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Submission to the AEMC

Power of Choice Review Draft Report

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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).

We appreciate the opportunity to provide a submission to the AEMC's Power of Choice review. There is currently a range of policy and regulatory processes underway in relation to the energy sector and we note that the first ministers' COAG process may intervene and accelerate this ongoing reform process. Responding to multiple processes with limited resources in addition to the need to work on own projects means that we have found it necessary to restrict our response to a small number of selected issues.

Power of Choice Review Draft Report

TEC congratulates the AEMC on a comprehensive draft report. We appreciate the consultation and dialogue undertaken by the AEMC on this process, and are impressed with the options for reform that the AEMC proposes. We applaud the AEMC's recognition that aggregators and other demand response providers find it difficult to participate in the wholesale market; the move to more time of use pricing and related smart meter rollout; and the attempts to improve incentives for networks to undertake DSP projects.

We recognise that many of the proposals are high level and will require extensive further work before they can be implemented. However, we have also identified some areas where the report's proposals could be improved. The following comments therefore only address areas where we consider a different approach should be taken.

Efficient and flexible pricing options

TEC strongly advocates the rapid implementation of efficient and flexible pricing options. The literature in regarding the environmental effects of demand management suggests that time of use pricing provides a strong environmental benefit as most consumers use less energy overall, rather than simply deferring their energy use away from peak times.[1] This also benefits consumers directly through lower energy bills and indirectly through infrastructure deferral/displacement.

With regard to introducing time varying prices for the network tariff component of consumer bills, TEC considers that the AEMC's approach is overly complex. For instance, it would not mandate time of use

[1] See Holland, S. P., & Mansur, Erin, T. (2004). Is Real-Time Pricing Green?: The Environmental Impacts of Electricity. Center for the Study of Energy Markets, University of California Energy Institute; Nemtzow, D., Delurey, D., & King, C. (2007). The Green Effect: How demand response programs contribute to energy efficiency and environmental quality. Public Utilities Fortnightly, 40–46; King, C. and Delurey, D, "Efficiency and Demand Response: Twins, Siblings or Cousins?" [2005] Public Utilities Fortnightly 54–61.

(TOU) pricing for band 2 customers, meaning that consumers may opt to use a flat tariff, potentially reducing the impact of the rollout. Also, research regarding consumer choice suggests that opt-out systems result in much greater uptake than opt-in.

TEC therefore recommends there be no bands for different levels of consumption. There could, though, be an opt-out provision for small consumers who believe they are unable to reduce their load. If this option is not feasible politically, the next best option would be to simplify the categorisation of consumers. We propose two categories of consumer: those who are readily able to shift/reduce much of their load, and those that cannot. The former category would include the AEMC's proposed bands 1 and 2, and potentially the medium-size consumers from band 3. Time of use pricing would be mandated for this group, while the latter group would retain flexibility.

However, we agree with the AEMC that the move to cost reflective pricing needs to avoid cost shifting by networks from time of use customers onto flat tariff customers (Ramsey pricing).

We agree that government programs should ensure that advice and assistance is provided to vulnerable consumers to help them manage their electricity use and that governments should review their energy concession schemes to ensure effective coverage.

We do not support cost reflective pricing to extend to geographic constraints, as this introduces a variable that consumers have little power to influence. We do consider that (aside from critical peak pricing and other options) there should be a standard TOU pricing option available across the NEM, with the multiplier for peak pricing limited to perhaps 3 times the base rate for residential and small business customers to reduce confusion and bill shock.

The move to time varying prices for the network tariff component of consumer bills depends upon the much faster rollout of interval or smart meters. TEC considers that the current rollout process across the NEM has been – with the exception of Victoria – unnecessarily slow and piecemeal, with insufficient incentives for, or obligations on, networks. While we understand the political and social considerations surrounding smart meter deployment, there are significant economies of scale as well as benefits to consumers and the environment that could be gained in deploying as rapidly and as widely as possible. With regards to the technologies deployed, our view is that it is preferable to implement smart meters with maximum functionality at the outset to ensure that the roll-out is robust and future ready.

We recommend that the AEMC:

- recommend mandated smart metering deployment and consumer engagement programs;
- proceed with the proposed incentive mechanism for networks to drive smart meter deployment in network-constrained areas;
- allow networks to share in the savings and other benefits gained from reduced infrastructure spending (discussed below); and
- mandate the National Smart Metering Program national smart metering specifications and performance standards.

Demand response mechanism

TEC supports the proposed mechanism to allow demand responses to be renumerated in the wholesale electricity market. We agree that the NER must clarify AEMO's role in developing demand forecasts and support the creation of a new category of market participant so as to unbundle non-energy services and electricity sale/supply. Effectively determining consumers' baseline consumption is crucial in determining

the amount of compensation they receive and therefore in ensuring the mechanism is efficient. There is a range of options open for determining baseline consumption, and an accurate model may consider simple consumption data and adjustments, as well as more nuanced factors such as weather characteristics. Given the importance of this issue, we support the formation of a working group and refer the AEMC to a recent paper which considers a number of methods for determining baseline consumption in considerable detail: *Survey of Models on Demand, Customer Base-Line and Demand Response and Their Relationships in the Power Market.*[2]

Network incentives

Overall, TEC agrees with the AEMC's two main proposals to decouple volume from revenue – i.e. by ensuring that any expenditure associated with projects approved under the Demand Management and Embedded Generation Connection Incentive Scheme (DMEGIS) is treated in the same manner as all other operating and capital expenditure; and by allowing networks to retain a portion of the value of capex savings. We also note that the WACC element of the capex bias is being be dealt with under network regulation rule change.

We believe that an incentive scheme can be developed that leverages both of these approaches. Reimbursement of foregone capex can be coupled with an incentive payment derived from the deemed benefit to the whole supply chain. While this is more complex than capex reimbursement alone, we feel that this is the approach most likely to incentivise DSP uptake. The disaggregated nature of the market distorts investment decisions as a network may not reap the benefits of its investment: while reimbursing foregone capex ensures that a network is not out of pocket when undertaking a DSP project, it does not provide a positive incentive to undertake DSP projects. Given the strong cultural bias toward capex projects, simply levelling the playing field in this blunt manner may not be a sufficient incentive to drive DSP projects.

Energex has already used a calculation of the value of upstream benefits to justify its proposed DM programs to the AER. Building on this, it is possible for the value of upstream benefits to be calculated independently, and a portion of those benefits to be allocated to the DNSP as an incentive payment. We note that Ausgrid has recently been recommending such a scheme.

Such an independent valuation would likely be beneficial to all participants by limiting the extent of review that the AER would have to undertake, with the AER focusing on the DNSP business case itself, rather than having to engage in a debate about the appropriate values of non-DNSP benefits. Valuation of upstream benefits could be undertaken by an independent party and be reviewed periodically, in much the same way that the Weighted Average Cost of Capital is reviewed by the AER.

However, we also consider that approaches identified to decouple volume from revenue[3] amount at best to partial decoupling, since none of them fundamentally alter the underlying link between volume and revenue; instead they simply claw back some of the revenue earned from increased volume. The business model of networks and retailers must be fundamentally shifted toward an energy service company (ESCO) model where revenues are based on efficient energy provision, rather than energy consumption. Network incentives simply reinforce the prevailing view that sees DSP as a separate activity, undertaken to benefit from regulatory incentives, rather than as an essential part of business.

[2] Heshmati, A, 'Survey of Models on Demand, Customer Base-Line and Demand Response and Their Relationships in the Power Market' (2012) available at http://ftp.iza.org/dp6637.pdf.

[3] Page 129.

We therefore recommend that the AEMC should commission research on international best practice in decoupling energy company volume and revenue, with a view to recommending new business models that inherently support more DSP, rather than using DSP to "clawback" capex made under a defective regulatory model.

Price versus revenue caps

TEC has previously expressed a preference for revenue over price caps, on the basis that they are less amenable to gaming and more likely to lead to efforts by networks to constrain demand, since there is no incentive to encourage higher consumption. However, we also recognise that networks also say they are less likely to install smart meters and do DSP trials under a revenue cap, since it effectively makes them lazy. This makes it more important for smart meters and other DSP-related initiatives to be incentivised or mandated by other means.

We agree with the AEMC that "any move towards revenue cap regulation would need to be supported by introducing more prescriptive detail prescription in the rules on how distribution network business sets their network tariffs" (page 130). However, in response to the AEMC's assertion (on page 130) that "the incentive to set tariffs at efficient cost under a price cap regulation… will still be considerably better than under revenue cap regulation", we note that efficient pricing is not in itself an incentive to do more DSP, and that the link between higher volumes and higher revenues remains under a price cap.

The issue of which control mechanism favours more DSP has become more critical in the context of falling total demand. Evidence from the AER in relation to the Queensland experience of a revenue cap and the Victorian experience of gaming under a price cap in the current determination period appears to favour revenue caps.

Nevertheless, the problems inherent in both approaches, and the potential for gaming and inefficiencies, lead us to conclude that both control mechanisms are deeply flawed. We believe that regulation needs to be more flexible to changes in demand, especially in the context of escalating DSP, and therefore recommend that the AEMC undertakes a separate review into the entire 5 yearly revenue determination process. The options to be considered in such a review should include annual, but less comprehensive, revenue determinations, which would take much of the risk and potential for gaming out of these processes.

Demand management targets

We agree with the AEMC that there "needs to be a mix of appropriate obligations and incentives" placed on networks.[4] Given the poor uptake of current DSP initiatives and the uncertain outcomes from the network incentive reforms proposed by the AEMC, TEC is convinced that a target for DM for networks is an essential component of reform to ensure greater DSP uptake. While the AEMC may consider that targets are unnecessary if incentives are working well, simply relying on incentives is an unnecessary stall on reform as it would take too long to wait for evidence about their relative success or failure. What is certain is that – given the long standing failure to adequately undertake DM and the urgent need to rapidly accelerate action – that incentives are a second rate response.

[4] Page 117.

The AEMC is concerned that networks may invest in inefficient DSP projects in order to meet their target. Given the extent of network gold-plating currently occurring, this concern is both warranted and ironic. We do not, however, think that this poses an insurmountable problem. Firstly, since DSP uptake is so low now, the risk of some overinvestment may be worth taking. Secondly, as the current level of DSP is so far below best practice, it would be simple to set a target that is above current levels, so as to spur investment, but still well below economically efficiently level, so as to assure that the target does not result in overinvestment. Finally, we see no reason that the AEMC could not develop a mechanism for ensuring that investment in DSP projects provides a genuine benefit for customers.

Network DM targets of the type proposed by the Alternative Technology Association, which is based on a target of 10 per cent of avoided capex per year, can be relatively straightforward to implement, would target reductions in costly peak demand, and would allow policymakers a high degree of flexibility. The target could be modest – starting, alternately to the ATA's proposal, at 1 per cent of forecast or actual peak demand, increasing by a further 1 per cent per year – and be reviewable after several years, to ensure the scheme is working well.

We recognise that care must be taken in the scheme's design, and that there are inherent problems with DM targets based on demand forecasts. We therefore call on the AEMC to put aside its scepticism and investigate efficient designs for a target and scheme, with the aim of recommending the implementation of the scheme option that is most likely to be effective and efficient.

Innovation allowance

Good quality research into DM that is of sufficient scale to be attractive is also costly to networks, and is unlikely to occur in the currently regulatory environment unless there is targeted innovation funding for this purpose. Networks that pursue innovative DM programs beyond take significant risks. We agree with the AEMC that research and development projects are unlikely to attract funding under the proposed demand management incentive scheme.

While we support government programs such as Smart Grid, Smart City, these programs are limited in scope, designed for a specific objective, and are too small and disparate to replace a strong and consistent mechanism within the NEM for funding DM research and innovation. Rather than scaling back innovation funding, it should be increased and strengthened. Consumers would pay for such a fund through it being part of a network's opex expenditure; however, the benefits obtained would likely be greater than the cost in the long term.

Instead of developing the current scheme and making it more attractive and accessible, the AER proposes to not increase the current Demand Management Innovation Allowance (DMIA) under the Demand Management and Embedded Generation Incentive Scheme[5] in NSW and the ACT as it has not been used to its full extent. In these circumstances, we believe that the current DMIA must either be replaced with a new fund mandated by the rules, or that the AEMC develops new principles that better guide the AER's development of the scheme and ensure that it is incentivising innovation.

An appropriate alternative model is that used by UK regulator Ofgem, where network operators bid for portions of £250m of innovation funding over a regulatory period. We agree with the AEMC that any such

[5] For NSW and ACT during the 2014-2019 regulatory period.

scheme should include both cost recovery and a mechanism which allows the network to capture a share of any associated long term benefits.

Regulatory investment tests (RITs)

Networks are required to undertake RITs before committing to major new infrastructure spending, yet the fact that (to our knowledge) not a single new network project proposal has been abandoned as a result of a RIT suggests that there is a major flaw in these processes.[6] This is no surprise, since (a) proponents are expected to call for and review DSP alternatives to their own infrastructure plans, and (b) the AER does not have the powers and/or the resources to properly review the merits of these proposals, instead essentially being reduced to the role of checking that the networks have "ticked the boxes" before concluding that, indeed, their project is the most economically efficient solution to a supply-demand squeeze.

TEC considers that the AER should have greater powers and resources to oversee these processes, becoming the arbiter instead of rubber-stamping the result of processes conducted essentially by the proponents for their own benefit. Indeed, new infrastructure proposals should be subject to public tender in which DSP proponents such as DM aggregators and local solar power providers can compete on an equal footing. This proposal would require more resources for the AER as well as regulatory changes, but the costs would be more than offset by savings in the form of less infrastructure spending. It would help to ensure that the implementation of peak demand target would result in more DSP rather than capex investment.

Energy efficiency measures and policies

While TEC agrees with the AEMC that "The electricity market should provide the right signals for uptake of DSP and EE on a sustainable basis", and therefore that "the issues of peak demand and facilitating efficient DSP outcomes should be addressed within the market and not external to its regulatory arrangements", this "perfect world" approach does not mirror reality in the context of energy retailers traditionally profiting from higher consumption. This is why the NSW and Victorian energy efficiency schemes, which place obligations on retailers to deliver savings to consumers, have been successful. We therefore support the harmonising of these schemes and the introduction of the proposed National Energy Savings Initiative (NESI).

Consumer participation

Regulatory processes involving important DSP decisions, as elsewhere in the NEM, are beset by an imbalance of resources and expertise between end consumers – for whom the NEM exists, as recognised by the National Electricity Executive – and market participants. While this situation is expected to improve with the creation of a new national energy consumers' advocacy body, the AEMC and AER should formally ask energy consumer groups what information they need early in regulatory processes and provide the expert advice they need, including by commissioning external research of relevance to consumer groups.

The AEMC should also investigate what formal role consumers could have in determining regulatory outcomes – as occurs, for instance, in California, where we understand consumers and power companies

[6] See TEC's submission to the 2012 Senate inquiry into electricity prices for an example of the inadequacy of the current regulatory process for new network projects: in this case, TransGrid's proposed Dumaresq-Lismore line.

negotiate annually to set network revenues and retail prices.[7] For instance, there could be a Consumer Review Panel or similar body with a formal role alongside the AER in all regulatory processes, with a mandate to constrain prices and encourage DSP.

Recommendations

The following recommendations focus on areas where TEC considers that the approach proposed in the draft report should be amended. In other respects TEC's position is generally consistent with that of the AEMC.

1. **Demand response mechanism**

   TEC supports the proposed mechanism to allow demand responses to be renumerated in the wholesale electricity market, but recommends the establishment of a working group to determine consumers' baseline consumption.

2. **Efficient and flexible pricing options**

   While time varying prices should be introduced for the network tariff component of consumer bills, there should be no bands for different levels of consumption. There should be a standard TOU pricing option available across the NEM, with the multiplier for peak pricing limited to perhaps 3 times the base rate for residential and small business customers to reduce confusion and bill shock.

   There should, however, be an opt-out provision for small consumers who believe they are unable to reduce or shift their load, as well as comprehensive measures to prevent vulnerable households from being disadvantaged by this move.

3. **Smart meter rollout**

   Smart meter rollout, including consumer education, should be mandated and accelerated to all residential, commercial and industrial users, with standards being set that ensure a high level of smart meter functionality including in-home display.

4. **Decoupling**

   The AEMC should commission research on international best practice in decoupling energy company volume and revenue, with a view to recommending new business models that inherently support more DSP, rather than DSP being a "clawback" option.

5. **Network incentives**

   A mechanism should be developed to allocate a share of the whole-of-supply chain benefits of DM projects to networks.

6. **Demand reduction targets**

[7] See http://www.dra.ca.gov.

The AEMC should maintain an open mind on this issue and investigate in more detail the potential design of a target that would mandate networks to reduce peak demand below company and AEMO forecasts for each supply area.

7. Network revenue determinations

In view of the challenge flat or falling demand, evidence of network gaming and the potential for DSP to be affected by the control mechanism adopted, the AEMC should undertake a separate review into the entire 5 yearly revenue determination process. The options to be considered in such a review should include annual, but less comprehensive, revenue determinations, which would take much of the risk and potential for gaming out of these processes.

8. Innovation allowance

The AEMC should maintain an innovation allowance designed to provide certain and ongoing funding for research activities. This fund should be strengthened and the principles guiding the AER's implementation of the fund should be changed to ensure that the AER develops the fund appropriately, rather than acquiescing in its responsibilities.

9. Investment tests

The AER should have greater powers and resources to oversee the RIT processes, becoming the arbiter instead of rubber-stamping the result of processes conducted essentially by the proponents for their own benefit. Indeed, new infrastructure proposals should be subject to public tender in which DSP proponents can compete on an equal footing.

10. Energy efficiency

The AEMC should recognise that markets are not perfect or self-correcting and that this kind of initiative has been successful in NSW and Victoria, and support the introduction of the National Energy Savings Initiative.

11. Consumer participation

The AEMC and AER should formally ask energy consumer groups what information they need early in regulatory processes and provide the expert advice they need, including by commissioning external research of relevance to consumer groups. It should also investigate, by reference to international comparisons, what formal role consumers could have in determining regulatory outcomes.

TEC staff would be happy to provide further information on any matter raised in this submission.

Yours sincerely,

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