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Submission to the AER

Preliminary Framework and Approach Paper

Ausgrid, Endeavour Energy and Essential Energy
Regulatory control period commencing 1 July 2014

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Total Environment Centre's National Electricity Market Advocacy

Established in 1972 by pioneers of the Australian environmental movement, Total Environment Centre (TEC) is a veteran of more than 100 successful campaigns. For nearly 40 years, we have been working to protect this country's natural and urban environment, flagging the issues, driving debate, supporting community activism and pushing for better environmental policy and practice.

TEC has been involved in National Electricity Market (NEM) advocacy for eight years, arguing above all for greater utilisation of demand side participation — energy conservation and efficiency, demand management and decentralised generation — to meet Australia's electricity needs. By reforming the NEM we are working to contribute to climate change mitigation and improve other environmental outcomes of Australia's energy sector, while also constraining retail prices and improving the economic efficiency of the NEM — all in the long term interest of consumers, pursuant to the National Electricity Objective (NEO).

The Need for Fundamental Reform of the NEM

Government-initiated processes generally proceed on the assumption that the NEM is working well and only needs minor tweaking. TEC and some other consumer and environmental advocates, however, regard it as fundamentally flawed. Since its inception in 1998, it has failed to keep electricity affordable and has impeded the implementation of environmental and climate change policies.

The main challenges currently facing the NEM are: to constrain retail price increases; to transform the electricity network from a 'hub and spokes' model to a two-way system with greater consumer input and demand-side participation; and to transition the Australian energy sector from its current reliance on ~90 per cent fossil fuels to one based on renewable energy and energy conservation and efficiency.

We believe that fundamental reform is required to face these challenges, beginning with:

- Annual reporting on how well the NEM is fulfilling the current NEO.
- The inclusion of quantitative environmental criteria in the NEO.
- Significantly greater incentives and targets for demand-side participation and decentralised energy
- Giving the AER greater powers to control network spending.
- Greater opportunities for public participation in, and appeal of, decisions made pursuant to the NER.

Preliminary Framework and Approach Paper

TEC appreciates the opportunity to provide input to the AER's Preliminary Framework and Approach Paper for Ausgrid, Endeavour Energy and Essential Energy for the regulatory control period 1 July 2014 to 30 June 2019 (Preliminary F&A Paper). Our comments focus on the control mechanism to be used to regulate standard control services in NSW/ACT[1] and demand management incentivisation. Our primary interest is in

[1] I.e. services that comprise the majority of DNSP activity that are used by all, or most, customers, such as physical 'poles and wires' infrastructure.

increasing the level of demand management activity undertaken by DNSPs (Network DM). Network DM has the potential to significantly limit new investment in poles and wires that is encouraging greater consumption, increasing peak demand and driving price increases.

Selecting a Suitable Control Mechanism

As monopoly businesses, NSPs' revenues are regulated by the AER using the 'building block' approach to calculate revenue needs over five year regulatory periods. Under this approach, the dominance of capital expenditure (capex) means that there is a strong incentive for a DNSP to build more infrastructure in response to increasing peak or total demand. However, most Network DM programs utilise allowances for operating expenditure (opex), which does not generate a rate of return in subsequent regulatory periods by expanding the Regulated Asset Base (RAB). DNSPs therefore have a strong incentive to encourage higher consumption, both peak and total, in order to maximise their revenue.

The AER has the option to choose either a Weighted Average Price Cap (WAPC) or a revenue cap as the control mechanism for standard control services within the building block approach. TEC has previously assessed both control mechanisms. In particular, in 2008 we commissioned research to determine which control mechanism is most likely to produce improved Network DM outcomes. We have previously provided the report, *Does Current Electricity Network Regulation Actively Minimise Demand Side Responsiveness in the NEM?*,[2] to the AER.

Price Cap

Weighted Average Price Caps (WAPCs) set the total weighted average price a DNSP can charge across its four tariff components.[3] A price cap requires a 5 year forecast of demand, with the price being set on an annual basis. Unlike under a revenue cap, a price cap allows DNSPs keep additional profit they make when demand is higher than anticipated, or requires them to bear the losses when the reverse occurs. A price cap therefore provides networks with a significant opportunity to game the market.

The AER notes that Victorian DNSPs (a price capped jurisdiction), in the period 2006-10:

> *recovered revenue substantially above forecast throughout the period, averaging a recovery of 8.28 per cent above forecast annually (a total over recovery of $568 million (real $2010) over the period). This demonstrates the large fluctuations in revenue that can occur under a WAPC as a result of variations from forecast demand and prices.*

[2] Headberry Partners, & Bob Lim & Co. (2008). Does Current Electricity Network Regulation Actively Minimise Demand Side Responsiveness in the NEM? Sydney: Total Environment Centre. Retrieved from http://www.advocacypanel.com.au/documents/Applic280.pdf

[3] Peak energy, other energy, fixed charge and capacity charge.

> *The AER considers that during the regulatory control period DNSPs were able to make windfall gains by increasing the price (above the general increase specified in the WAPC) of components of particular services experiencing sales growth above its forecast.*[4]

The disincentive to DM outlined above is further reinforced when the building block approach is combined with a price cap, as it encourages increased consumption and demand. Under a price cap, a regulator must identify any revenue lost as a result of a Network DM initiative and allow the DNSP to recover the lost revenue. As such, the NSP might be able to game the system in order to maximise its revenue.

Revenue Cap

A revenue cap sets the total amount of revenue a DNSP can collect in a given regulatory period (maximum allowable revenue or MAR). If a network makes more revenue than the cap one year, it must forfeit the additional revenue in future years, and vice versa. Revenue caps are therefore difficult for networks to manipulate.[5]

A revenue cap approach suffers from the same inherent disincentives as price caps under the building block approach. However a revenue cap of itself does not incentivise or dis-incentivise a DNSP to undertake Network DM. This is because when the MAR has been decided, a revenue cap requires the NSP to develop a set of tariffs which will return the allowed amount of revenue. The DNSP is therefore insulates variations in demand or consumption within its network.

Thus a revenue cap is neutral as to whether revenue recovery is made using Network DM or capex network solutions, even if the mode of expenditure might allow a bias against Network DM in the way the regulator assesses the amount of revenue that can be recovered. However, as the building block approach allows for transparency and for incentive mechanisms to operate in parallel, a revenue cap operating within the building block approach, with appropriate incentive mechanisms provides a 'least worst' outcome.

Control Mechanisms in the Context of Changing Demand

When demand is increasing generally in line with forecasts, a revenue cap ensures that revenue remains predictable in the short-term. DNSPs therefore have an incentive to encourage energy saving measures so as to reduce costs and thereby increase profits. On the other hand, where a price cap is in place in these circumstances, networks will attempt to increase their revenue by encouraging more consumption. This can be seen in Queensland, where Ergon and Energex have conducted significantly more DM activity under a revenue cap than networks in jurisdictions with price caps, such as NSW and Victoria.

Where peak and/or total demand are flat or falling, a revenue cap again maintains revenue levels, and the incentive remains to increase Network DM measures. The downside for consumers is that if demand proves

[4] AER, Framework and approach paper, Ausgrid, Endeavour Energy and Essential Energy, Regulatory control period commencing 1 July 2014, June 2012, p 128.

[5] "…under a revenue cap, a DNSP has little incentive to set prices in a manner that aims to maximise revenue recovery". AER, Matters relevant to the framework and approach, ACT and NSW DNSPs 2014–2019: Control mechanisms for standard control electricity distribution services in the ACT and NSW, April 2012, p. 6.

to be lower than forecast for much of the 5 year determination period, the DNSPs receive a windfall profit, since their revenue was determined by the original forecast.[6] A price cap does not encourage more Network DM in the context of falling demand, as the DNSPs have an incentive to increase consumption to ensure that their revenue falls as little as possible.

Overall, we believe that a revenue cap is more likely to deliver greater Network DM activity, but that it remains only the least worst option. However, if a mechanism can be developed to deliver substantially more Network DM through a WAPC, TEC would consider supporting such an approach.

Demand Management and Embedded Generation Connection Incentive Scheme

TEC is concerned about the approach of the AER to the DMEGCIS. We had hoped that this regulatory period would see the introduction of an improved incentive scheme to increase DNSPs uptake of Network DM options. Instead, the AER's proposal is to continue with the DMIA unaltered and drop the NSW D-Factor mechanism without considering any replacement mechanism.

The AER proposes this course of action on the grounds that the DNSPs are not taking full advantage of existing Network DM incentive schemes, so there is no need to increase the level of funding available. This is in spite of the DMEGCIS coming under scrutiny in the AEMC's *Power of Choice* review.

In TEC's opinion, the lack of utilisation of Network DM incentive schemes by DNSPs is a reason to reform and augment such schemes to increase uptake. A lack of utilisation is reflective of a poorly designed scheme and not necessarily a result of apathy on the part of DNSPs.

As we support the AER's preliminary position in favour of a revenue cap, we do not address Part B of the DMEGCIS which allows foregone revenue recovery for program approved under the Demand Management Incentive Allowance (DMIA, part A of the DMEGCIS).

Demand Management Incentive Allowance

Good quality research into large scale Network DM is costly to DNSPs, and is therefore unlikely to occur in the current regulatory environment unless there is targeted innovation funding for this purpose. NSPs that pursue innovative DM programs despite the framework take significant risks as there is uncertainty as to how the regulator will approach projects.

The main issues with the DMIA as it currently stands are the relatively small amount of funds available to DNSPs that seek to innovate using Network DM; and the incentive payment provided does not provide the DNSP with a payment for the system-wide benefits resulting from their innovations.

[6] The AER argues that differences between forecast and actual demand should not greatly affect network revenue as most of their costs are fixed (pers. corr.).

DMIA: Increasing Funds

A simple and effective change to the mechanism would be to upgrade the fund from a small one aiming at innovation to a more substantial fund aimed at scaling up such exploratory Network DM efforts by funding larger-scale and more wide-ranging programs.

UK regulator Ofgem has introduced an innovation fund where network operators bid for portions of £250m of innovation funding over a regulatory period. This was introduced after review of the regulatory framework found that the framework did not support expenditure on innovation and as a consequence may have inhibited innovation.

DMIA: Incorporating Upstream Benefits

In addition, the DMIA should be extended to include payment for deemed external values.

As part of its most recent regulatory proposal, Energex inserted a 5 year DM plan as part of its requested opex. The projects it proposes cover a wide range of activities, from a short-term "summer readiness" program to long term investments in capability development. In response, the AER approved both opex and capex allowances much higher than had previously been incorporated in a DNSP revenue determination in order that Energex can undertake its proposed Network DM activities during the period.

Energex valued its Network DM based on the deemed long-term and system-wide benefits. The AER accepted this as a basis for approving Energex's proposed plan. In doing this, the AER has implicitly allowed Energex to secure a portion of these projected long-term and upstream benefits. In other words, the AER has provided a financial incentive for undertaking Network DM, based on the deemed benefits that the Network DM programs will bring to the system as a whole.

A similar approach could be taken in relation to the DMIA: upstream benefits to the whole supply chain could be factored in to an incentive payment in order to allow DNSPs to reap the full benefits of their innovation.

D-factor

The D-factor has led to increased Network DM activity in NSW, but it is limited in scope as it is location-specific. The process is also complex and the practical outcomes have been small. Nonetheless, a report commissioned for TEC concluded that "the available evidence indicates that, compared to past NSW and current interstate practice, the D-factor has been successful in stimulating greater consideration and implementation of DM by NSW Distributors".[7] Therefore, while the mechanism is an effective model, it would require reform to drastically scale-up its contribution to spurring DM investment.

However, rather than build on the potential of the D-factor mechanism, the AER is now proposing to abolish the D-factor. Despite discontinuing the D-factor mechanism, the AER is not proposing to significantly augment the DMEGCIS.

[7] Institute for Sustainable Futures & Regulatory Assistance Project, 2008. Win, Win, Win: Regulating Electricity Distribution Networks for Reliability, Consumers and the Environment, Sydney: Total Environment Centre.

Proposal for a Simplified D-factor type incorporating deemed value of System-Wide benefit

The D-factor as it is currently formulated provides one-for-one cost recovery, and so does not consider the broader benefits that Network DM can bring to the NEM. A proposed simplified D-factor would provide for a deemed value payment to be applied within regulatory periods. The AER would be responsible for determining the deemed value for the system-wide benefits of Network DM and a fixed share of those benefits could be claimable by the NSP for verified projects

This mechanism would be paid under similar recovery provisions as the current approach, but removes the need for assessment of avoided distribution costs or review of efficiency of project costs; these would no longer be part of the mechanism. Instead, the incentive component would be determined according to the deemed value of system-wide benefits.[8]

This mechanism would mean that internal benefits to the NSP are added to its share of external benefits. This would make a broader range of DM options cost effective and would allow NSP to justify implementing longer term programs where the main benefits are external and the internal benefits are longer term or otherwise difficult to quantify for the purposes of claiming the incentive.

Efficiency Benefit Sharing Scheme (EBSS)

TEC supports the AER's proposal to introduce an EBSS for opex because of its potential to limit energy throughput and prices. We also concur with the proposal not to extend the EBSS to capex as well, as the deferral of new investment is not necessarily represent a saving to consumers, especially when any deferred project can be reinstated in a network's revenue proposal in the subsequent regulatory period.

Conclusion

The NEM as a whole is beset by a lack of adequate incentives or targets for DM, and the Preliminary F&A paper does little to rectify this situation. While we support the AER's 2011 Rule change proposal on the Economic Regulation of NSPs, which would give it greater powers to curb network overspending, and look forward to new incentives for DM in the Power of Choice draft report, we believe the AER could do more, along the lines proposed above, to incentivise DM in the current revenue reset.

Beyond these regulatory processes, the larger issue of decoupling network revenue from energy throughput – essential to constrain demand as the Australian energy sector moves away from its current reliance on fossil-fuelled generation – remains unsolved. While we have no magic bullet solutions, and recognise the AER's limited responsibilities under the NER, it could use opportunities such as this revenue reset to at least canvass more radical solutions to network gold-plating, such as limiting revenue increases to CPI, independent of demand, with additional incentives for reducing demand.

Even more ambitiously, network revenue could be determined by DM targets being built into building blocks, with a percentage of total revenue being allocated to DM activities (the design and implementation

[8] The current incentive under the D-factor mechanism is equal to project implementation costs capped by the avoided distribution costs.

of which could be at the network's discretion, but approved post facto by the AER). It would then be up to networks to determine how best to constrain capex, opex, etc. to accommodate the DM target for each year.

Also problematic is the fact that revenue resets are based on 5 year forecasts. Even now that forecasting is done independently rather than by the networks themselves, there are considerable risks for consumers as well as networks in this process, especially with overall and possibly peak demand falling. While it is obviously beyond the scope of this process, we believe it may be time to move to a much more simplified model of network funding involving reimbursement for approved expenses with greater incentives for reducing demand. We see no problem with higher unit prices for electricity as long as overall demand falls, and thus bills remain relatively stable or fall (as in California).

TEC staff would be happy to present or answer questions at any public hearing related to this inquiry.

Yours sincerely,

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