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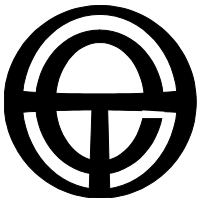

SUBMISSION
to

AEMC

National Transmission Planning Arrangements

Draft Report

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1. Introduction

1.1 National Transmission Planning

Total Environment Centre (TEC) is pleased to have another opportunity for input to the arrangements for national transmission planning, and we welcome the extended consultation process the Australian Energy Market Commission (AEMC) is holding on this issue. We have responded on previous occasions to other papers[1], and our recommendations in previous submissions are still relevant in this context. TEC's Rule Change Package[2] also addresses some of the issues relating to transmission planning, and we have reproduced a section of that in this submission.

TEC believes that the establishment of the new transmission planning arrangements provides a unique and opportune time to rethink policy and principle. TEC's underlying concern is that two main principles should be driving regulatory mechanisms, that is:

- Demand management[3] (DM) should be the overarching principle for decision making, in other words augmentation of networks should be the second choice after DM approaches and should be avoided wherever possible. To this end, regulatory mechanisms must include strong incentives for transmission network service providers (TNSPs) to undertake investigation and implementation of DM as the primary option to address potential constraints.
- Proactive planning is essential to promote efficiency in the use of electricity, particularly where there is potential intersection with climate change policy. Ex ante planning is more appropriate than ex post planning, and regulations for the National Electricity Market (the NEM) should be aimed at minimising expansion of the whole electricity system to the greatest extent possible. This would increase overall efficiency, as well as assisting with greenhouse gas abatement.

We have particularly focused our comments in this submission on the proposed Rules for the Regulatory Investment Test for Transmission.

1.2 Climate change policy and the NEM

Demand management in all its forms must be recognised as a viable alternative to current approaches and actions throughout the NEM because of the many benefits that it delivers to consumers. The NEL Objective is set up to cater for "the long term interests of

[1] Total Environment Centre (2007) *Submission to AEMC National Transmission Planner, Scoping Paper*, September 2007; and Total Environment Centre (2008) *Submission to AEMC National Transmission Planner, Discussion Paper*, April 2008

[2] Total Environment Centre (2007) *Rule change package – Demand management and transmission networks*, November 2007

[3] DM in this submission can be read to include 'demand response', 'demand side management', 'demand side response', 'energy efficiency' and 'non-network solutions'. In general, DM can include both the management of peak loads and energy efficiency as a way of meeting capacity requirements most cost effectively. It includes a diverse array of activities that meet energy needs, including cogeneration, standby generation, power factor correction, fuel switching, interruptible customer contracts, and other load shifting mechanisms.

consumers" but without effective DM this is not being achieved. DM, including energy efficiency, is also the most cost-effective and rapid technique within the NEM for reducing greenhouse gas emissions from the fossil-fuel intensive generation of electricity.

Greenhouse gas emissions from fossil fuel generation constitute a massive contribution to climate change. DM addresses this problem in a number of ways:

- Reduction of consumption through more efficient systems (various forms of energy efficiency, including power factor correction) and hence reduced need for generation.
- Embedded/distributed generation is not only usually based on non-fossil fuels but also reduces network losses by virtue of being local generation.

We note that the AEMC has made several references through the Draft report regarding the need to enhance the ability of transmission investors to respond to climate change policy and make decisions "in a carbon constrained world" (p. 71). TEC considers that the draft planning arrangements are certainly an improvement on the status quo, but would argue that the regulations, the AEMC and the Australian Energy Regulator (AER) need to become even more proactive both in future planning and in the principles embodied in the regulations. This requires DM – with the understanding that energy efficiency and embedded generation are components of that – to be placed at the forefront when assessing future needs as well as TNSPs' investment decisions.

In regards to the new "Regulatory Investment Test for Transmission", the Draft report refers to the latest version of the test itself as developed by the AER in November 2007. In the new version, the AER has clearly attempted to address the potential for intersections between the NEM and climate change policy (and see also section 3.2 below).

However, TEC is of the opinion that although these modifications will improve the consideration of alternatives by TNSPs they are not sufficient to fully implement the changes required to balance the playing field between demand side solutions and the current heavy bias towards supply side approaches. Various strategies to combat climate change are already under way and there will be many more in the future, including an emissions trading scheme and potentially an energy efficiency trading scheme. These **will** have an impact on the NEM, and the worst approach by regulators would be to allow the NEM to continue its 'business as usual' that would continue to blunt these external measures. To consider these measures to be outside the NEM is extremely short-sighted. It is time for the AEMC, the AER and the TNSPs themselves to be visionary as they join with, rather than resist, the universal effort to combat climate change. Proactive, cutting-edge regulation will only enhance reputations and allow the NEM to catch up with more forward-looking regulatory frameworks such as that seen in California and the UK.

Furthermore, to argue that TNSPs are not the right agency for DM techniques – as many do – is a feeble position. There is a range of approaches open to TNSPS. They can take direct actions, such as arrangements with large users. They can also negotiate strategies with distribution businesses and retailers, who already have a longer history of undertaking DM. Finally, there are growing opportunities for DM via businesses that are

DM providers and/or aggregators, and these businesses will only continue to expand in a "carbon constrained world". Transmission is not the only sector where solutions are to be found, but action here certainly has a significant role to play in enhancing the incremental reduction of consumption.

The most important solutions for establishing a robust demand-side presence in the electricity market include:

- establish DM targets for all sectors, including transmission networks
- ensure networks investigate and implement DM as a primary option, ahead of network augmentation wherever possible; where the costs of DM or non-network alternatives are equal to network solutions, augmentation should be ranked below other options
- establish a DM code of practice, for both transmission and distribution
- establish incentives throughout the NEM, including the transmission sector, for the implementation of DM and the use of small, local generators based on alternative energies
- ensure networks disclose information on impending constraints and potential non-network solutions in a timely manner
- provide transparency of pricing in relation to demand and constraints – end users are currently unaware of the true price of their electricity
- establish a DM funding mechanism.

Using the need to reduce greenhouse gas emissions as a driver for DM will require changes in actions and principles, but it will also afford commercial and efficiency opportunities to the benefit of both consumers and industry. Avoidance of carbon costs will further strengthen the case for non-network solutions, however, the astute and forward-thinking regulator would act now to ensure that carbon costs for consumers are reduced, by implementing the above recommendations, rather than wait for carbon costs to increase and merely allow TNSPs to pass on these costs to consumers.

2. National Transmission Planner and Development Plans

TEC has consistently endorsed the establishment of a National Transmission Planner (NTP) and we recognise the attempts made to at least refer to climate change issues. Our greatest concern with transmission planning is the reactive form it continues to take. It is time to be proactive and plan ahead, not just in terms of meeting future constraints but also in terms of reducing electricity consumption and keeping the transmission system in check. The current emphasis is always on building for forecast future loads or repairing existing networks rather than opportunities for reduction or even obsolescence.

The need for greenhouse gas emissions reductions has made it clear that the emerging role of DM and energy efficiency will be enormous. As consumption is held steady then reduced, and as renewable energy replaces existing coal-fired power stations, it is likely that growth in transmission infrastructure will be the exception in addition, existing lines may be relocated. These concepts must be included in future transmission planning. The AEMC and the AER can be proactive in promoting opportunities for abatement. The establishment of a new organisation such as the NTP is an opportune time to rethink policy and principle.

Although TEC supports the general intent and details regarding the NTP and the National Transmission Network Development Plans (NTNDPs), we are still of the opinion that the arrangements will be less than useful for promoting the implementation of non-network solutions. The main problems we had regarding the Issues paper (raised in our submission of April 2008) have still not been addressed, that is, that the NTP should:

- improve the accuracy of forecasts developed by NEMMCO;
- develop a methodology for the inclusion of DM in forecasts;
- undertake and publish annual DM forecasting and reporting as part of their development of a database; and, most importantly;
- have actual power in regard to influencing transmission planning, rather than being solely an advisory body, or at the very least be able to refer matters to the AER for resolution.

The Rules for the NTNDP do at least specify that both network and non-network options should be presented in relation to flow paths, but this still does not satisfy the need to achieve either the prioritisation of DM over supply side augmentations or the AEMC's rhetoric of intended interest in climate change policy. The inclusion of carbon costs as essential inputs to an NTNDP is a minimal gesture but hardly proactive, as carbon costs are, in fact, **real** costs. On its own, however, it will do little to address the deep bias against non-network solutions, and it does not appear that the development of the NTNDPs will mitigate this. Although the establishment of the NTP and NTNDPs will certainly improve reporting and forward planning for transmission, this is a lost opportunity to establish proactive, imaginative regulation.

In addition, the Objective is stated as "promoting the efficient, long term and co-ordinated *development* of the national transmission grid" (our emphasis). Although we are in favour of the emphasis on efficiency, as well as the long-term view and coordination, all of which are directly relevant to consumer interests, we take issue with "development". This continues the "build, build, build" mentality of network planning to date and does nothing to promote forward planning in addressing climate change policies or DM growth. On page 25 the phrase "long term evolution" is used and we consider this better represents the interests of all who produce and consume within the NEM, since it incorporates the possibility of minimisation of the system.

We support the planning cycle for the annual NTNDP, as well as the timeframes set out in the Draft report. These should allow for input from interested parties and proper consideration of issues raised.

3. Regulatory Investment Test

3.1 The problem

The provisions for the Regulatory Investment Test for Transmission (RIT-T) still do not include demand side or non-network options as a **necessity** in any assessment of costs or benefits. Without the requirement to investigate DM solutions **before** other options, it is likely that augmentation options will dominate from the beginning, putting DM solutions at a disadvantage.

An additional and related problem is that the Rules give equal weight to "those who produce, consume and transport electricity". This assumes that the interests of those who produce and transport electricity are aligned with and equal to the long-term interests of consumers. This is not necessarily the case, however, considering the extraordinary waste that occurs from the inefficient and unnecessary consumption of electricity in the NEM. In this context, the push for consumers to use electricity ***in***efficiently is to the benefit of, and is often driven by, generators and networks at the expense of the interests of consumers, who bear the burden of inefficient investments and increased prices. The Regulatory Test should reflect the NEL Objective by ensuring that the long-term interests of consumers are the priority.

To reverse the bias towards augmentation options and the neglect of demand side solutions, it is critical that the Rules specify that DM options must be investigated before augmentation options. This is likely to ensure that a more appropriate level of transmission networks' resources and attention are directed to DM before augmentation planning is under way.

This new reworking of the Rules is also going to lead to confusion about the Rules that apply to distribution. There were sections in 5.6.5A which referred to all networks, and as far as we can tell these are to be modified to refer to DNSPs only. It is not clear if these sections have been modified to suit TNSPs in 5.6.5B, so it would be helpful if the AEMC could explain the situation in more detail.

3.2 Reviews of the Test

The AER produced a new version of the test itself in 2007, and we presume that it will be revised again by the AER as a result of the AEMC process, particularly in view of the removal of the "limbs" (reliability and market benefits), which were still encapsulated in that version. When that happens we would strongly urge a revisiting of the test in the light of the significant developments in climate change policy.

As the test now stands it is a step forward from previous versions, especially the section on "Alternative options", which more clearly sets out DM as a viable alternative to network augmentation and is not so prescriptive regarding the need for one, fixed proponent. We also support the inclusion of "market based regulatory instruments that may be used to address greenhouse and environmental issues" when undertaking sensitivity testing.

In addition, the assessment of carbon costs would probably be picked up under the general analysis of costs; for instance, TNSPs will probably be obliged to report carbon costs in the future and so should, in theory, automatically include them in cost analyses. It is, however, incumbent on the AER to be vigilant about the reporting of carbon costs – and avoidance of these – when assessing TNSPs' analyses.

Although we are appreciative of the changes made in both the test and the Rules for the Regulatory test to take the emphasis away from network options in various ways (including the development of the concept of "credible options"), to give inclusion to and put greater emphasis on non-network solutions, TEC is still of the opinion that DM needs

to be actively assumed to be the first solution. This is to promote efficiency across the NEM as well as to address climate change concerns.

In the next section we present a discussion of the revised version of the Rules, based on the version in the Draft report, to better represent that concern. We have focused on the draft Rules themselves instead of directly responding to the discussion in the Draft report.

3.3 Proposed amendments to draft Rules

3.3.1 General discussion

We are pleased that the emphasis on justification has shifted so that TNSPs are now required to justify **not** undertaking assessment in regard to all market benefits [Cl 5.6.5B(d) (6)], which will assist proper consideration of all potential benefits. In addition, the costs referred to in (d)(8) should follow our note above in reference to carbon costs under the actual Test – we would ask the AEMC to reconsider whether the draft wording is sufficient to clarify that carbon costs must be analysed. If the TNSPs overlook this, then it will be to their detriment in the long run since they will have to meet these costs eventually.

TEC also fully supports the removal of the distinction of the two limbs, and the opening up of extra consideration within the analysis of potential "market benefits".

3.3.2 Monetary limit

We reiterate our position in our previous submission (of April 2008) that the trigger for applying the test should remain at $1 million rather than being raised to $5 million (Clauses (e) onwards). A compromise – in the recognition of rising costs – would be using $1 million as a minimum for analysis instead of a maximum. To quote from that submission:

> The RIT provides much-needed oversight of a multitude of TNSP investment decisions. Combined, these small investments may comprise a significant imposition on consumers. To allow such investments to occur without the rigour of the RIT would be against the interests of consumers. In particular, we are concerned that many DM alternatives to smaller augmentation decisions may be overlooked.

Detrimental impacts occur not only through large, dramatic action but also through small, incremental change. A similar argument applies to "urgent and unforeseen" investment – we are not convinced that TNSPs can be relied upon to make unbiased judgements in regard to DM opportunities under such circumstances. Light-handed regulation should still ensure that the objectives of the regulation are being met – in this case, efficiency in the interests of consumers. Businesses specialising in DM provision and/or aggregation are relatively recent and currently few in number. Arrangements to set up these alternatives may be complex in terms of the number of parties involved. Such factors work to the disadvantage of DM proponents when in competition with massive TNSPs that have huge budgets and many personnel, as well as a longer history of dealing with electricity planning.

For similar reasons TEC is also not convinced that replacement and reconfiguration are appropriate for exemption [(e)(3)] – they could instead act as an impetus to review the

overall efficiency of that section of the system. It could be found that redundancies are available, or alternative non-network solutions. There is no other tool within the Rules to our knowledge which impels TNSPs to review overall efficiency, and the emphasis continues to be on augmentation or replacement.

3.3.3 Definitions

In regard to the definitions, please note:

> **"Credible option"**: We support this concept, and we also support the move away from a defined, single proponent. Many DM initiatives may not be apparent until the opportunity is sought out. We also support the development by the AER of definitions for "credible options" and methodologies to apply.
>
> **"Identified need"**: Investment by TNSPs in DM opportunities must be allowed where they are effective in providing general benefits to the long term interests of consumers (including reduced greenhouse emissions), rather than simply in relation to forecast constraints or as "investment to the transmission network".
>
> **"Preferred option"**: the emphasis on "net economic benefit" throughout these Rules undermines the intent to meet the long term interests of consumers, reliability standards and demand side opportunities. It should stand as "net benefits", since there are many references in the Rules to other benefits which may not be purely economic but serve other consumer interests. "Least cost" and "net present value" are not the only lenses through which to assess efficiency and consumers' interests, which are not solely price-based.

3.3.4 Project reporting

It is essential that the principles and procedures underlying TNSPs' decisions are transparent. It is also essential that they receive assistance in their decision making in light of the regulatory changes ahead. Therefore, TEC supports the concepts of specification consultation reports, assessment draft reports and assessment conclusion reports. We consider these mechanisms would be very helpful for all interested parties, both in assessing alternatives and for awareness of the steps by which decisions are reached.

However, we consider that assessment of demand side and non-network alternatives and potential carbon costs should be given greater emphasis in these reports, and these should be spelt out explicitly as **requirements** for the information to be presented. In addition, due to the complexity and barriers to competition for non-network solutions, it is critical to ensure that sufficient time is allowed for proponents of these solutions to develop a case. Anecdotal evidence from DM businesses suggests that it can be considerably more time-consuming to assemble a proposal for these solutions when compared to the time scale in which a TNSP can put together a network solution. We are therefore disappointed that the consultation period for the "project specification consultation report" has been reduced to 12 weeks (Cl h). In our previous submission we recommended a lengthening of time, not a reduction – 26 weeks should be the absolute minimum, since these are investments which are many years in the planning, and moreover the TNSP is allowed to take 12 months to prepare their draft report (Cl i).

The details and timing of the "project assessment draft report" seem appropriate and inclusive, although the 4 week period in (m) and (n) is too short – it should be at least 6 weeks (the period the AEMC tends to use for its consultation purposes).

3.3.5 Disputes

It would be helpful if a definition of "interested parties" were developed. Would that include, for instance, non-government organisations; or does it only refer to registered market participants?

3.3.6 Specific amendments

We have reworked some of our recommendations put forward in the Rule change package (section 4.11) to take account of the new phrasing proposed in the Draft report in Appendix D. Our proposed changes to the suggested wording for the Rules are in bold; we have only included sections where simple changes could be made and our comments above should be considered as complementary to these amendments.

Changes to 5.6.5B Regulatory investment test for Transmission

(b) The purpose of the *regulatory test* is to **first** identify ***demand side*, then other non-*network solutions*** **before any other feasible option that maximises** the long term **benefits to consumers.**

(d) The *regulatory investment test* must:

> (1) be based on a cost-benefit analysis that is to include an assessment of reasonable scenarios of future supply and demand were each ***demand side*** **or other** ***credible option*** to take place compared to the situation of no *transmission investment* options taking place;

(i) A *Transmission Network Service Provider* must consider all genuine and practicable possible ***demand side,*** **non-*network*** **and** *transmission investment* options that could reasonably be classified as *credible options*, taking into account, without bias:

> (1) the pass-through of **cost-reflective pricing and locational price;**
>
> (2) energy source;
>
> (3) technology;
>
> (4) ownership;
>
> (5) the extent to which the ***demand side*** **or other** *credible option* enables *intra-regional* or *inter-regional* trading of electricity;
>
> (6) whether it is a ***demand side*, non-*network*** **or** ***network*** option;
>
> (7) whether the ***demand side,*** **non-*network*** **or other** *credible option* is intended to be regulated;

(8) whether the ***demand side,*** **non*-network* or other** *credible option* has a viable proponent; or

(9) any other factor ...

Change 5.6.6 (c) (4) to:

(4) a detailed description of all *credible options* that address the *identified need*, which may include, without limitation, **demand side management**, **cost-reflective pricing (including dynamic pricing) and** locational pricing, **the substitution of demand for electricity by the provision of alternative forms of energy**, alternative *transmission* options, *interconnectors*, *generation*, *market network services*, or other *network* options.