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**Total Environment Centre**

**AEMC:**

**DEMAND MANAGEMENT RULE CHANGE CONSULTATION PAPER**

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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 ten 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).

### **Introduction**

TEC welcomes the opportunity to provide further input into this process. While we consider that incentivising networks to undertake more demand management activities is a fundamental and overdue energy market reform, we are concerned that regulators may now consider that (a) the job of reducing peak demand may be performed by the introduction of more cost reflective network tariffs, and (b) this reform is not relevant in the current environment of flat or declining demand. As our responses below to the issues raised by the AEMC reveal, we consider that neither of these conclusions would be warranted.

If this rule change proposal fails, Australia could be locked into an outmoded, centralised infrastructure regulatory model, with long term risks to consumers in relation to even more gold plating and higher prices, just as international technology and market trends towards a more decentralised paradigm are accelerating. However, there are grounds for optimism about a positive outcome for this rule change, including:

1. It is very closely modelled on specifications for a rule change that the AEMC itself recommended.
2. It closely mirrors a similar proposal from all state, territory and federal governments via the COAG Energy Council.
3. AEMC commissioned research has estimated the potential consumer savings from demand management (DM) at between \$4 billion and \$12 billion. Reforms already enacted will deliver no more than a fraction of these savings.
4. The AER has recognised the need for stronger DM incentives, but has explicitly delayed creating such incentives, pending the outcome of this process.
5. The net benefits to consumers of DM have been repeatedly demonstrated over decades in Australia and overseas.
6. The failure on the part of the AER to adequately consider, analyse, monitor, report or support cost effective DM was a major contributor to the overspend of billions of dollars on network infrastructure over the past five years.

7. One key reason that networks have not undertaken more DM has been a lack of confidence in its efficacy is due to a lack of precedents, expertise and experience with DM. The proposed DM incentive scheme (DMIS) will likely overcome this barrier.
8. An effective DMIS is the probably the best way to help networks to adapt to the rapidly accelerating trends associated with decentralised energy, including, solar PV, energy management, energy efficiency, batteries and electric vehicles.
9. The proposed DMIS rule change has been carefully drafted to incentivise cost effective DM; that is it will only support DM that demonstrates net benefits for consumers. In other words, consumers can only win from this rule change.
10. The proposed DMIS rule change has been carefully drafted to refer only to incentives for networks to undertake cost effective DM. There is no reference to penalties for networks. In other words, networks cannot lose from this rule change.

We also note that demand management is an area of concern to many stakeholders. For instance, the following companies and organisations made submissions to the AER in relation specifically to the demand management programs in Ergon's and Energex's 2015-19 regulatory proposals:

- AGL
- City Smart (Brisbane City Council)
- Daikin Pty Ltd
- Dreamworld
- Fujitsu
- George Wilkenfeld and Associates
- Londis and Gyrs
- Radio Rentals
- Sekisui House
- SPASA QLD (Swimming pools and spa association)
- Thew and McCann Group
- The Good Guys
- Australian PV Institute
- QCOSS
- Queensland Consumers Association

## **Issues this rule change is seeking to address (according to the AEMC)**

### **Issue 1**

*1.1 Having regard to current and potential future market conditions, and in light of recent changes to the regulatory framework for distribution businesses, is there a gap in the current framework which may be discouraging distribution businesses from pursuing demand management projects as an efficient alternative to network investment?*

*1.2 If a gap does exist, where does it lie? Is it a product of the provisions in the NER or a result of the current design of the DMEGCIS applied by the AER?*

The gap in the current regulatory framework was identified by the AEMC itself in the 2012 *Power of Choice* final report, as well as by the Productivity Commission (PC), and was the catalyst for the TEC and COAG Energy Council rule change requests. Essentially, the problem is that the AER has not considered the existing DMEGCIS rule (Clause 6.6.3 of the NER) to be sufficiently prescriptive for it to implement an incentive-based demand management (DM) scheme – even though both the AEMC and the PC found that there is sufficient scope in the existing Clause 6.6.3 of the NER for such an incentive scheme.

In the absence of such a scheme, the AER has restricted its use of the DMEGCIS to the Demand Management Innovation Allowance (DMIA), an arbitrary and unchanged cap of up to \$1 million pa for networks to spend on supposedly innovative projects, and which also allows them to recover any revenue foregone through this spending. In NSW it also applied IPART's earlier D-factor in the 2004-09 and 2009-14 regulatory periods to provide a short-term incentive to networks to overcome barriers to the efficient use of DM solutions in supplying network services. However, in the move to a revenue cap for NSW networks the D-factor has also now been abandoned, since total network revenue does not decline as a result of undertaking DM activities.

By 'current and potential future market conditions' we assume the AEMC is referring to the overall flattening of peak demand in recent years; and by 'recent changes to the regulatory framework for distribution businesses' we assume it is referring to the cost reflective network tariff rule change. Together, it might be inferred that the AEMC considers that the need for this rule change is no longer as strong as when it was first proposed by the AEMC in the *Power of Choice* final report, and that it therefore does not still have the same level of concern over the inadequacy of the AER's application of the DMEGCIS.

If this interpretation is correct, we strongly dispute it, and note the following:

- The downward energy trend was already apparent in 2012 when the AEMC itself recommended the DMEGCIS rule change.
- There are still many areas of localised peak load growth, where DM may be a viable alternative to network augmentation.
- Our experience to date of the DM plans proposed by the NSW, Queensland and South Australian networks in the current round of regulatory determinations is confirmation that without a specific incentive, networks are unlikely to invest cost effectively in DM.
- Part of the reason that DM was not used in place of network capex over the past 5 years is that (outside of Queensland) the groundwork to develop network experience, expertise and confidence was not done in the years before it. It would be unwise not to invest in DM now because of overspending on capex in the past.
- While significantly lower than in the previous period, augmentation related capex still amounts to a very significant 18 per cent of total capex in the current round of network revenue proposals (excluding Victoria and Tasmania). Furthermore, some replacement capex (42 per cent of proposed capex) may also be deferrable with DM.
- Emerging decentralised energy technologies, in particular grid- and consumer-scale battery storage and energy management systems, have considerable potential to reduce peak demand. Networks should be encouraged to support and engage constructively with, rather than obstruct the development of, these technologies.

- Without significant investment in DM, the potential for future stranded assets is greatly increased, since networks will continue to respond to the inherent regulatory bias to increase their regulatory asset base (RAB), even while peak demand and overall consumption are flat or declining.
- The Capex Expenditure Saving Scheme (CESS) allows networks to retain 30% of the value of deferred capital expenditure relative to forecast (with the other 70% remaining with consumers). This benefit is subject to assessment by the AER at the end of the regulatory period and accrues in the next regulatory period. The CESS is likely to moderate the pressures to overspend on capex, but it remains to be seen if this is sufficient to offset the financial incentive for networks to invest in infrastructure projects that add to a network's RAB.

However, the CESS is very unlikely to be an effective incentive for DM, for the following reasons:

- Firstly, to access the CESS, the network will need to define expected projects that will contribute to the capex forecast. This could create a bias for networks to plan capex rather than DM projects.
  - Secondly, because the CESS is only available for underspend capex, in establishing a forecast of required capex networks will have an incentive to *overestimate* capex in order to maximise the chances of gaining a benefit from the CESS. This will encourage the network to understate the expected and potential impact of DM.
  - Thirdly, in building a business case for efficient DM, the network would need to *include* the capex budget for the network infrastructure that it is planning *not* to build, and to *exclude* the opex budget for DM that it *does* plan to undertake. This is perverse and perpetuates a regulatory perspective that DM is abnormal or unconventional.
  - Fourthly, if expenditure for DM is not included in the opex forecasts, then the capex underspending benefit to the network from the CESS will tend to be offset by the overspending penalty for opex under the Efficiency Benefit sharing Scheme (EBSS).
- The AEMC cost reflective network tariff rule change may complement, but is unlikely to replace, the need for a reformed DMIS rule. It does not take effect until 2017, and networks have five years to gradually implement it. And there are lots of unknowns. Networks get to make their own decision about how to calculate long run marginal cost. Then the AER has to assess and approve a likely variety of methodologies. Most networks are likely to go for smeared or postage stamp tariffs, but some may not, complicating the job. Then these new network tariffs need to be reflected in the tariffs offered by retailers. Then consumers need to get the message and change their behaviour.
  - An effective DMIS is likely to provide the necessary impetus to unlock the massive potential consumer savings of DM. This rule change is likely to be the most effective means of stimulating the establishment of such a scheme.

Finally, we feel the need for a history lesson, as a reminder that reform of the DMEGCIS is not an ephemeral thought bubble. In 1989, the first issue of the Australian [National Grid Protocol](#) stated that 'Demand management and renewable energy options are intended to have equal opportunity alongside conventional supply options to satisfy future requirements. Indeed, such options may have advantages in meeting short lead-time requirements...'

In 2002, the Independent Pricing and Regulatory Tribunal's [\*Inquiry into the Role of Demand Management and Other Options in the Provision of Energy Services\*](#) found that 'It is the Tribunal's strong view that there is significant untapped potential for efficient demand management. To a large extent, one of the major obstacles continues to be a culture which favours traditional 'build' engineering solutions and which pays little more than lip service to alternative options.' The primary recommendation of this Inquiry was the establishment of a DM incentive fund.

As noted in the ISF [\*Restoring Power\*](#) report, effective DM incentives have been established in dozens of jurisdictions overseas. The AER currently has the power to establish an effective DMIS but has yet to do so. This failure to do so has contributed substantially to the doubling in electricity prices over the past 7 years. Indeed, in one recent draft determination the AER rejected Ausgrid's very modest proposed DM spending, half of the savings from which would have gone to customers as incentives, reducing average bills.

Given the 14-15 month delay between the rule change proposals being received by the AEMC and the commencement of this consultation process, the urgency of this issue has become critical. The AER is already well advanced in its network regulatory determinations for the next four year period. On current indications, it is unlikely to support greater uptake of DM by NSPs and its overly cautious approach may even lead to a reversal of some of the modest gains over the current five year period, in particular by the Queensland networks.

## **Issue 2 Proposed DMEGCIS**

*2.1 In making its decision on the network regulation rule change request, the AEMC considered how much prescription the NER should include. In this context, we welcome the views of stakeholders on the appropriate level of prescription to include in the NER to enable the AER to develop and apply an effective DMEGCIS. In particular:*

*(a) Having regard to the level of flexibility and discretion afforded to the AER in designing and applying other incentive schemes under Chapter 6 of the NER, is the level of flexibility and discretion currently afforded to the AER in relation to the DMEGCIS appropriate?*

*(b) If there is benefit in providing more prescription in the NER, is the level proposed by the COAG Energy Council and the TEC in their rule change requests appropriate?*

Despite what the AEMC and the PC concluded, clearly the AER considers that it requires greater direction or prescription. TEC's rule change request provides this, by specifying:

- That the AER *shall* introduce a DMIS (at present it *may*).
- An explicit objective.
- Scope: network DM may include 'demand response, energy efficiency or embedded or distributed generation.'
- A set of guiding principles, including 'the need to incentivise network DM over the long term, and not just for the forthcoming regulatory period.'
- A requirement for networks to monitor and publish the results of DM projects undertaken pursuant to the DMIS. An expanded series of criteria for applying the DMIS.

- Explicit recognition for the AER's DMIS to include a calculation of the share of non- network market benefits to be retained by networks.

While *Restoring Power* suggests how a reformed DMIS could work, TEC's rule change request still leaves the AER considerable discretion as to the nature of the scheme it designs and implements.

*2.2 Having regard to recent changes made by the AEMC to Chapter 5 and 5A of the NER in relation to the arrangements for connecting embedded generators, are additional financial incentives for innovation in the connection of embedded generators through the DMEGCIS required?*

We do not understand this question. Recent changes made by the AEMC to Chapter 5 and 5A of the NER in relation to the arrangements for connecting embedded generators are intended to streamline the connection process, not to provide a financial incentive to networks to connect embedded generators as part of their DM programs. The proposed DMIS rule change is strongly complementary to, and in no way conflicts with, these reforms.

In particular, the Connecting Embedded Generators Under Chapter 5A Rule does not:

- Require the AER to adopt a DMIS.
- Define the objective of the DMIS.
- Remove the financial disincentives for networks in considering and facilitating DM (including embedded generation).
- Address load management, energy efficiency, energy storage, end use behaviour change, or many other forms of DM.
- Facilitate targets for DM.
- Require reporting of DM activity, expenditure and outcomes.
- Encourage and incentivise networks to find innovative ways to reform their business model towards a more decentralised energy future.

### **Issue 3 Demand management innovation allowance**

*3.1. Given that the proposed amendments in relation to the innovation allowance are largely reflective of existing AER practice, what additional benefits are likely to be gained by codifying these in the NER?*

The NER do not currently refer explicitly to the DMIA, which is a mechanism with potential merit in fostering innovation. The fact that it is reflective of current AER practice is no reason not to codify the existence of such an allowance.

Unfortunately, in practice the DMIA has been a fig leaf covering the absence of an effective DMIS. The cap is arbitrary (around \$12 million for all networks per year, whereas Ofgem's Low Carbon Networks Fund is eight times that amount); the AER provides little effective supervision of programs; there is only patchy innovation occurring; reporting on spending and outcomes is poor and not standardised; and there is no requirement for networks to have mainstreamed *any* past programs in order to receive new funding.

TEC is not greatly concerned if explicit reference to the DMIA is removed from the new DMIS rule. We included it because we wanted to stay as close as possible to the AEMC's draft specifications of the Power

of Choice. However, if the AER and others are going to judge the DMIA on its performance *ex post*, then the AER should specify its performance metrics and benchmarks *ex ante*.

*3.2. What impact, if any, will the proposed amendments have on distribution businesses incentives to utilise a greater proportion of their allocated allowances on innovative demand management projects, relative to current practice? For example, would greater certainty increase the likelihood of distribution businesses participating in this scheme?*

Probably, but the DMIA is small, not performance based and provides no financial incentive other than cost recovery, so DMIA reform as proposed by TEC and the COAG Energy Council is a relatively minor consideration in comparison with the DMIS.

*3.3. Are the proposed amendments likely to address concerns raised by stakeholders around the size of the innovation allowances allocated by the AER to the distribution businesses (noting that, to date, these amounts have been considered to be modest)?*

The current small size of the DMIA would be fine if there was an effective DMIS alongside it. There are numerous ways the DMIA could be improved, including removing the de facto \$1 million cap (with appropriate benchmarking and reporting requirements), but we do not consider it is necessary to codify these in the NER.

*3.4. Given the new DAPR and DSES arrangements are now in place, what additional benefits will the proposed annual reporting requirements deliver to the market? Is there a risk of duplication in reporting for the distribution businesses?*

The clear, consistent, regular, public and transparent reporting of expenditure and outcomes should be applied to the DMIS and network DM in general as a matter of good practice and accountability, not just in relation to the DMIA. For instance, currently the DAPRs do not require breakdowns of spending or metrics on outcomes, such as MVA saved or the benefit to cost ratio of DM spending. There is an overdue need for a much higher standard of accountability and transparency from networks, and for better oversight of DMIA spending by the AER.

*3.5. Should the innovation allowance be a time-limited measure? If so, should the AER be given the flexibility and discretion to determine the appropriate timeframe?*

TEC prefers benchmarking or performance standards for DM. If the introduction of a new DMIS results in network DM rapidly escalating (e.g., to at least 2 per cent of peak demand in each network area), then the DMIA could expire in, say, 5 years. However, we see no time limit on the need for innovation and R&D by networks, and if the DMIA can accomplish this, it should be strengthened, not eliminated over time.

#### **Issue 4 Demand management incentive scheme**

*4.1 If distribution businesses are able to receive a payment based on a proportion of the market benefits produced by a demand management project, is this likely to increase investment in projects that will deliver broader market benefits that are in the long term interests of consumers?*

Yes, provided the incentive outweighs the cost to the network. The AER has successfully applied incentives in other areas — reliability (STPIS), capex (CESS) and opex (EBSS) — so why not in relation to DM as well?



Ideally, substantial DM expenditure should be in the revenue proposals of the networks approved by the AER, as was the case in Queensland in 2009-14 and as proposed by Ausgrid, Ergon and Energex for the 2015-19 determination period. If so, the incentive payments could apply above a threshold of the planned performance (e.g. above 80 per cent as suggested in the scheme outlined in *Restoring Power*).

Naturally, there also needs to be a robust methodology for calculating the downstream or consumer benefits, and a cap on the percentage of these that should be available for capture by networks. *Restoring Power* proposed such a methodology. TEC proposed a cap of 50 per cent for the share of non-network benefits to be captured by networks, but we are also comfortable with the lower cap of 30 per cent proposed by the COAG Energy Council.

*4.2 Given that the majority of distribution businesses are expected to be regulated under a revenue cap in the near future, is there value in amending the rules to explicitly require the inclusion of a payment for any foregone revenue resulting from implementing a demand management project approved under the innovation allowance? Should the AER retain discretion as to whether this component is appropriate?*

Under a revenue cap, any revenue foregone by undertaking activities under the DMIA can be recovered elsewhere by the network. However, we note that the question refers to 'the majority', rather than 'all'. Revenue caps are not prescribed in the NER, so this is insurance against a possible future return to price caps as the form of control.

*4.3 In light of the recent changes to the distribution network pricing arrangements, what are the potential benefits of requiring that the DMEGCIS include tariff based demand management options, in addition to non tariff based options?*

The move towards more cost reflective network tariffs may in time lead to lower peak demand on networks, but (assuming LRM is properly applied to new tariffs, rather than leading to higher fixed charges, which on current evidence is a strong possibility) there are a number of uncertainties involved, including the variable responsiveness of household and business behaviour to tariff signals. Giving networks an additional incentive to introduce tariff based DM may allow them to allocate additional resources to making sure this approach to DM works in the marketplace.

TEC sees significant benefit making the option of tariff based DM available via the rule change, and considers that there is little if any benefit to excluding it. For instance, some networks may in future choose to introduce nodal or locational tariffs in response to localised capacity constraints. Being incentivised to do this via the DMIS may make this a more economically efficient way to lower local peak demand either as an alternative to or in concert with non-tariff based DM programs.

Further, cost reflective network tariffs are intended to be based on LRM, whereas tariff based DM need not be constrained by the network-wide application of the same methodology.

Finally, TEC also notes the following statement by the AEMC in its consultation paper,

The DMEGCIS is not intended to be the sole, or even the primary, source of recovery of demand management expenditure by a distribution business. Rather, its purpose is to complement the incentive regulation structure by supplementing a distribution business's approved capital expenditure (capex) and operating expenditure (opex) to facilitate investigation and implementation of demand management strategies. It also aims to correct any disincentives that might discourage distribution businesses from undertaking demand management.

Accordingly, if tariff based DM can deliver large benefits at low cost, then there should be little cost included in the network's proposed opex and capex. This only emphasises the potential benefits to customers of incentivising efficient tariff-based DM via the DMIS.

We look forward to further consultations on this important rule change process.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'JA Angel', written in a cursive style.

**Jeff Angel**  
Executive Director