

24 February 2009

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

Dear Mr Tamblyn

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

I refer to the Australian Energy Market Commission (AEMC) review into the use of Total Factor Productivity (TFP). Integral Energy fully supports the AEMC conducting a thorough and detailed review of TFP to determine its relative merits and limitations within the broader context of economic regulation.

Integral Energy considers that the outcomes of the review of TFP have the potential to be the single most profound set of changes to economic regulation since the inception of the NEM, and as such it must be approached prudently and in a manner that allows focused consideration of the range of policy and technical matters at each stage.

This is particularly the case given that energy networks are now required to undertake significant capital renewal and investment programs across the country. This investment is essential to not only support the existing demand for energy, but is also a cornerstone of developing the infrastructure necessary to support Australia's economic recovery and to ensure the competitiveness of our industries internationally. Minimising uncertainty in regulatory framework is a key element underpinning this investment.

Integral Energy believes that the recent regulatory reform process undertaken by the Ministerial Council on Energy (MCE) has made significant in-roads into areas of concern with the current "building block" approach to the economic regulation of infrastructure businesses as applied in the National Electricity Rules (Rules). It would seem appropriate, therefore, to allow these reforms to be implemented by the Australian Energy Regulator (AER) and refined based on the experience of stakeholders before a wholesale change to the approach to economic regulation is contemplated.

It is evident from comments made at the AEMC's 11 February 2009 public forum on the TFP review, that there is a general lack of understanding or lack of confidence in the reasons to consider TFP (or the "problems" that TFP is to "fix"), the policy settings supporting those reasons and the body of economic theory and practical experience supporting the examination of TFP as a regulatory tool in Australia.

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In this context, the implications for network investment arising from the uncertainty intrinsic in applying TFP as the basis of economic regulation do not appear to be outweighed by the benefits attributed to TFP by its proponents.

Attached are Integral Energy's detailed comments on the AEMC's TFP review. In summary, Integral Energy considers that the AEMC should conduct its review in two stages. An initial stage to discuss and debate:

- The rationale for considering TFP within the context of the current Rule arrangements;
- Whether there is general agreement that there are sufficient "problems" with the current arrangements that could be reasonably be addressed by TFP as opposed to further review of the arrangements in the Rules supporting the building block method;
- Whether there is sufficient positive practical experience with TFP in comparable overseas jurisdictions to suggest that TFP could be practically applied in Australia;
- If TFP can adequately incorporate the costs of complying with regulatory and legislative obligations relating to service and reliability performance standards; and
- Whether there is a sufficient balance of economic theory to support TFP as having the potential to create better incentives for efficiency compared to the building block approach within the current Rule settings.

Based on the AEMC's findings in this first stage, the review would either be complete or proceed to a second, more detailed specification and Rule change development phase, but with the benefit of clarity as to the benefits of TFP and how, or if, it could be introduced into the regulatory framework.

If you have any queries regarding this submission please do not hesitate to contact me on (02) 9853 6101 or our Manager Regulatory & Pricing, Mr Mike Martinson on (02) 9853 4375.

Sincerely



Vince Graham

Chief Executive Officer

Attachment 1

Integral Energy's Detailed Comments on TFP

The issue of using Total Factor Productivity (TFP) either as the basis for or an adjunct to economic regulation has been discussed within regulatory circles on and off for the better part of the last decade. Understanding of how TFP could be used in economic regulation, however, does not appear to have developed significantly over that time, primarily due to concerns over how TFP is to be measured and also its ability to give appropriate weight to renewal expenditure and the valuation of service outcomes.

Despite these concerns, the Expert Panel¹ noted in its report that TFP should be more fully considered following the recent regulatory reforms that have given rise to the National Electricity Law (NEL) and the National Electricity Rules (Rules). These reforms have substantially changed the administrative and governance arrangements supporting the regulatory processes, and in doing so the nature of the building block approach has also substantially changed.

Integral Energy notes that there has been some support for including TFP as an option for economic regulation, as highlighted by the recent Rule change proposal lodged by the Victorian Minister for Energy and Resources. While the Rule change has not proceeded, the current detailed review has been a positive result from the proposal to afford more rigorous debate and greater understanding of TFP, particularly outside of Victoria where the debate has been the strongest in recent years. It should be noted however, that TFP has been considered in several jurisdictions in the past, including NSW, but has not progressed due to insufficient confidence in the approach as a regulatory tool.

Therefore, Integral Energy fully supports the Commission conducting a thorough and detailed review of TFP to determine its relative merits and limitations within the broader context of economic regulation, and in particular Integral Energy is interested to understand whether the concerns that have given rise to the TFP debate are as strong following the implementation of the recent regulatory reforms.

The following submission is a high level submission and comments on selected procedural and policy issues that Integral Energy believes deserve greater focus in the initial stages before progressing to the detailed issues of the TFP specifications if required. In addition, Integral Energy is in the final stages of the first distribution review by the AER under the Rules, which has limited the time available to explore the detailed issues at this stage; however Integral Energy hopes that its experience with the revised regulatory arrangements will assist the Commission in its considerations.

¹ Expert Panel On Energy Access Pricing - Report To The Ministerial Council On Energy, April 2006.

1 Timing of the review

Integral Energy holds some reservations regarding the timing of this review, both in terms of the appropriateness of conducting the review so close to the recent reforms that have delivered the NEL and Rules, and also in terms of the time that the Commission has allowed for completing the review and preparing Rule change proposals.

The potential implications for economic regulation arising from this review are profound, and as with all major change uncertainty regarding its nature and effect can create significant concern for affected parties. Therefore the review and the detailing of the issues and specifications needs to be carefully managed to ensure that participants have adequate opportunity to understand the issues, consider the resulting options, and fully engage in the review processes.

Therefore Integral Energy advocates that the Commission approach the review cautiously and ensure that it is conducted in a manner that allows focused consideration of the range of policy and technical matters at each logical stage, and does not overwhelm participants by trying to cover too much detail before participants have had adequate opportunity to engage in the discussion of the higher level issues.

1.1 Timing to undertake the review

It is not clear that the timing for conducting this review is appropriate. Rather, the review appears to be more in response to issues raised in relation to the Rule change proposal submitted by the Victorian Minister for Energy and Resources.

While the Commission has been responsive to submissions received in relation to Minister's Rule change proposal by commencing a more comprehensive review, the conducting of the review does not appear to be part of a broader strategic plan to review the regulatory arrangements with a view to identifying possible improvements based on practical experience with the recently modified arrangements.

Integral Energy would like the Commission to consider whether there is a more appropriate time to consider the use of TFP, following the completion of a number of regulatory processes under the new arrangements. Integral Energy believes that the recent reform process has made significant changes in areas that have been identified as concerns with the building block approach. Therefore it would seem appropriate to allow those changes the opportunity to be implemented (and refined based on experience) by the AER. The experience gained through implementing the new arrangements will allow an assessment of their effectiveness, and provide a more robust starting point for comparison with any proposed options for change.

Integral Energy also believes that in order for the Commission to apply the proposed assessment criteria it is necessary for the correct starting point to be understood and informed by experience for the comparison to be robust.

1.2 Timing to deliver the reports to the MCE

One of the few points that appeared to have universal agreement at the recent AEMC public forum on TFP is that a 12 month window to deliver a final report with any necessary Rule changes to the MCE is an extremely ambitious timetable.

As a comparison the AEMC's Transmission Pricing Review was afforded approximately 18 months. While the Transmission Pricing Review delivered several critical changes to the arrangements supporting the regulatory processes, the detailed specification of a revenue cap supported by a building block approach was largely unchanged and much of the work for this review was in terms of clarifying the existing arrangements in transitioning from the National Electricity Code to the Rules.

While Integral Energy does not mean to diminish in any way the outcomes of that review, the analysis undertaken by the Commission and the significant consultation processes undertaken, Integral Energy is concerned that a review of TFP would appear to be as (if not more) complex, but critically the consideration of TFP is significantly more controversial.

Therefore Integral Energy has two proposals that it would like the Commission to consider at this time.

Firstly, the breadth and the detail of the issues being canvassed by the Commission at one time have made responding to the Framework and Issues Paper (the Paper) in any detail prohibitive. Importantly, responding to many of the more detailed specification, application and transition questions in the Paper requires a resolution, or at least a clear understanding, of many policy and analytical issues.

From comments made at the public forum held on this review, it appears that there is a general lack of understanding or lack of confidence in the reasons to consider TFP (or the "problems" that TFP is to "fix"), the policy settings supporting those reasons, and the body of economic theory and practical experience supporting the examination of TFP as a regulatory tool in Australia.

Regardless of the reasons for this lack of understanding or lack of confidence it would appear reasonable for the Commission to take on board the starting point for the industry more generally and look to conduct the review in two stages. An initial stage to discuss and debate:

- the rationale for considering TFP within the context of the current Rule arrangements;
- whether there is general agreement that there are sufficient "problems" with the current arrangements that could be reasonably be addressed by TFP as opposed to further review of the arrangements in the Rules supporting the building block method;
- whether there is sufficient positive practical experience with TFP in comparable overseas jurisdictions to suggest that TFP could be practically applied in Australia; and

- whether there is a sufficient balance of economic theory to support TFP as having the potential to create better incentives for efficiency compared to the building block approach within the current Rule settings.

From this first stage a report could be prepared by the Commission for the MCE that would report on whether there is sufficient evidence and support to consider having TFP available as an alternative form of economic regulation, whether TFP could be used to support the building block approach, or whether the use of TFP is not advisable at this stage.

Based on the Commission's findings at this stage, the review would either be complete or proceed to a more detailed specification and Rule change development phase, but with the benefit of clarity as to the reasons to use TFP and how TFP is proposed to fit into the overall regulatory framework.

While Integral Energy recognises that phasing of the review in this manner would extend the timeframe for debating the higher level issues, Integral Energy believes that it could save time and money in the long run and would provide greater confidence in the outcomes due to the improved understanding of the higher level issues.

2 Identifying the need or desire for alternatives

As discussed above, there is a general lack of clarity regarding the concerns being raised with the current regulatory arrangements that need to be "fixed". This was an issue raised by several participants at the public forum.

Integral Energy accepts that it may not be necessary for a problem to exist for service providers and the AER to be open to agreeing to alternative approaches to economic regulation. However, it is apparent from the Paper that there is a cost to having more options for regulation than is required, and that for the Rule change test to be met any new option must at least be as good as the current approach (if not better) at meeting the National Objectives and the Revenue and Pricing Principles.

From Integral Energy's reading of the Report there appears to be broadly three issues which have been raised with the building block approach to support considering an alternative approach to regulation. The issues being that the building block approach:

- is too resource intensive;
- requires subjective judgements by the regulator; and
- is open to gaming by service providers

While Integral Energy is aware that these concerns have been raised in the past, as discussed below it is unclear whether these concerns continue to be as prominent following the development of the Rules.

2.1 Too resource intensive

It is unclear that there will be any reduction in the resources required to undertake regulatory the broad range of activities as a result of implementing TFP. In the absence of more information relating to how TFP will be used within the regulatory framework and its specification, the total amount of information and its nature remains unclear.

It was clear from the Paper however that a building block approach is required to establish a reasonable starting point for TFP, as there is no ability within the TFP approach to recognise a fair return on investment or other issues of profitability.

Recognising that TFP has no ability to identify fair returns on investment it is likely that the building block process needs to be undertaken at regular intervals (most likely at the end of each regulatory period) to assess whether the TFP price path is providing profitability outcomes that are within acceptable tolerances to the underlying costs of an efficient service provider.

The potential for an acceptable band was discussed in section 3.8 of the Report relating to off-ramps. Whether resetting the prices at regular intervals or by allowing an earnings based off-ramp the result is that a building block process will be required to support and/or reset the TFP approach, and therefore it appears clear that implementation of a TFP framework requires to a large extent all of the information and resources required for each method. This is because it is unlikely that annual reporting arrangements would provide sufficient guidance on the economic profits being achieved by regulated service providers under a TFP approach due to the inherent differences that exist between general purpose reporting and the information required to calculate the economic profits consistent with the current building block approach.

It must be noted of course that an earnings based reset of the TFP price path or earnings based off-ramps would likely be symmetric as it is reasonable to expect that there would be significant political and public opinion pressure to undertake a forensic review of service providers and share "excess" profits with consumers where it is identified that a service provider was outperforming the reasonable range of profitability.

Whether formally expressed or not it is clear that all interested parties will have a view of the acceptable range for profitability under a TFP approach. Therefore as discussed above excursions from this range could result in off-ramps being triggered. However, other responses to concerns of under or over performing against the reasonable range of profitability could include shorter rather than the longer regulatory periods that are suggested as a benefit of adopting a TFP approach.

Given these issues, it is not immediately clear whether the TFP approach would provide any assistance in easing the resource burden of economic regulation, and as discussed the reverse could be the case. In addition, the potential for concerns regarding service providers outperforming the profitability expectations could potentially lead to shorter regulatory periods and therefore more regulatory review processes.

2.2 Requiring subjective judgements by the regulator

It is not clear that any party has ever advocated that the economic regulator should not be able to exercise any judgement in relation to economic regulation. Therefore, the

concern or “problem” would appear to be less about the requirement to exercise regulatory judgement, but rather relates to the manner and the robustness of how that judgement is exercised.

With respect to the conduct and robustness of regulatory judgement, consideration must be given to the recent regulatory reforms, particularly those relating to the introduction of merits reviews and the requirements for the AER to fully disclose its reasoning when rejecting proposals submitted by service providers and/or substituting the service provider’s information with its own.

These two changes would appear to directly address the two concerns regarding the exercising of regulatory judgement.

The introduction of the merits appeals arrangements provide both an external discipline on the AER’s judgement that would be reflected in its decisions and as a result provides greater confidence in the AER’s initial decision making, without the need to seek remedy through merits appeal.

In addition, the requirements for the AER to disclose its analysis and reasoning provides confidence in the level of transparency, allows interested parties to engage the AER on how it has exercised its judgement, and again improves the confidence of all participants in the application of regulatory discretion.

With the introduction of these procedural reforms as part of the transition to the Rules, it is not clear that requiring the AER to exercise judgement remains a valid concern that should be considered by the TFP review, at least in the absence of any experience of the effectiveness of these procedural reforms.

Therefore Integral Energy submits that these reforms must be afforded the opportunity to be implemented and allow an assessment of their effectiveness before considering yet further reforms due to concerns of the AER exercising regulatory judgement.

2.3 Open to gaming by service providers

The issue of regulatory approaches being open to gaming appears to be centred on the belief that information asymmetry exists, and that it can be exploited by the regulated network to achieve higher than required revenues.

The potential for information asymmetry was another issue recognised by regulators even before the commencement of the NEM, and is discussed in several regulatory issues and positions papers. To address the perceived imbalance of information, regulators have imposed reporting regimes and sought the assistance of experts to help interpret the information provided and apply industry experience and judgement. Both of these approaches are reasonable responses to the concerns that information can be withheld or misrepresented by businesses.

However, due to concerns arising from increasingly complex business structures and/or contractual arrangements between related and other parties in some jurisdictions combined with the significant increases in capital and operating programs in other

jurisdictions the information powers afforded to regulators were materially increased in the recent regulatory reforms.

The new powers are only now beginning to be tested in review processes, and revisions to annual reporting guidelines that are expected to be released for consultation over the coming months. With these new powers being provided to address the potential for information asymmetry to impact on the outcomes of regulatory processes it is unclear whether the concerns regarding information asymmetry have been materially reduced. The concern that there exists some information asymmetry is unlikely to ever be fully removed, however the potential for information asymmetry to have a material impact on outcomes appears to have greatly reduced.

Therefore, consistent with the position stated above in respect to exercising regulatory judgement, it is not clear that information asymmetry and the resulting potential for gaming is a sufficient "problem" that business specific information should be ignored and TFP should be introduced. However, as discussed above it is not clear that a TFP approach could resolve any lingering information asymmetry attributed to the building block approach as it is clear that a building block approach in some form will be required to implement a TFP approach.

3 High level concerns with TFP

Integral Energy holds some high level concerns with the potential implementation of TFP. In general terms Integral Energy's concerns include:

- It is not clear from both a theoretical and practical standpoint that the productive efficiency benefits attributed to TFP relative to the building block approach exist;
- It is not clear that TFP adequately considers service outcomes;
- Of a greater concern is that it is not clear that TFP can adequately capture and support the existence of binding design planning criteria imposed on network service providers;
- The introduction of a TFP approach will most likely still require the continuation of schemes such as the Efficiency Benefit Sharing Scheme (EBSS) in some modified form to ensure that there remains a continual incentive to seek efficiencies for each year; and
- The introduction of a TFP approach would still require the application of the building block approach and the associated information in addition to that required for TFP and thus would appear to increase the burden of regulation rather than reduce it.

3.1 Incentives for productive efficiency

As identified at the public forum, there is no conceptual reason to believe that a business will have greater incentive to achieve efficiency improvements under one externally set revenue or price amount compared to another. Provided that the administrative arrangements and the incentive schemes apply to equally to both the TFP and building block approaches there is no reason to believe that one has any inherent qualities to promote productive efficiency compared to the other.

This is consistent with the Expert Panel's findings that TFP does not provide intrinsically stronger incentives than the building block framework.

A profit maximising firm will only invest if it will earn at least the internal cost of capital, providing clear incentives to minimise costs, maximise revenues and to select the timing for investment that optimises both of these inputs. The same applies for investments in operating costs where it is incumbent on management to undertake any action that will return \$1 more than the costs incurred by that action (in net present value terms).

Thus it can be seen that it is not the target that will drive the decision to undertake opex investments, but rather it is the timing and the processes for the sharing of the benefits that will have the greatest impact on the commercial value calculations. This issue was clearly recognised in the development of the Rules by the inclusion of the obligation for the AER to develop a benefit sharing arrangement for efficiency improvements.

Indeed, for the reasons set out above (and the expectation that the TFP price path will be set and reset using historic actual performance) Integral Energy believes that the EBSS, or some variation, will be equally required if TFP were introduced to ensure that TFP does not produce *less* incentives for productive efficiency than the current building block regime.

Integral Energy recognises that the incentives for productive efficiencies would be increased if the regulatory period were to be lengthened; the potential of such longer regulatory periods has been a suggested benefit of the TFP approach. Despite Integral Energy's reservations that this benefit would be realised, the incentives for productive efficiencies could be similarly increased under the current building block approach by simply extending the current 5 year rolling incentive used in the EBSS.

Therefore, if one of the objectives of the introduction of TFP is to increase the incentives for productive efficiencies it is questionable whether the same level of incentive increase can be achieved through minor amendments to the current regime at significantly less cost to the industry and consumers.

3.2 Service outcomes

It is critical that the energy policy objectives of achieving adequate security of supply and maintaining the reliability of supply are adequately considered and supported by the regulatory framework.

Comments made at the recent public forum indicated that the preferred approach for ensuring the security and reliability of service was through the network licensing obligations. This is consistent with the approach that was adopted in other jurisdictions such as NSW which introduced strict design planning and reliability standards into the licences of DNSPs in 2005.

Integral Energy is committed to ensuring long term customer service by developing and operating a sustainable and reliable network. The commitment of Integral Energy's network business to energy security and reliability is second only to Integral Energy's corporate commitment to safety.

Integral Energy believes that any regulatory approach that does not give full support to investments in safety or security and reliability of supply is inconsistent with the demands and expectations of consumers and the community.

3.2.1 Regulating security of supply and reliability of supply standards through government obligations

While this approach may be the most effective means of ensuring that networks meet the policy settings for security and reliability of supply, it does not in of itself solve the interaction of network performance standards and the economic regulatory arrangements, particularly in a TFP context.

There are some difficulties with incorporating mandated design standards and service performance outcomes in the regulatory context, including:

- Compliance with the standard is either pass or fail;
- Compliance is a legal obligation;
- Failure to meet the standard will require action by the service provider to remedy the breach, or it will incur a penalty, or it could result in both; and
- Statistically, to achieve a mandated minimum standard requires a service provider to target a standard of performance above the minimum standard. This is required to provide a reasonable probability that compliance will be achieved within an acceptable statistical range of outcomes arising from unforeseen events.

3.2.2 Incorporating mandated standards in building block regulation

In terms of the building block approach to regulation, there are two ways in which mandated standards have been recognised in the most recent regulatory processes. Firstly, regulators have applied a service performance incentive regime, incorporating the mandated standards when considering the starting point, although this is under review. Secondly, as licence conditions are an obligation on the network the AER is required to provide the network sufficient revenue to fund its compliance activities. While this is conceptually simple, as discussed below there are some practical difficulties in quantifying such costs once the standards are part of business as usual.

3.2.3 Incorporating mandated standards in TFP regulation

Existing mandated standards would appear to pose a particular problem for a TFP as the measure for the service component of the outputs is binary, being either pass or fail. Moreover, it is known that performance below the minimum standard is unacceptable, however it is unclear whether there is any case to support higher service/price outcomes on allocative efficiency grounds, i.e. it is not clear that increased security of supply or greater reliability above the minimum standard has an observable value for customers generally.

Input costs for compliance with mandated design reliability standards and service performance targets are not separable from the other cost input elements of a network's

total capital and operating program as networks do not develop non-complaint work programs to compare against compliant programs.

As identified above, the policy settings for the minimum design reliability requirements and service performance outcomes are a tangible means of measuring the allocative efficiency of network investment with the mandated Government standards acting as a legal proxy for service and cost preferences of customers and the community generally.

It is worth noting that in specifying the network obligations, the policy settings have tended to apply differential standards to different service areas; generally being CBD, urban and rural supply areas. This is in recognition of the different value placed on service outcomes by customers in different supply areas, and also recognises the broader community costs of failures of supply in the various network supply areas.

Further, there are different definitions applied to setting network security and reliability policies across the jurisdictions. While this may pose further difficulty for application of a TFP framework to reconcile the different legal obligations of networks operating in different areas within a state and between jurisdictions, the differences are not necessarily a problem from a policy perspective. As stated earlier the standards applied by the policy makers and the respective definitions are all relevant settings for the respective allocative efficiency of investment in each jurisdiction reflecting the value placed on service by consumers within each network supply area of those jurisdictions.

Therefore, any attempt to reconcile or standardise the definitions between jurisdictions merely for the purposes of facilitating TFP could have detrimental impacts for the allocative efficiency of the resulting network investment and therefore would be inconsistent with the National Electricity Market Objective.

The differences in customer and community preferences between network supply areas pose a first order barrier to networks being sufficiently comparable between jurisdictions to facilitate TFP benchmarking, as the output measures themselves for network security and service reliability are not consistent.

Just as difficult is the ability to compare network cost inputs between networks in the same jurisdiction, as the allocative efficiency measures are different within the various elements of a single service provider's franchise area. As already discussed, such differentiation is quite understandable from a public policy perspective reflecting the relative value to consumers and costs to the community of network failures in each of those three areas. However, it does mean that trying to develop comparable pricing inputs to benchmark relative efficiency is extremely difficult, if not impossible. It is not clear that it is even possible to compare the efficiency of the incurred by a single network that services more than one of the three service area types.

Recognising these difficulties and Integral Energy's commitment to compliance with its obligations it would need to be convinced that mandated service outcomes are fully accounted for in a TFP framework before it can be considered for use in any context.

If it is not possible to fully reconcile the costs of compliance with mandated design reliability standards and service performance outputs then a TFP approach would be of little, if any, value to regulatory decision making where the regulatory framework is to give any consideration to the costs of compliance with legal obligations, and/or

consideration with allocative efficiency as represented in the mandated standards on behalf of consumers and the community.

3.3 Continuation of existing incentive schemes

Without a detailed specification of the TFP model and more importantly how the model would be applied, it is not clear whether all of the current schemes would be required.

However, as discussed above it is likely that schemes such as the EBSS, in its current or modified form would need to be continued to ensure that the incentives for continuous improvement are not weakened towards the end of a regulatory period.

The likelihood that the existing schemes would continue to have a role is supported by comments made at the recent public forum. Discussion on the day indicated that there was a general expectation that many, (if not all) of the current incentive add-ons would be required for TFP to deliver at least comparable outcomes to the building block approach. This suggests that the administrative benefits of TFP may not be as significant as suggested by its proponents.

3.4 Potential for an increasing regulatory burden

From the issues discussed throughout this submission, it is not clear that introduction of a TFP approach will reduce the regulatory burden as suggested by its proponents but rather may have the potential to increase the costs of regulation.

Integral Energy recognises that these concerns are in the absence of a detailed specification of the TFP approach and the supporting administrative arrangements; however, it does highlight that the Commission should carefully review the potential costs of a TFP approach, and critically analyse both suggested benefits and costs of TFP.