundamental to achieving practical progress towards further consideration of TFP regulation.

Current data availability

The major hurdles to achieving a nationally consistent and robust input data set appears to be a major weakness in the ESC's proposition that Victorian TFP estimates could be the starting point for national TFP estimates, and additional data could be rolled into calculations over time.7 Taken at face value the approach of simply "rolling in" the other businesses data over time appears to be a gross underestimation of the difficulties associated with establishing the necessary pre-condition of streamlined data across the sample of regulated businesses. This point is also picked up by Economic Insights:

In submissions to the AEMC Review the Victorian DPI and ESC were the only ones who expressed the (somewhat guarded) view that currently available data were sufficiently robust to support TFP analysis suitable to base regulatory determinations on. This was thought to be the case in at least one jurisdiction and it was suggested that data from other jurisdictions could be progressively 'rolled in'. However, this view was predicated on the TFP specification used in the research sponsored by the ESC to date which relies on financial variables as the sole basis for determining input quantities.⁸

Ergon Energy is also concerned that the ESC appears to have misconstrued Economic Insights' conclusion as to the current availability of TFP financial data. The ESC's second supplemental submission to the current Review states:

The [Economic Insights Report] says that financial data needed to estimate TFP are generally available...⁹

Ergon Energy agrees that financial data is "generally available" (relative to physical network data), and this is also noted by Economic Insights:

Jurisdictional regulators noted that their efforts to date had almost exclusively been directed at obtaining the financial data required for building blocks regulation...¹⁰

⁷ Essential Services Commission, Submission to the AEMC Review into the Use of Total Factor Productivity for the Determination of Prices and Revenues – Framework and Issues Paper, March 2009, p 26; Essential Services Commission, Second Supplemental Submission to the AEMC review into the use of Total Factor Productivity for the Determination of Prices and Revenues - ESC Response to the Consultant's Reports, June 2009, p 13

⁸ Economic Insights, p 39

⁹ Essential Services Commission, Second Supplemental Submission to the AEMC review into the use of Total Factor Productivity for the Determination of Prices and Revenues - ESC Response to the Consultant's Reports, June 2009, p 13

¹⁰ Economic Insights, p 19

However, Ergon Energy does not believe that this necessarily makes the data of the type "needed to estimate TFP". Ergon Energy's interpretation reconciles with the following assertion by Economic Insights:

Our review of the available data has indicated that even key financial variables have been subject to progressive refinement and changes in coverage over time and differences across jurisdictions which compromise their use for TFP purposes.¹¹

The inability to collect like-for-like data from a sufficiently large sample set of businesses is one of the reasons why Ergon Energy remains to be convinced that the TFP regulation could be successfully executed in Australia at the current time.

AER's approach to data collection

The ESC's recommends that the AER address data concerns at each building block price reset (presumably through the Regulatory Information Notice-type instruments):

There will be more challenges associated with developing high-quality and consistent cost data. The ESC recommends that these challenges be confronted on a case-by-case basis as part of the building block reviews that will still be conducted for individual service providers. These reviews provide an opportunity to examine each company's costs carefully and attempt to establish uniform and consistent standards for accounting and reporting.¹²

For the reasons outlined below, Ergon Energy does not agree with the view that regulators can deal with cost data issues at revenue resets. Ergon Energy believes that, due to time constraints within the reset process combined with the vast number of constituent decisions required of a revenue determination, the AER is (rightly) more concerned with establishing prudent and efficient cost forecasts rather than backcasting cost information.

It is Ergon Energy's current belief that it is unrealistic to expect that regulatory accounting policies could be sufficiently streamlined across all distribution businesses in the NEM to allow for the robust operation of TFP regulation. Ergon Energy notes that the AER's ability to implement a uniform Regulatory Information Order (RIO) across NEM businesses has been met with scepticism by some stakeholders:

A nationally consistent reporting framework can be applied to customer outcomes or service performance measures. However, such a framework should not be imposed for reporting of input costs (e.g. capex and opex) as it risks losing the context, meaning and reliability of data. This is because the underlying differences of each DNSP in terms of operational structure, IT systems and financial reporting structure are not properly recognised. EnergyAustralia therefore questions the objective of a nationally consistent reporting framework for input costs at the expense of relevance and reliability which could potentially lead to a decision that is adverse to a DNSP.¹³

¹¹ Economic Insights, p 39

¹² Essential Services Commission, Submission to the AEMC Review into the Use of Total Factor Productivity for the Determination of Prices and Revenues – Framework and Issues Paper, March 2009, p 26

¹³ EnergyAustralia, Submission on AER's Regulatory Information Order, October 2008, pp 5-6

Indeed, a uniform Regulatory Information Notice (RIN) across only a handful of electricity distribution businesses has not been able to be implemented. Those RINs that have been served in most cases do not reflect the businesses established financial reporting frameworks. Ergon Energy's experience is similar to that of EnergyAustralia's:

EnergyAustralia spent significant time and resources in developing [RIN] templates that were able to be populated. It should be noted that the RIN reflects a compromise by both the AER and EnergyAustralia and does not reflect the way in which EnergyAustralia operates its business.¹⁴

In Ergon Energy's case, there have been many instances where historical cost and price data could not be provided to the level of dis-aggregation that was originally requested by the AER. Ergon Energy's final RIN reflected this fact. If the AER were to compile the 7 completed electricity distribution RINs it now possesses (4 NSW/ACT, 2 Queensland, 1 South Australia), Ergon Energy considers it unlikely that, from the RIN data collected thus far:

- A transparent, consistent and comparable historical cost database could be constructed sufficient to base a robust historic TFP estimate across these 7 businesses; or
- A transparent and comprehensive description of differences in the spectrum of accounting policies across the 7 businesses, how they have been used to develop each cost input in the 7 RINs, and how they might have been used to develop the historic TFP estimate, could be formulated.

Ergon Energy believes that the difficulties associated with data collection are not the result of regulated businesses attempting to be confrontational or clandestine. It must be remembered that uniform regulatory accounting practices, such as the USOA, were generally implemented when electricity networks were not significantly developed and different accounting practices and procedures, which have been stylised to suit individual corporate governance frameworks, could be summarised in a few common templates. Many regulatory accounting procedures and requirements have been derived from negotiations and consultations with jurisdictional regulators over the past 20 years. During these discussions the achievement of national consistency, as noted by Economic Insights, has come second to resolving jurisdiction-specific issues:

Data requirements have in general evolved first and foremost to reflect jurisdictional characteristics and priorities with the objective of national uniformity being recognised but not receiving the highest priority.¹⁵

As noted, even if one started from that position that close to perfect accounting consistency was impossible, the AER would need to ensure that differences in accounting practices across businesses could be fully accounted for and explained. Ergon Energy believes that simply achieving this objective would also require many years of continued consultation and information gathering and processing by the regulator. The regulator would require a detailed knowledge of all the dynamic accounting policies implemented by each regulated business, and a comprehensive understanding of how and why these

¹⁴ EnergyAustralia, p 4

¹⁵ Economic Insights, p 38

have changed over the businesses recent history (to establish an historic TFP). The regulators would have to simultaneously undertake their day-to-day functions. Given their current resourcing, it would appear unrealistic to expect regulators to fulfil such a mandate. When establishing the costs of adopting a TFP option, the cost to both the regulated businesses as well as the regulator (in terms of increased resourcing) must be considered. The costs of a TFP option are commented on in the next section.

It might be argued that most technical disputes would arise and be resolved during the first application of TFP regulation to a particular business. Once a dispute arises and is resolved, subsequent revenue resets will learn from the practices agreed upon at previous resets. One problem with this belief is the loss of 'corporate memory'. As noted by Economic Insights, this is a key barrier to understanding the nature of past data (and agreed data adjustments) and likely to result in continued disputes over particular data sets.

Cost of data collection

Another important aspect of streamlining regulatory accounting requirements is the cost associated with implementation and operation. A national data base for TFP regulation will increase costs on most (if not all) DNSPs in the NEM. This is particularly the case if those businesses that do not opt-in for TFP regulation are still required to provide TFP data. These costs could be in the millions of dollars for each DNSP that is required to change its accounting systems to accommodate TFP data provision. As noted, the requirement to concurrently apply building block regulation to some businesses and TFP regulation to other businesses is also likely to impact upon the AER's operating costs.

Implementation costs are in addition to the ongoing data provision and record keeping costs associated with TFP. Ergon Energy draws the AEMC's attention to Integral Energy's point that, due to the possible requirement for an earnings off-ramp, the data necessary to institute a building block process will also have to be maintained by the business.16 This is particularly the case for those government-owned businesses which may be 'politically pressured' into exercising an off-ramp option if there develops a public perception that it is earning above normal profits under TFP regulation.

Ergon Energy also notes that a building block type assessment is also likely to be required to set opening prices, as noted by the Victorian Department of Primary Industries' Rule Change Proposal. The proposed TFP approach will require the prices at the commencement of each regulatory period to be set with reference to the (firm-specific) cost incurred by the distributor to provide the regulated services, consistent with what implicitly is the case for the building block approach.17

¹⁶ Integral Energy, Letter to AEMC Chairman – Review into the use of total factor productivity for the determination of prices and revenues, 24 February 2009, p 7

¹⁷ Victorian Department of Primary Industries, *Proposed Rule Change to the Australian Energy Market Commission to Permit the Use of the "TFP Approach"*, May 2008, p 23-24

The administrative costs associated with this assessment are likely to be similar (if not the same) as those associated with the current requirement to reset opening prices under building blocks. Debates over the profile of capital investment, in particular the ability to defer capital expenditure, will still occur. As Envestra notes in its submission to the TFP Review:

The question therefore becomes one of comparing the incremental costs of undertaking the building block approach for the last four years of a regulatory period relative to the costs of a TFP approach.¹⁸

In addition there are relatively few examples of businesses adopting longer regulatory periods under TFP which may have led to a reduction in the costs of TFP regulation. This leads Ergon Energy to submit that any perceived theoretical utility that TFP may have over the building block approach should not be at the expense of a full consideration of the real costs associated with implementing TFP regulation.

Scope of the RIO

The Economic Insights report concludes that, regardless of the data issues, there is a strong case for developing a well specified national TFP database for at least the electricity and gas distribution industries. Ergon Energy does not necessarily agree with this conclusion if it relies upon the AER extending its draft Regulatory Information Order (RIO) to include more quantity information on both outputs and inputs and to ensure cost data consistent with TFP requirements is collected. The AER has already indicated that its RIO could change to account for possible requirements for TFP regulation¹⁹.

Ergon Energy, like many other electricity distribution businesses, has provided a response to AER on its draft RIO²⁰. As noted above, most businesses have strongly opposed the data requirements in the draft RIO. A major theme of many responses is that the AER has not demonstrated nor substantiated the causal link between the requirements of the NEL and NER and the request for certain information. Ergon Energy therefore believes that relying on the extension of the draft RIO to make TFP regulation more likely to 'work' is unrealistic. Distribution businesses have indicated significant problems with the breadth of the draft RIO as it stands, so contemplation of an extension to its scope to allow for the possibility of TFP is likely to be strongly opposed by the industry.

¹⁸ Envestra, Letter to AEMC Chairman – Re: Total Factor Productivity Review – Framework and Issues Paper, 6 March 2009, p 6

¹⁹ AER, Letter to AEMC Chairman - Total Factor Productivity Review – Framework and Issues Paper, EMO0006, 6 March 2009, p 6

²⁰ Ergon Energy, Issues Paper – Electricity Distribution Network Service Providers Annual Information Reporting Requirements – Submission to the Australian Energy Regulator, 9 October 2008

5. INCENTIVES UNDER TOTAL FACTOR PRODUCTIVITY BASED AND BUILDING-BLOCKS TYPE PRICE CONTROLS (THE BRATTLE GROUP)

5.1. Report Conclusions

The report discusses and compares the incentives created and fostered under the building block and TFP approaches to economic regulation. The incentive-types can generally be seen as relating to:

- The incentive to reduce capital and operating costs;
- The incentive to invest efficiently; and
- The incentive to at least meet service targets.

The report concludes that, while TFP methods should have relatively strong cost-minimisation incentive properties (because it disconnects future prices from out-turn costs), the improvement in these incentives from building blocks would be small for the TFP approach in the Rule change proposal (the VTFP approach). The report also argues that incentives in terms of investment and service quality are similar under the two forms of regulation.

5.2. Ergon Energy's Comments

Incentive regulation promotes economic efficiency in the energy sector and serves the best interests of end-users and the economy as a whole. The incentive regulation framework must also be sustainable and understood by all participants, and be capable of implementation through a regulatory process that is efficient while at the same time addresses the concerns of interested parties and ensures openness and transparency.

A key issue identified by Ergon Energy for the current TFP Review is that the AEMC's review of incentive properties not be limited to a discussion of incentives under only the TFP and building blocks approaches. The debate should encompass other forms of regulation, some of which are outlined by the Brattle Group report and which have been discussed by the ACCC/AER at various points. A significant volume of economic literature has been dedicated to the incentives created under different forms of economic regulation. This literature should be considered by the AEMC when considering the incentives created by TFP and building blocks.

Generally, Ergon Energy agrees with the conclusions arrived at in the Brattle Group report. Ergon Energy would suggest, however, that the ability of firms to 'game' expenditure levels and profiles to take advantage of regulatory mechanisms such as an efficiency benefit sharing scheme or an upcoming price reset, might be overstated in the report. Investment decision-making is driven by considerations relating to such issues as network reliability, security of supply, and supply quality. Unit

costs are driven by the terms of established supply contracts and/or market conditions at the particular point in time.

Important to explore other studies

The issues of incentives created by TFP regulation have been discussed in other jurisdictions, including most recently in Canada. The Ontario Energy Board has recently undertaken an extensive review of the principles and methodologies for incentive regulation. Ergon Energy encourages the AEMC to review the documentation generated by this review. For example, Ergon Energy notes that the OEB has discussed compatibility issues with TFP regulation and capital investment incentives. During this consultation, some members of the review working group discussed options such as a "modular approach":

The non-output related capital expenditures, identified by working group members as in relation to matters such as smart meters, significant replacement of aging assets and/or distributed generation-related investments, would be considered as "incremental" and would be reviewed by the Board on a case-by-case basis.²¹

It appears that a significant argument made by the Brattle Group is that the number of 'safeguards' built into the VTFP proposal have worked to detract from the incentive power of the VTFP model. While it is difficult to quantify the power of incentives under different forms of regulation, Ergon Energy notes that the ESC has attempted to do this via an 'incentive power' model. Ergon Energy believes that the AEMC should consider the mechanics and results of this model and compare it with the conclusions drawn by The Brattle Group. Further (independent) review of the ESC model and accompanying report on this issue may be beneficial to the TFP Review.

Along these lines, the development of a 'strawman' TFP model may also be beneficial to enable regulators and the industry to compare possible outcomes and incentives generated under both the building block and TFP approach. Ergon Energy notes that the Revised Statement of Approach provides that the AEMC will release a strawman TFP design for consultation.

Incentive to cherry-pick regulatory mechanism

Ergon Energy would finally like to draw to the AEMC's attention the following important issue raised by the Brattle Group:

...we expect that only those firms that expected higher prices under TFP than under building-blocks would request the switch. The firms that expected a lower X factor (and thus higher total revenue) under building-blocks than under TFP would elect to stick with building-blocks. As a result, prices will be higher if firms have the option to choose TFP than if all the firms remained subject to building-blocks, because those firms that switch would get higher prices than would have been the case before the VTFP option was introduced.²²

²¹ Ontario Energy Board, Staff Discussion Paper on 3rd Generation Incentive Regulation for Ontario's Electricity Distributors, 28 February 2008, p 23.

The ESC has responded strongly to the Brattle Group's claim:

Without exception...customer prices were lower under TFP-based regulation than building block regulation. In fact, building block regulation sometimes leads to higher prices than cost of service regulation, due to companies' ability and incentives to "game" their operating and capital cost forecasts, which are in turn used to set their forward-looking prices.²³

Ergon Energy can not agree with the ESC's logic given the form of the VTFP Rule change proposal. The form of regulation ultimately chosen by the business will be largely driven by the perceived likely profits under each. A profit-maximising business will not choose that form of regulation which it believes results in lower profit. Government-owned businesses, like private companies, are directed to maximise the return on their shareholders' investment. If TFP results in lower prices "without exception" as claimed by the ESC, the only situation where TFP would be chosen by the firm is in situations where:

- the firm was not profit-maximising, or the profit-maximisation objective was secondary to other company objectives which resulted in the nomination of TFP;
- The businesses modelling of the profit under building block and TFP options was flawed, and the business opted for TFP 'by mistake'; or
- Even though it resulted in lower prices, TFP was still the profit-maximising alternative as the firm could retain the benefit of any achieved costs efficiencies under TFP to a significantly greater extent than under building blocks.

The only conceivable option of those listed appears to be the third option. However, as noted by the Brattle Group, the VTFP sees reset prices based on out-turn costs and a forward looking weighted average cost of capital. Therefore, the ability to retain cost efficiencies realised across regulatory periods is limited under the VTFP to the extent to which the AER did not reflect these achieved efficiencies in the P0. This supports the view that the VFTP option is unlikely to be chosen by a significant number (if any) distribution businesses. While this isn't strictly speaking an incentive created by TFP per se, it does indicate possible firm behaviour if the VTFP Rule change proposal was adopted. It also calls into question the ability of the VTFP to reconcile with the element of National Electricity Objective relating to the "long term interests of consumers…with respect to price".

²² The Brattle Group, p iv

²³ Essential Services Commission, Second Supplemental Submission to the AEMC review into the use of Total Factor Productivity for the Determination of Prices and Revenues - ESC Response to the Consultant's Reports, June 2009, p 5