



Department of Primary Industries

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Our Ref:

Dear Mr Weickhardt,

Inquiry into electricity network regulation

The Victorian Department of Primary Industries (DPI), as the portfolio agency responsible for energy policy in Victoria, welcomes the opportunity to provide the attached submission in response to the Productivity Commission's issues paper for its Inquiry into Electricity Network Regulation.

Yours sincerely

Mark Feather

Executive Director
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Introduction

DPI considers that the current economic regulatory frameworks governing electricity network businesses are overly prescriptive and restrict the ability of the Australian Energy Regulator (AER) to set efficient price or revenue caps on network businesses. Rather than a prescriptive approach, DPI would like to see the economic regulatory framework relaxed to allow the AER flexibility to set allowances for network expenditure based on assessment of desirable outcomes (rather than prescriptive inputs).

Within a less restrictive framework, benchmarking becomes a powerful tool for the AER to set expenditure allowances based on an assessment of costs. DPI supports the greater use of benchmarking as both a tool for economic regulation within the existing 'building blocks' approach to network regulation, as well as consideration of its use as an alternative to building blocks through the application of 'total factor productivity'. This latter framework has been extensively considered by the Australian Energy Market Commission (AEMC) through its review into the use of total factor productivity (concluded in July 2011).

In terms of transmission frameworks and interconnectors, DPI considers that existing transmission arrangements should be amended to deliver the efficient management of network congestion in the short-term and ensure that network investment (both intra- and inter-regional investment) is delivered in a timely manner and in the correct locations in response to changes in the wholesale market over the longer term.

This would be best achieved through introduction of a financial transmission rights model to promote competition between generators and establish market-based signals to ensure that transmission network investment is targeted to those areas where it is needed (including interconnectors). A national planner-procurer arrangement could also be established to promote true national planning of transmission infrastructure. Both of these proposals are discussed further in this submission as well as in DPI's submissions to the AEMC Transmission Frameworks Review (TFR).

The remainder of this submission provides further detail on DPI's position regarding network regulation and benchmarking, including an analysis of the work undertaken to date on total factor productivity (Part 1), and summarises DPI's concerns regarding transmission frameworks regulation and proposed solutions to address these concerns (Part 2). Part 2 includes a response to criticisms of DPI's proposals raised by other stakeholders as part of the AEMC's TFR.

1. Benchmarking and network regulation

Prescription versus outcomes-focussed regulation

DPI is concerned that the current economic framework governing electricity networks specified in the National Electricity Rules is overly prescriptive and restricts the ability of the Australian Energy Regulator (AER) to set efficient levels of capital and operating expenditure for network businesses.

Rather than highly prescriptive rules, DPI supports a shift towards greater regulatory discretion for the AER to use tools such as benchmarking to set appropriate allowances for network expenditure. This would see a shift away from prescriptive assessment of 'inputs' and towards a focus on "outcomes" (while maintaining elements of prescription where necessary). In this context, DPI has provided a submission to the AEMC rule change process which supports many of the AER's proposed amendments to the Rules¹.

Limitations to the use of benchmarking

In its rule change proposal concerning network regulation, the AER has indicated that there are material restrictions on its discretion which require it to conduct a "bottom up" line-by-line assessment of the businesses proposals. In particular, the AER notes its inability under the current Rules to substitute forecast expenditure proposals of network businesses with their own estimate, whether based on benchmarking or an alternative assessment.

Consistent with the views set out above, DPI considers that the AER should be given sufficient discretion to determine an efficient level of forecast expenditure taking into account a broad range of information and innovative regulatory tools. This would include the network businesses' proposals as well as benchmarking and activity-based analysis and other expert input where appropriate. Such an approach would reduce the current focus on line-by-line assessments, which exacerbates issues of information asymmetry between the regulator and the network businesses.

Total Factor Productivity

DPI supports the Productivity Commission including an assessment of the benefits and drawbacks of Total Factor Productivity (TFP), as both a stand-alone framework or as a tool to be used within the "building blocks" model, as part of its draft report to the inquiry.

The Productivity Commission's issues paper describes TFP as one of a suite of benchmarking methodologies available to regulators. In fact, TFP is provided for in the National Electricity Law (Schedule 1, Clause 26J) as one of the methodologies available to the AER (in addition to the building blocks approach) for making or amending a distribution or transmission determination or access determination. The clause allows TFP to either be used instead of the building blocks approach, or as a tool with which to assess proposals as part of a building blocks assessment. The policy intent was that this section of the Law would allow for the AER to utilise TFP once a TFP methodology was provided for in the Rules.

¹ DPI submission to AER rule change request: available at <http://www.aemc.gov.au/Electricity/Rule-changes/Open/Economic-Regulation-of-Network-Service-Providers-.html>

In 2008, the Victorian Government submitted a rule change proposal to the AEMC to provide for a TFP based methodology for setting distribution standard control services. The context to this submission was one of increasing concern that the building blocks method of regulatory price setting was losing its efficacy in setting efficient prices and incentives for the network sector.

Victoria's rule change proposal aimed to institute TFP as a regulatory *option*. That is, it would be voluntary for a business to go under a TFP based price cap in the first instance. The rationale for this was that the initial TFP rules needed to be in the character of a pilot scheme, that industry was not generally ready for a wholesale change of regimes (and issues of investment risk are raised by instituting it suddenly), and DPI wished to have industry support during the rule change process.

Rather than assessing the rule change as a stand-alone amendment, the AEMC decided to instead initiate a broader Review into the use of TFP. The AEMC found in its final report to the Review that:

“[The] use of a TFP methodology in setting the allowed revenue path has the potential to create stronger incentives for service providers to pursue cost efficiencies compared to the building block approach [and] could reduce the scope for the service provider to boost returns by exploiting its information advantage over the regulator²”.

However, rather than amend the Rules to provide for TFP in the near term, the Review final report proposed a two-stage process, with initial provisions inserted into the Rules to allow a period of data collection to support TFP, pending an additional review at the end of a defined period to determine whether TFP should be implemented through an additional rule change. The Standing Council on Energy and Resources (SCER) is yet to respond to the Review findings.

DPI considers that there is already sufficient data to support the implementation of TFP as a regulatory approach, at least in Victoria. From 2001 to 2007, the Victorian Essential Services Commission (ESC) contracted with Pacific Economics Group (PEG) to develop and refine a TFP index estimate for the Victorian electricity distribution industry, so that productivity developments could be tracked. DPI understands that data has not been collected since 2007 due to the transfer of economic regulatory functions from the ESC to the AER. Although the AER has had the ability to continue this work through a continuing contract with PEG, we understand that this has not occurred. However, DPI understands that additional data could be collected for those years if TFP were to be pursued.

Reliability settings and planning

Under the transmission planning model in Victoria, transmission augmentation decisions are evaluated by AEMO using a probabilistic approach based on value of customer reliability (VCR). Under this approach, all investment decisions must be justified on the basis of maximising net benefits to the market. This contrasts with the

² AEMC TFP Review final report, 2011, p.1, available at <http://www.aemc.gov.au/Market-Reviews/Completed/Review-Into-the-Use-of-Total-Factor-Productivity-for-the-Determination-of-Prices-and-Revenues.html>

approach in other jurisdictions, where pre-set redundancy standards are established using a deterministic planning approach, without considering issues such as the value that customers place on reliability.

At the distribution level, network businesses are subject to incentive regulation – most notably the Service Target Performance Incentive Scheme - which encourages businesses to meet reliability requirements without the need for prescriptive pre-set standards. This approach has been successful in maintaining high levels of reliability without the significant network cost increases seen in other jurisdictions associated with pre-set redundancy standards. In particular, the approach enables network businesses to make efficient trade-offs between the costs of network investment (which are ultimately passed through to customers) and the reliability benefits that investment provides.

DPI considers that there are significant benefits of the probabilistic planning approach in comparison to the deterministic approach employed in other jurisdictions, in terms of providing augmentations at the most suitable time and with the least cost to end consumers.

2. Transmission frameworks and interconnectors

Outlook for generation and transmission investment in the NEM

The requirement for new investment in generation to meet load growth and in response to climate change policies has the potential to lead to significant changes in the patterns of generation across the National Electricity Market (NEM). This is likely to drive the need for significant investment in transmission networks.

In this context, the regulatory and commercial frameworks governing network planning, and investment in the long term, and network operation and management in the short term, need to be robust to meet these challenges.

In the short term, it is important that network congestion is managed efficiently. In the long term, it is critical that the transmission frameworks ensure that network investment (both intra- and inter-regional investment) is delivered in a timely manner and in the correct locations in response to changes in the wholesale market.

Deficiencies in existing transmission frameworks

DPI considers that the concerns regarding the level of investment in interconnectors over the past decade are symptomatic of broader deficiencies in the existing transmission framework. These concerns are detailed in DPI's submissions to the AEMC's Transmission Frameworks Review (TFR).

DPI is concerned that the current open access model may not facilitate efficient investment in generation and transmission networks over the longer term and in the face of a significant transformation in the configuration of generation across the NEM. Indeed, given the potential need for unprecedented investment in transmission networks in coming decades, maintaining the status quo arrangement creates material risks that efficient and timely network investment does not occur in response to market demand, including in particular, new generation investment projects.

Under the existing transmission frameworks, transmission network service providers (TNSPs) investment programmes are driven primarily by the need to meet demand growth and comply with reliability obligations, rather than by generation patterns. Indeed, DPI considers that TNSPs have limited incentives to respond dynamically to changes in the configuration of generation.

TNSPs are not exposed to the costs of any inefficient over or under investment. This is because actual capital expenditure undertaken by TNSPs in a regulatory control period is rolled into the asset base in the following period. There is no *ex post* assessment of inefficient over investment – i.e. where TNSPs invest in assets which subsequently become stranded. In addition, there is no mechanism to reward TNSPs for delivering timely investment or conversely no mechanism to penalise TNSPs for delays in delivering investment.

DPI considers that the absence of effective incentives on TNSPs over the timely and efficient delivery of investment in response to the demands of the wholesale market is a significant defect in the current arrangements. DPI believes that TNSPs should ultimately be more accountable to the market for their investment programmes.

Ultimately, a failure on the part of TNSPs to invest efficiently or in a timely manner in response to changing patterns of generation could create significant costs to the market, namely:

- a. Efficient generation developments are constrained off the market leading to higher costs to consumers
- b. Generators increase their contractual risk premia to manage the risk of being constrained off
- c. Investment decision making on the part of generators could be undermined, if generators are concerned that they will not be able to deliver their generation to market.

Financial transmission rights model

As noted in DPI's submissions to the TFR Directions Paper³, there are merits in the AEMC considering the introduction of a tradeable access rights framework for transmission. Under this model, in the short term, an entry capacity rights framework would ensure that those generators that valued network capacity the highest would be able to gain access. This would promote competition between generators. Further, in the long term, market based signals would help to ensure that transmission network investment is targeted to those areas where it is needed (including interconnectors), thereby reducing the risk of inefficient under or over investment. This model is further detailed in the DPI submission to the TFR Issues Paper.⁴

³ DPI submission to AEMC TFR Directions Paper, available at: <http://www.aemc.gov.au/market-reviews/open/transmission-frameworks-review.html>

⁴ DPI submission to AEMC TFR Issues Paper, available at: <http://www.aemc.gov.au/market-reviews/open/transmission-frameworks-review.html>

National planner-procurer model

Whilst it is desirable that market mechanisms, such as financial transmission rights, are utilised to maximise efficiency, the complexities of these arrangements may necessitate consideration of more regulated approaches to planning and investment. One option raised by DPI for consideration as part of the TFR Review is to introduce a national planner-procurer model for transmission planning, with AEMO to take on responsibilities similar to the current arrangement in Victoria⁵.

DPI considers that transmission network planning is likely to be required at a national level in future with more inter-regional network augmentations becoming necessary to transport electricity from new generation locations remote from existing transmission infrastructure.

In this context, DPI considers that there are risks and potential costs associated with having multiple network planners across the NEM responsible for augmentation decisions. Different TNSPs in different regions of the NEM will not necessarily adopt a national focus to network planning decisions. Further, augmentations of transmission networks in one region can impact system conditions in other regions. A fragmented approach to planning creates risks that local planners do not properly capture interregional or national impacts in making their planning decisions.

DPI therefore considers that the challenges posed by significant changes in the configuration of generation across the NEM require consideration being given to further embedding a national approach to planning, and more broadly, service provision.

Whilst AEMO has acquired the National Transmission Planner (NTP) function, DPI believes that consideration should be given to whether AEMO's planning role is broadened further so that it takes on responsibility for making transmission planning and investment decisions on a national basis. Under this arrangement, AEMO would be responsible for planning the transmission network and tendering for major augmentations, while TNSPs would continue to own, maintain and operate the jurisdictional transmission network (as SP Ausnet does in Victoria). This concept is further detailed in DPI's submission to the TFR Issues Paper⁶.

By having AEMO take on a greater role in planning, this should reduce the negative impacts of the existing fragmented and regionalised planning structure. Under such an approach, AEMO would take on responsibility for making planning and investment decisions and in turn contract with TNSPs for the delivery of these investments.

⁵ DPI submission to AEMC TFR Directions Paper, available at: <http://www.aemc.gov.au/market-reviews/open/transmission-frameworks-review.html>

⁶ DPI submission to AEMC TFR Issues Paper, available at: <http://www.aemc.gov.au/market-reviews/open/transmission-frameworks-review.html>

Criticisms of the national planner-procurer model

In response to DPI's proposal for AEMO to take on the role as national planner-procurer, Grid Australia has raised an alternative proposal with the AEMC for a national transmission planning body to be created which would be a profit-motivated independent corporation. In its First Interim Report to the TFR review, the AEMC notes its view that financial incentives are likely to provide the most robust and transparent driver for efficient decision making⁷. The AEMC also notes its concern that the not-for-profit nature of AEMO means that reliance is placed on the decision making of the AEMO board, and that the creation of a national planner-procurer role for AEMO could also potentially conflict with its role as market operator⁸.

DPI considers that there is little evidence provided to demonstrate how the existing incentives framework which is applicable to TNSPs drives efficient investment that is in line with the needs of generation in the wholesale market. Rather, as described in this submission, DPI considers that the current incentive framework is not aligned with the needs of the wholesale market. In particular and as noted above, the framework is not designed to ensure that TNSPs respond in a timely and efficient manner to the needs of the wholesale market, especially changes in generation investment patterns.

DPI considers that the AEMO not-for profit planning model is a transparent service based model more aligned with the needs of the market. AEMO is well placed as an independent not-for profit agency to make impartial planning decisions in the long-term interest of end-use consumers (as intended by the National Electricity Objective). The significant industry representation on the AEMO Board gives DPI confidence that sufficient checks and balances are in place to support unbiased decision-making. It is similarly unclear as to how AEMO's role as national planner-procurer would conflict with its role as market operator.

DPI notes that the planner-procurer model has been successfully introduced in recent years in the electricity markets of both California and Texas, in response to concerns that for-profit TNSPs were under-investing in transmission assets. In California, the role of the independent system operator (Californian Independent Systems Operator, CAISO) has been expanded from market operator to include a pro-active role in identifying, coordinating and planning the necessary development of transmission infrastructure and reinforcements within its region. Under this approach, CAISO identifies the investments that need to be made and can put proposals out to tender for third party investors should the relevant transmission owner be unable or unwilling to undertake the project.

⁷ AEMC – TFR First Interim Report, p.143

⁸ Ibid.