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Consultation Paper on Economic Regulation of Network Service Providers

The Energy Supply Association of Australia (esaa) welcomes the opportunity to make a submission to the AEMC on its Consultation Paper on Economic Regulation of Network Service Providers.

esaa is the peak industry body for the stationary energy sector in Australia and represents the policy positions of the Chief Executives of around 40 electricity and downstream natural gas businesses. These businesses own and operate some $120 billion in assets, employ over 61,000 people and contribute $19.3 billion directly to the nation's Gross Domestic Product.

Economic regulation of Australia's monopoly electricity and gas network service providers (ENSPs and GNSPs) is an important process given that these businesses deliver the key energy commodities of electricity and gas to millions of homes and businesses around the country. It's recognised that due to their monopoly status, it is appropriate to have some regulatory oversight of the prices they charge for this service[1]. This oversight must however recognise the intrinsic limitations and costs of the regulatory process. The Rule change proposals, taken as a whole, run the risk of upsetting that balance.

The full set of proposals is very detailed and accordingly we provide below a high level overview of the issues they raise. Where the proposals are aimed only at changes to the National Electricity Rules, the discussion focuses on ENSPs, but where they are aimed at all energy networks – i.e. the AER's proposals for changes to the process for setting the allowed return – it covers both ENSPs and GNSPs.

The development of a national regulatory framework for energy networks

The national regulatory frameworks for ENSPs and GNSPs were created in response to various key reviews of the stationary energy sector that highlighted the benefits that could be obtained by moving from the existing patchwork of state-based regulation to consistent, national frameworks. For example, the MCE's Reform of Energy Markets report argued that Australian governments should "streamline and improve the quality of economic regulation across energy markets, to lower the cost

[1] The exception being the gas transmission sector where the extent of regulation is more variable, recognising the competitive outcomes in that sector.

and complexity of regulation facing investors, enhance regulatory certainty and lower barriers to competition"[2]. During this period of reform, the advantages of light-handed regulation were recognised[3], along with the importance of creating a regime that would encourage the investment the sector needed.

The details of the frameworks and the Rules that govern them were debated intensively and all stakeholders had the opportunity to contribute to this debate. Accordingly, the frameworks that resulted were those which were considered, on balance, the most appropriate at the time, noting that the overarching guidelines for the Rules are:

1) the National Electricity Objective, as set out in the National Electricity Law:

"to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to –

a. price, quality, safety, reliability, and security of supply of electricity; and
b. the reliability, safety and security of the national electricity system."

2) the National Gas Objective, as set out in the National Gas Law:

"to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas."

As the AEMC's consultation paper explains, the key criterion for accepting the proposed Rule changes, or indeed making a more preferable Rule, is that they better satisfy these objectives than the current Rules.

Whilst it may be appropriate for some elements of the frameworks to evolve after five years of practical interpretation and application, the value of maintaining the stability of the frameworks should not be overlooked and any arguments for change should be thoroughly tested. In particular it's important to note that the regulatory outcomes are a function not just of the Rules, but of their interpretation and application by the AER. In the interest of stability, the question that should be asked - as the AEMC has in its consultation paper - of any perceived deficiency of the outcomes is: could the desired outcome be achieved within the existing framework? Further, how certain is it that the proposed Rule changes will deliver a better outcome – with reference to the key objectives of the framework - than may be possible under the current frameworks?

Rising prices

The AER's presentation of its Rule change proposals focuses heavily on the rising price of ENSP services. However, the guiding principle of the Rules under which the AER regulates ENSPs is the National Electricity Objective, within which price is only

[2] MCE report to COAG, Reform of Energy Markets, 2003
[3] The Productivity Commission's Gas Access review of 2003, for example, contained a detailed chapter on the advantages of light-handed regulation

one of several considerations along with, quality, safety, reliability, and security of supply of electricity. There is an inherent tension in this objective, which is that ensuring the quality, safety, reliability, and security of supply of electricity can only be achieved by ENSPs incurring costs, which in turn must be recovered from consumers through electricity prices.

Recent years have seen the emergence of a number of cost drivers that have put upward pressure on energy prices. These cost drivers have been explored by the Productivity Commission in its review of productivity in the Electricity Gas Water and Waste sector. This review explores the reasons for the declining multifactor productivity in the sector over recent years. The review is yet to be published, but its results have been foreshadowed in the PC's annual report[4], which includes a section on the key trends, several of which are pertinent to the network sector:

Cyclical investment – many of the existing network assets were installed during the 1960s and 1970s and are reaching the end of their serviceable life. This requires new investment to replace and update these assets.

Peak Demand – the Productivity Commission note that peak demand has been rising faster than energy use. Peak demand is a key investment driver for networks, as they must be built in order to reliably serve the maximum expected demand. However, if this driver is increasing faster than energy use, given that network charges are mostly unit charges, it will lead to higher unit prices.

Quality changes – two further trends noted by the PC are increased undergrounding and higher reliability standards. The visual amenity of removing poles and wires from the landscape is valued by the community, but comes at a higher cost (although there may also be operational benefits over the longer term). The length of underground cabling in Australia's electricity networks has more than doubled over the period 1998-2010, while the length of above ground cables has hardly changed[5]. Meanwhile, some jurisdictions have increased reliability standards over recent years, which have inevitably entailed additional investment in parts of the network.

The PC's analysis shows that additions to the physical capital stock has increased faster than their output measure – electricity use - for the reasons outlined above. The cost of financing this capital investment has also increased in recent years – after a long period of low global finance costs, the Global Financial Crisis (GFC) in 2008 led to increases in financing costs. It follows that the combination of these two trends leads to higher costs per unit of electricity, and thus prices.

It is therefore critical to separate the impacts of these trends from any consideration of the impact on prices of the transition to the national regulatory framework.

Assessing forecasts

A key theme of the AER's Rule change proposals is the ability to exercise greater discretion in setting allowed revenues. In the case of its ability to substitute its own forecast for an ENSP's forecast, it considers that it is unduly constrained by the

[4] *Annual Review 2010-11*, Productivity Commission, pp63-70
[5] Based on data published in the *Electricity and Gas Australia* series, esaa

requirements of the Rules. However, the outcomes of the first round of price control determinations do not suggest significant constraints, given that in many cases the AER has removed significant amounts from the ENSPs' forecast expenditures.

An aspect of the Rules that the AER is seeking to change is that it is required to accept a "reasonable" forecast, even if it considers that it could substitute a lower, but also reasonable forecast. Clearly, the uncertainties entailed in forecasting five years' worth of network expenditure entails "reasonable" forecasts covering a range of values. It is perfectly legitimate that if a company's forecast falls within that range of reasonableness that it must be accepted by the regulator and it is a source of concern to the industry that reasonable forecasts could be subject to downward adjustment under the proposed Rule changes.

There is also concern about what makes an AER forecast more "correct" than an ENSP's forecast. Asymmetry of information is endemic to price regulation, and an ENSP will always have better information about its own network and the necessary cost to operate, maintain and extend it than the regulator. There is a strong risk that attempts by the regulator to independently replicate the analysis of the required costs to run the network over the price control period that the ENSP has carried out simply boils down to substituting one set of engineers' point of view for another's. It is of course the ENSP, not the regulator, that is responsible for the safe, secure and reliable operation of the network and who has to bear the direct consequences of any failure.

The asymmetric information problem is recognised by the academic literature on price regulation and by regulators in practice as being best addressed through the use of appropriate incentives. These are discussed in the next section.

Investment incentives

The general form of regulation embodied in the National Electricity Rules is known as incentive-based regulation. Getting the incentives right is key to the success of this form of regulation, and a key element of that is getting the right strength of incentives. High incentives can be a strong driver of efficiency, but can also create the risk of underinvestment in the network. Low incentives allow more flexibility for the NSP to spend more than originally envisaged if required and still recover the majority of its costs, but they can also dampen the pursuit of greater efficiency. So there is a balance to be struck.

The proponents of the Rule changes argue that there is an incentive to overinvest in the network. This argument appears to be driven by an assumption that the incentive needs to be designed to compensate for the risk that the allowed return is higher than the actual cost of capital and also that ENSPs are responding to what they describe as "a broader range of incentives, rather than just financial incentives". It does not expand upon what this broader range of incentives might be, nor why they are considered an inappropriate driver of ENSPs' expenditure decisions. More importantly, though, the argument that incentives should be designed on the presumption of an excessive allowed return (and the Association considers that there is no evidence that this is the case) conflates two issues. The strength of incentives should be considered under the assumption that the allowed return is, at least on average, consistent with ENSPs' actual cost of capital.

Accordingly, the issue is simply what the appropriate strength of the incentives should be, both on capital and operating expenditure. The AER's proposal is to change the capital expenditure incentives. This is described as providing a fixed incentive rate of 40 per cent (i.e. only 60 per cent of overspend is rolled into the RAB). However, the AER also states that "ENSPs would continue to bear the financing costs during the remainder of the regulatory period from the time of the overspend. Depending on the depreciation framework adopted, there may also be a loss of depreciation". This means that the incentive is actually somewhat stronger than 40 per cent in most cases, with the actual figure depending on the allowed return and the depreciation rate. By contrast, a net underspend will not be subject to this adjustment, creating an asymmetric incentive.

No clear justification has been given by the AER for why 40 per cent is an appropriate fixed rate or why asymmetric treatment of overspending versus underspending is appropriate. In any case if a fixed rate is selected, then it is not clear why additional losses should be borne by the ENSP. The UK energy regulator Ofgem has used a fixed incentive rate, whereby any overspend is rolled into the RAB, the present value of the depreciation and allowed return foregone is calculated and then a "true-up" adjustment is made in the subsequent price control period to adjust to the fixed incentive rate set by the regulator (and underspending is treated symmetrically). A similar approach could be applied to Australian ENSPs if a fixed incentive rate is considered appropriate.

Setting the allowed return

Setting the allowed return on capital, typically expressed as the Weighted Average Cost of Capital (WACC), is one of the most challenging tasks a regulator can face. There is no inherently "right" answer, as it entails forecasting a number of components that are either subject to fluctuations with market conditions, or are difficult to measure directly. What is important is to understand the risks of setting an allowed return that turns out to be either materially too high or materially too low. If the former occurs then customers face charges that are higher than necessary. However, if it is the latter, then *in extremis*, an ENSP or GNSP can find itself in financial distress, unable to finance necessary investment in its network, and may ultimately fail to maintain an adequately reliable, safe and secure network. This in turn has serious consequences for customers, and this asymmetry should be recognised in the process for setting the allowed return.

The AER's proposal is to harmonise the WACC process for all the businesses it regulates: electricity distribution, electricity transmission and gas, such that it would conduct a single WACC review every five years and apply the methodology to all price control determinations between reviews. The Rule change proposals also hand greater discretion to the regulator in determining the values of the key parameters of the WACC.

It is important to note that five years is a long time in capital markets, and the process needs to allow for individual price control reviews to reflect prevailing capital market conditions that may be very different from those set at the time of the WACC review. This is a significantly more important consideration in setting the WACC than administrative ease and electricity transmission networks currently do not operate

under a framework that explicitly allows for this. Accordingly, to the extent that the process of setting the WACC for ENSPs is subject to revision, the preferable Rule change would be to amend the Rules so that Chapter 6A of the NER allowed for departures to the conclusions of the WACC review for electricity transmission networks under the same 'persuasive evidence' criteria as that applying under Chapter 6 to electricity distribution networks.

It follows also from this that there is no need to amend the National Gas Rules, since the model applying in gas already provides for the most up-to-date and best information to be taken into account.

The proposal for the regulator to have greater discretion over setting the parameters for the cost of capital should be treated with caution. Specifically, the AER's approach is to give itself complete discretion to determine a methodology or value for the debt risk premium in a WACC review. Compounding this, under their proposed approach, any such determination could not be departed from in a subsequent revenue determination and there would be no scope for merits review. This level of discretion is not conducive to regulatory stability and certainty, which would be better served by retaining some structure to the methodology in the Rules. To the extent that there are specific concerns with aspects of the current Rules that the AER has no discretion to address, such as the definition benchmark for the debt risk premium, these could be considered in the context of a revised Rules-based methodology.

The proposal by the Energy Users Rule Change Committee to set a differential WACC for ENSPs that are owned by governments than for those that are privately owned overlooks the point that the appropriate allowed return for any business should be related to the riskiness of its cashflows and that this risk, in the case of NSPs, is not dependent on whether the business is publicly or privately owned. While governments as the ultimate owners of some NSPs can typically borrow at very low rates, efficient allocation of public capital requires that they seek the same return from any commercial entities they control that a private owner would.

Alternative pathways to reducing energy network cost pressures

NSPs will always need to be able to recover enough revenue to meet the challenges of operating and maintaining their network to high standards of reliability, safety and security of supply. Thus, guarantees can never be given that a particular policy approach will reduce charges over time. However, it is appropriate to consider ways to reduce cost pressures, so that charges are no higher than they need to be.

A key cost driver is the decline in capital utilisation of the network. This driver is set to continue with AEMO forecasting greater peak demand growth than consumption growth over the decade to 2021[6]. As long as a substantial proportion of customers lack the price signals and the tools to shift their load from peak to non-peak periods, the trend is unlikely to be abated.

However, the technology to enable more dynamic pricing and tools to manage load-shifting do exist and are already in some cases being used in Australia, often on a trial basis. Capital utilisation and the operational costs of the system can also be

[6] *Electricity Statement of Opportunities 2011*, AEMO

improved by installing network communications systems that allow for better monitoring of the condition of the system and making it easier to identify faults.

However, new technology, especially in cases where its benefits are linked to changes in consumer behaviour, has its risks and it is important that the regulatory framework does not evolve in a punitive way that discourages NSPs from implementing newer technologies where they are confident that the benefits outweigh the costs. In such circumstances, attempts by the regulator to substitute their own judgment for that of the NSP will be particularly challenging.

Consideration of the benefits also needs to be more holistic than simply considering the lowest short-term cost option. Other policy settings will need to be in place to maximise the benefits – principally tariff reform, although educating and informing consumers to aid their empowerment is also important. Firstly, tariff reform can allow more dynamic pricing at the network and consequently retail levels, which gives consumers the price signals that provide a rationale for them to consider load-shifting. Tools to help consumers respond to price signals already exist, but more will emerge rapidly in response to demand for them – i.e. when consumers are facing these price signals. Secondly, tariffs can be designed to reward any agreement by consumers to allow portions of their load to be directly controlled (alternatively consumers may choose to set their own controls on their appliances as part of their response to price signals).

It's important to note that there are currently significant inhibiting factors acting against the introduction of innovative tariffs, including retail price regulation in all jurisdictions of the NEM except Victoria and a moratorium on network time-of-use pricing in Victoria.

The Association believes that these changes, which the AEMC has an important role in facilitating through its *Power of Choice* review, will offer larger and more enduring benefits for consumers than a set of Rule change proposals that seek to screw down network expenditure potentially at the expense of network development and innovation. However, we recognise that it is important to back up this claim with underlying analysis and we are developing some quantitative work on this theme to submit to the next stage of the Rule change process.

Improving customer engagement

One factor that exacerbates the concern amongst customer groups in respect of rising prices is that they may not be clear on the underlying rationale for the expenditure that is driving price increases and, although they are important stakeholders, they may feel disenfranchised from the price-setting process. It can be difficult for customer representative organisations to fully engage in these processes, given the level of technical detail required to understand the process and the cost drivers. However, a process that better integrates customer views in the development and evaluation of network spending proposals could go a long way to improving the understanding and therefore acceptance of the price outcomes. The Association recognises that the question of how such groups are organised and resourced will likely require addressing if this approach is to be explored further.

Stronger resourcing of the AER itself is also a consideration for policymakers, in order to ensure that it has the analytical capacity to regulate effectively and efficiently. A number of network businesses' successful appeals under merits review have resulted from admitted errors by the regulator. Better resourcing would minimise the risk that the regulator makes such mistakes, and thus in turn reduce the resources required for appeals processes for the regulator, the industry and other stakeholders.

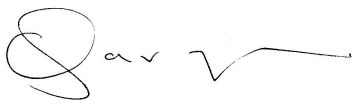
The importance of regulatory certainty

Network businesses are inevitably highly capital-intensive businesses that must regularly access capital markets for both new capital and refinancing. It is critical to their abilities to access these markets at reasonable cost that the providers of finance have confidence in the stability and predictability of the regulatory framework that governs the cashflows the businesses can earn. This regulatory certainty is best achieved by having a clear governance framework and a clear understanding of how the regulator interprets and applies the Rules under which it operates. As such any changes to the Rules run the risk of undermining this regulatory certainty, especially where they create, through affording the regulator new powers of discretion, ambiguity about how these rules will be applied.

This does not mean that the Rules can never be changed, as all regulatory frameworks should be capable of evolution to respond to the changing environment in which networks operate, but that any changes should be carefully considered and robustly justified. At present, it does not appear that this robust justification has been provided by the Rule change proponents.

Any questions about our submission should be addressed to Kieran Donoghue, by email to kieran.donoghue@esaa.com.au or by telephone on (03) 9670 0188.

Yours sincerely



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