ELECTRICITY TRANSMISSION NETWORK owners

# TEC Rule Change Proposal – Demand Management

## ETNOF Response to AEMC Consultation

1 February 2008

TransGrid ElectraNet electricity transmission Powerlink TRANSEND SP AusNet

**ETNOF Submission - TEC Rule Change Proposal**

**Demand Management**

## 1. Introduction and Overview

The Australian Energy Market Commission (AEMC) has commenced the Rule change process and initial consultation in respect of Rule changes relating to demand side management (DM) proposed by Total Environment Centre (TEC). The Electricity Transmission Network Owners Forum ("ETNOF")[1] welcomes the opportunity to lodge this submission in relation to TEC's Rule change proposal.

ETNOF notes that TEC adopts the following definition of DM[2]:

> "Demand management in this proposal 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 with the greatest cost-efficiency. It includes a diverse array of activities that meet energy needs, including cogeneration, standby generation, fuel switching, interruptible customer contracts, and other load-shifting mechanisms."

This definition is much broader than the usual meaning of "demand management" because it includes some supply-side solutions. However, TEC's definition is not as broad as 'non-network alternatives' as presently defined in the Rules, as the latter would also include services procured from remote generators. For ease of exposition, this submission uses TEC's definition of "DM" and the meaning given in the Rules to "non-network alternatives" interchangeably.

TEC's principal rationale for its proposed Rule changes is summarised in its covering letter as follows[3]:

> "To counter the strong bias of networks towards inefficient augmentation, it is essential that cost-effective DM is the priority consideration for meeting energy demands *before* other options are considered. In this way, the market can truly serve the long-term interests of consumers through harnessing maximum efficiency."

Whilst ETNOF is supportive of DM solutions, it does not accept TEC's view that TNSPs have an incentive to over-invest in network solutions. In fact, the recently finalised Chapter 6A Rules provide incentives for TNSPs to deliver capital and operating expenditure efficiencies, subject to satisfying network performance requirements. A revenue cap form of control provides a natural incentive to implement non-network solutions to address an identified network need where it is more cost-effective to do so. In addition, the Rules presently contain appropriate provisions that require TNSPs to examine non-network solutions and to publicly disclose detailed information regarding opportunities for the development of non-network solutions.

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1 ETNOF members are: ElectraNet Pty Limited, Powerlink Queensland, SP AusNet, Transend Networks and TransGrid.

2 TEC, Rule Change Proposal, 6 November 2007, page 1, footnote 1.

3 TEC, Rule Change Proposal, 6 November 2007, page 1.

More generally, TEC's proposal document contains a significant number of factual errors and unsubstantiated claims. In particular:

> "There is a common perception that networks do consider alternatives to network augmentation when these can provide the relevant services at a lower cost, but this is not borne out by an examination of the Rules themselves or in practice." [4]
>
> "The overarching problem is that DM (otherwise referred to in the Rules as "non-network solutions") is virtually ignored within the Rules." [5]
>
> "In theory, under the current arrangements demand and supply should be treated equally within the NEM, but this is not the case." [6]
>
> "It is necessary to prioritise DM activities to ensure they are prioritised, properly investigated and integrated into revenue determinations." [7]
>
> "The provisions for the Regulatory Test do not include demand side options as a necessity in any assessment of costs or benefits. For instance, Clause 5.6.5A(c)(8) states that alternative options "may include … demand side management …" (our emphasis). This does not represent the requirement or even encouragement to investigate more efficient solutions, but rather allows the network service provider to consider them on their own, without transparency and without reference to any objective methodology, and only if it chooses to do so." [8]
>
> "In practice, transmission networks rarely consider DM solutions to network constraints properly or thoroughly. 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." [9]

As a result of these incorrect and unsubstantiated propositions, a substantial majority of TEC's proposed Rule changes have no foundation, are inappropriate and are therefore not supported by ETNOF.

The remainder of this submission explains ETNOF's views in more detail and is structured as follows:

- Section 2 discusses the National Electricity Objective and its rationale;
- Section 3 explains the existing Regulatory Test and how it ensures that DM solutions are assessed on an equitable basis alongside other potential solutions to emerging network constraints;
- Section 4 sets out ETNOF's detailed response to TEC's proposed Rule changes; and
- Section 5 provides concluding comments.

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4 TEC, Rule Change Proposal, 6 November 2007, page 8

5 TEC, Rule Change Proposal, 6 November 2007, page 11.

6 TEC, Rule Change Proposal, 6 November 2007, page 13.

7 TEC, Rule Change Proposal, 6 November 2007, page 34.

8 TEC, Rule Change Proposal, 6 November 2007, page 40.

9 TEC, Rule Change Proposal, 6 November 2007, page 40.

## 2. The National Electricity Objective

The AEMC's *Guidelines for making written submissions on Rule change proposals* explain that in deciding whether or not to change the National Electricity Rules, the AEMC must apply a Rule-making "test". This means that the AEMC must be satisfied that the change is likely to contribute to achievement of the National Electricity Objective as set out in the National Electricity Law (NEL), which states:

> "The objective of this Law is to promote efficient investment in, and efficient use of, electricity services for the long term interests of consumers of electricity with respect to price, quality, reliability and security of supply of electricity and the reliability, safety and security of the national electricity system."

It is self-evident from the Rule-making test that the AEMC must apply the National Electricity Objective <u>as currently drafted</u>. ETNOF notes that TEC advocates changes to the existing National Electricity Objective[10]:

> "The insertion of a demand management objective in the National Electricity Law would be a significant fix for the DM problem at source. To this end, TEC and a range of community groups and the Clean Energy Council strongly advocate for insertion of demand management, environmental and social objectives in the National Electricity Law. TEC will continue to advocate for the inclusion for these objectives in the National Electricity Law."

TEC's continuing advocacy for the inclusion of environmental and social objectives in the NEL fails to recognise that this is a policy issue that has previously been examined and rejected by the Ministerial Council on Energy[11]:

> "The purpose of the NEL framework is to guide economic regulation, which should be guided by a unified objective of efficiency that is in the long-term interests of consumers. Environmental and social objectives are best dealt with through other legislative instruments and policies."

It would be reasonable to infer from TEC's statement that its proposed Rule changes seek, in part, to revisit the policy decision by the MCE to exclude social and environmental objectives from the NEL. TEC's comment that the "*insertion of a demand management objective in the National Electricity Law would be a significant fix for the DM problem at source*" further illustrates that its Rule change proposal may be addressing matters of policy and approach, rather than being properly aimed at contributing to achievement of the National Electricity Objective as presently enacted.

As noted in section 1 of this submission, a key driver for the proposed Rule changes is TEC's view that:

> "… it is essential that cost-effective DM is the priority consideration for meeting energy demands *before* other options are considered. In this way, the market can truly serve the long-term interests of consumers through harnessing maximum efficiency."

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[10] TEC, Rule Change Proposal, 6 November 2007, page 2.

[11] Energy Market Reform Bulletin No. 85 MCE SCO Response to Submissions on the Draft of the National Electricity Law (Amendments) and AEMC Rule-change process (April 2007), Table 1, item 8.

In contrast to TEC's view, ETNOF submits that proposed Rule changes which provide for priority consideration of DM solutions are inconsistent with the National Electricity Objective. This is because the National Electricity Objective is focused on promoting efficient investment in, and efficient use of, electricity services for the long term interests of consumers of electricity. In this regard, efficient investment can only be promoted if prospective solutions for meeting consumers' needs are considered on an equal footing. By giving priority to a particular type of solution, other potentially more efficient solutions - in terms of price, quality and reliability - are automatically treated as secondary, inferior solutions.

It is therefore axiomatic that where TEC has proposed Rule changes that give priority to DM solutions, these changes are inconsistent with the National Electricity Objective. The following TEC proposed Rule changes are substantially affected by this consideration:

- Transmission Network Planning, proposed changes to clause 5.6.2[12];
- Annual Planning Reports (APRs), proposed changes to clause 5.6.2A and inserted new clause thereafter[13]; and
- Regulatory Test, proposed changes to 5.6.5A[14].

## 3. Current Rules Provisions Regarding the Regulatory Test

TEC's Rule change proposal contains a number of assertions regarding the extent to which the current Rules are perceived by TEC to favour network solutions compared to non-network or DM solutions. For instance, TEC claims that[15]:

> "The overarching problem is that DM (otherwise referred to in the Rules as "non-network solutions") is virtually ignored within the Rules."

TEC's claim is inaccurate. TEC's proposal document itself (on pages 11 and 12) identifies numerous existing Rules provisions where non-network or DM solutions are addressed. A further concern is that TEC has misinterpreted or misrepresented the Regulatory Test provisions in the current Rules by stating that[16]:

> "The provisions for the Regulatory Test do not include demand side options as a necessity in any assessment of costs or benefits. For instance, Clause 5.6.5A(c)(8) states that alternative options "may include … demand side management …" (our emphasis). This does not represent the requirement or even encouragement to investigate more efficient solutions, but rather allows the network service provider to consider them on their own, without transparency and without reference to any objective methodology, and only if it chooses to do so."

12 TEC, Rule Change Proposal, 6 November 2007, pages 20-23.

13 TEC, Rule Change Proposal, 6 November 2007, pages 24-29.

14 TEC, Rule Change Proposal, 6 November 2007, pages 40-42.

15 TEC, Rule Change Proposal, 6 November 2007, page 11.

16 TEC, Rule Change Proposal, 6 November 2007, page 40.

Contrary to TEC's claim, clause 5.6.5A(b) of the Rules state that:

> "the purpose of the *regulatory test* is to identify *new network investments* or non-*network* alternative options that:
>
> (1) maximise the net economic benefit to all those who produce, consume and transport electricity in the *market*; or
>
> (2) in the event the option is necessitated to meet the service standards linked to the technical requirements of schedule 5.1 or in *applicable regulatory instruments*, minimise the present value of the costs of meeting those requirements."

Again, contrary to TEC's claim, the required purpose of the Regulatory Test is to identify network or non-network options that maximise the net economic benefit. In this regard, clause 5.6.5A(c)(3) states that the Regulatory Test <u>must</u> (emphasis added below):

> "ensure that the identification of the likely alternative option referred to in subparagraph (1) is informed by a consideration of all genuine and practicable alternative options to the proposed *new network investment* <u>without bias</u> regarding:
>
> (i) energy source;
>
> (ii) technology;
>
> (iii) ownership;
>
> (iv) the extent to which the *new network investment* or the non-*network* alternative enables *intra-regional* or *inter-regional* trading of electricity;
>
> (v) <u>whether it is a *network* or non-*network* alternative;</u>
>
> (vi) whether the *new network investment* or non-*network* alternative is intended to be regulated; or
>
> (vii) any other factor."

The Regulatory Test provisions also require TNSPs to take an active role in seeking alternative options to potential new large transmission network assets. In particular, clause 5.6.5A(c)(4) requires the network service provider to publish:

> (i) a request for information as to the identity and detail of alternative options to the potential *new large transmission network asset*; and
>
> (ii) details of the proposed *new large transmission network asset*.

Therefore, it is a Rules requirement that a TNSP must actively consider non-network options in an unbiased manner and must also publish information so as to encourage proponents of such solutions to come forward. Furthermore, clause 5.6.6(c) states that:

> "The applicant must make available to all *Registered Participants* and *NEMMCO* a notice (the application notice) which sets out, in relation to a proposed *new large transmission network asset*:
>
> (1) a detailed description of:

(i) the proposed asset;

(ii) the reasons for proposing to establish the asset (including, where applicable, the actual or potential *constraint* or inability to meet the *network* performance requirements set out in schedule 5.1 or relevant legislation or regulations of a *participating jurisdiction*, including *load* forecasts and all assumptions used); and

(iii) all other reasonable *network* and non-*network* alternatives to address the identified *constraint* or inability to meet the *network* performance requirements identified in clause 5.6.6(c)(1)(ii). These alternatives include, but are not limited to, *interconnectors*, *generation* options, demand side options, *market network service* options and options involving other *transmission* and *distribution networks*."

It should also be noted that 5.6.6(j) allows *Registered Participants*, the *AEMC*, *Connection Applicants*, *Intending Participants*, *NEMMCO* and other *interested parties* to dispute a TNSP's Regulatory Test analysis. Therefore, the Regulatory Test analysis could be disputed by a DM proponent or other interested parties if it is considered to be contrary to the Rules requirements.

In light of the existing Rules provisions, TEC cannot reasonably claim that "*the provisions for the Regulatory Test do not include demand side options as a necessity in any assessment of costs or benefits*." Not only are non-network solutions required to be addressed, interested parties are able to examine and dispute the Regulatory Test analysis if they so wish.

ETNOF also notes TEC's comment that[17]:

> "In practice, transmission networks rarely consider DM solutions to network constraints properly or thoroughly. 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."

This statement is inaccurate. In particular, NEMMCO publishes on its webpage the TNSPs' Regulatory Test analyses in accordance with clause 5.6.6A of the Rules. It is evident from these published reports that TNSPs properly consider DM solutions in accordance with the Rules. For example, Powerlink's summary of its Final Report for Maintaining a Reliable Electricity Supply to South Eastern Queensland, explained that[18]:

> "Powerlink issued a Request for Information (RFI) document to Registered Participants and interested parties in September 2006, which invited submissions from potential non-network solution providers to address Southern Queensland's future supply requirements by late 2008. The Southern Queensland area that was the focus of that document is broader than the South Eastern Queensland area considered in this document and was defined as the area from Bundaberg to the Gold Coast and west to Toowoomba and the Darling Downs. No material submissions were received from potential providers of non-network solutions. There were no proposed demand side options, either from individual providers or aggregators."

[17] TEC, Rule Change Proposal, 6 November 2007, page 40.

[18] Powerlink, Summary of Final Report, Maintaining a Reliable Electricity Supply to South Eastern Queensland, 22 June 2007, page 1.

Similarly, in its Summary of Final Report: Waddamana-Lindisfarne 220kV, Transend commented that[19]:

> "In relation to the question of the viability of demand side management as an option, Transend notes that over the past three or so years it has actively sought demand side management alternatives to network support and augmentation. Given that no viable expressions of interest have been obtained from potential providers of demand side services in response to Expression of Interest processes conducted in 2004 and 2006, Transend considers it is reasonable to rule out demand side management as an alternative option for the purpose of the regulatory test in this instance."

In relation to the Waddamana-Lindisfarne 220kV, it is noteworthy that although Transend did not identify any demand side management options, it did examine a thermal generation investment alternative involving installation of up to four 75 MW open-cycle gas turbines (OCGT) and/or a 225 MW combined-cycle gas turbine (CCGT) located at Bridgewater. Against 5 of the 6 scenarios examined in its Final Report, Transend found that network solutions provided higher net market benefits than the generation investment alternatives.

It should also be noted that the Regulatory Test consultation process is the final stage of publicly available information which can be used by non-network solution providers. Information is also provided much earlier through the Annual Planning Reports, specifically aimed at providing appropriate lead times for proponents of alternative solutions to develop proposals. This is discussed further in section 4.2.

ETNOF's view is that the limited application of DM solutions reflects the comparative economics of network and non-network options, rather than a bias in the drafting or application of the Rules towards network investment. In particular, there are a number of practical and commercial limitations, which can frequently compromise the efficacy of DM solutions:

- TNSPs have unlimited liability if found negligent for loss of supply, so the appropriate allocation of risk to DM service providers is a threshold issue for TNSPs. In many instances, however, DM service providers will not accept appropriate liability for non-performance;

- DM solutions may not be sufficiently reliable or response times may be inadequate, especially in relation to demand-side reduction;

- DM solutions may be insufficient to address significant demand issues on transmission networks, including the expected growth in demand; and

- large customers often find that demand side management is financially unattractive given the resulting loss of flexibility in plant operations.

In summary, ETNOF has provided information and analysis above to demonstrate that:

- the Rules require TNSPs to actively consider non-network options in an unbiased manner and to publish information so as to encourage proponents of such solutions to come forward;

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19 Transend, Summary of Final Report, Waddamana-Lindisfarne 220kV, 27 August 2007.

- the Rules contain provisions that enable any interested party to dispute a Regulatory Test analysis undertaken by a TNSP; and

- TNSPs properly consider non-network solutions in accordance with the Rules requirements.

The AEMC should therefore reject the proposed Rule changes as they are based upon inaccurate and unfounded claims regarding the existing arrangements. ETNOF's view is that the current arrangements already provide for a comprehensive assessment of non-network options.

## 4. Detailed Response to TEC's Proposed Rule Changes

This section comments in detail on each category of Rule changes proposed by TEC, namely:

- transmission network planning;
- Annual Planning Reports;
- DM Incentives;
- financial cover for DM investments;
- revenue determinations;
- acknowledgment of modest DM expenditure;
- prudency review;
- the Regulatory Test; and
- short-term and long-term price for DM.

### 4.1 Transmission Network Planning

#### *4.1.1. Overview of TEC's Proposed Rule Changes*

TEC claims that its proposed Rule changes in relation to transmission network planning are designed to ensure that networks thoroughly consider DM solutions before network augmentation alternatives and, therefore, that DM is implemented when it is more cost-effective than augmentation. TEC also claims that the changes are designed to take the perceived bias towards augmentation out of the language of the Rules.

TEC's proposed changes would essentially require DM options to be preferred ahead of potentially more efficient network solutions, and that network solutions would only be considered as a 'fall-back'. TEC recognises this outcome in the following note to the proposed Rule changes:

> "We recognise that these changes affect the augmentation steps including and following existing Rule 5.6.2 (i). The AEMC will need to amend Rules 5.6.2 (i) and those following to reflect two possible planning pathways. Firstly, the Rules should assume that a demand side option is proposed and then recommended. Secondly, should all cost-effective DM solutions be

> exhausted, the Rules would need to outline the 'fall-back' process for the assessment and implementation of augmentation alternatives."

ETNOF also notes that the proposed Rule changes would affect transmission and distribution networks, even though the title of the Rule change only refers to transmission network planning.

#### *4.1.2. ETNOF Response*

ETNOF strongly disagrees with TEC's view that there are weaknesses in the existing Rules that need to be addressed. As noted earlier, the Rules already require TNSPs to take account of non-network solutions in considering options to address identified network limitations. Therefore, TEC's proposal is based on a false premise that the Rules do not contain sufficient requirements in relation to examining non-network options. On this basis alone, the proposed Rule changes should be rejected by the AEMC.

Notwithstanding the numerous factual errors in TEC's proposal, ETNOF believes that the proposed Rule change is inconsistent with the National Electricity Objective. As noted in section 2, the National Electricity Objective is focused on promoting efficient investment in, and efficient use of, electricity services for the long-term interests of consumers of electricity. In this regard, efficient investment can only be promoted if prospective solutions for meeting consumers' needs are considered on an equal footing. By giving priority to a particular type of solution, other potentially more efficient solutions - in terms of price, quality and reliability - are automatically treated as secondary, inferior solutions.

In contrast to the requirements of the National Electricity Objective, TEC's Rule change proposal would effectively give priority to DM solutions. In doing so, it is much less likely to promote efficient investment in electricity services for the long-term interests of consumers of electricity. It is clear that giving priority to DM solutions would fail to maximise net market benefits where a network solution would provide a more efficient solution in terms of cost and reliability.

In summary, ETNOF does not support TEC's proposed Rule change as:

- it is based on a factually incorrect premise that the current Rules are inadequate; and

- the nature of the proposal is in conflict with the requirements of the National Electricity Objective as the proposal would fail to promote efficient investment in all cases.

### 4.2 Annual Planning Reports

#### *4.2.1. Overview of TEC's Proposed Rule Changes*

TEC argues that transmission networks should be required to publish robust data on emerging constraints that are relevant and useful to DM service providers. In TEC's view, this would serve to inform the DM market of upcoming opportunities and enable it to respond to these in a timely manner. TEC comments that[20]:

[20] TEC, Rule Change Proposal, 6 November 2007, page 25.

> "Regulators and consumers must be able to ascertain if networks are utilising an adequate level of DM in order to determine whether or not networks are operating efficiently. The Rules should require that Annual Planning Reports include:
>
> - detailed information about the current and future capacity of the transmission network; and
>
> - current projected demand and possible options to address any emerging constraints."

TEC's proposed Rule changes would have the effect of requiring TNSPs to publish additional information regarding constraints, and also to provide a statement on whether a Request for Proposal (RFP) is to be issued for DM solutions. TNSPs would also be required to provide information on how they intend to inform and test the market for DM solutions. Additional changes are also proposed to give priority to DM solutions.

#### *4.2.2. ETNOF Response*

TEC's proposed Rule changes are based on two incorrect propositions:

- firstly, that the APR does not contain sufficient information to enable DM service providers to offer solutions; and

- secondly, that it is appropriate for the Australian Energy Regulator to conduct ex-post prudency reviews to check that efficient levels of DM have been adopted.

Each of these matters is discussed in turn below.

Contrary to TEC's views, the Rules already require TNSPs to provide a comprehensive assessment of emerging constraints and prospective network developments in their Annual Planning Reports. Emerging network limitations are identified through the APR for 1, 3, and 5 years into the future, thereby allowing DM service providers sufficient time to develop firm proposals. Therefore, the APRs already provide DM service providers with substantial information regarding the likely need for and location of DM services well in advance of the actual need.

In addition to the forward notice provided through the APR process, TNSPs are also required to consider potential non-network alternatives in relation to new large transmission augmentations as a last step before committing to any such investments. This process is generally undertaken some two years or so prior to when the need must be met as an appropriate construction period must be allowed for to enable TNSPs to meet their regulatory and other obligations. Many TNSPs publish RFI documents specifically to provide additional, detailed information on the emerging limitations, and to enlist a response from potential non-network solution providers.

For clarity, ETNOF also notes that TNSPs currently incorporate all known/advised DM initiatives into the demand and energy forecasts underpinning the APR and other Regulatory Test documents.

One of the changes to the APR proposed by TEC included additional requirements in relation to DM aggregation. ETNOF notes that aggregation at a transmission level has important practical considerations for power system operation. In a situation where the demand-supply balance is tight, operation centres cannot call on large number of small DM providers. Such arrangements would increase system security risk at critical times. DM aggregators have an important role here in providing large enough 'chunks' of DM to be useful and that can be relied upon and verified for payment purposes.

In general, however, DNSPs are better placed to facilitate DM aggregation because of the direct interaction with energy users and the extensive data they have on their customer base and consumption patterns. The impact of DM aggregation at a distribution level is automatically taken into account by TNSPs through the bulk supply point load forecasts provided by distributors that, in turn, inform the TNSP planning processes. It is questionable, therefore, whether including specific requirements on TNSPs to address DM aggregation serves any practical purpose and may, in fact, confuse the respective roles of DNSPs and TNSPs.

As noted above, TEC's proposed Rule change is also based on the premise that it is appropriate for the AER to conduct ex-post prudency reviews to determine whether TNSPs have adopted efficient levels of DM solutions. The AEMC has previously examined the efficacy of such reviews as part of its Chapter 6 Review of the Rules and decided to remove ex-post reviews of capital expenditure from the regulatory arrangements. A more detailed discussion of this issue is provided in section 4.7 below.

Notwithstanding the important issues regarding ex-post reviews, ETNOF considers that the APR is not an appropriate vehicle for regulators and consumers to "ascertain if networks are utilising an adequate level of DM in order to determine whether or not networks are operating efficiently." As a matter of logic it is not possible to ascertain from a forward-looking planning report whether the existing level of DM is efficient. The question of whether DM options are being properly considered is a matter for the Regulatory Test process. This matter is reviewed in detail by the AER and its consultants as part of a TNSP's revenue reset and by interested parties and market participants through the consultation process.

In summary, ETNOF does not believe that TEC has demonstrated the need for its proposed Rule changes in relation to the APRs. TEC's proposed Rule changes are also based on incorrect propositions. Consequently, the AEMC should reject the proposed Rule changes.

## 4.3 DM Incentive

### *4.3.1. Overview of TEC's proposed Rule Changes*

TEC contends that TNSPs consistently overlook or ignore DM when considering how to respond to demand growth. In TEC's view, this is partly caused by the failure of the Rules to provide adequate incentives for TNSPs to adopt DM solutions. TEC argues that transmission networks currently have "massive financial incentives" to augment their asset bases, whilst for DM there is no such incentive.

To address its concerns, TEC's proposed Rule changes would require the AER to develop a DM incentive scheme to provide incentives to TNSPs to reduce load and peak demand on the transmission network. Specifically, TEC proposes that the scheme would provide incentives for each TNSP to:

(i) reduce demand on the *transmission system* that is owned, controlled or operated by it at all times when the *transmission system* is forecast to be constrained within 10 years; and

(ii) reduce peak demand on the *transmission system* that is owned, controlled or operated by it at all times when the *transmission system* is expected to experience critical peak demand.

#### *4.3.2. ETNOF Response*

ETNOF does not accept that there is a “massive financial incentive” for TNSPs to invest in network solutions. In fact, the regulatory framework established by the Chapter 6A Rules includes a number of incentive mechanisms that are designed to provide appropriate incentives for efficient network investment, operation and service performance. The AEMC described its approach to establishing the Chapter 6A Rules as follows[21]:

> “The Commission’s framework for economic regulation as codified in the Revenue Rule seeks to provide a range of incentive mechanisms that work harmoniously together to provide an overall suit of incentive properties that deliver efficient and desired production and service outcomes. The component parts of the Commission’s incentive framework include incentives for:
>
> - efficient capital expenditure;
> - efficient operating expenditure;
> - maintaining service standards; and
> - management of uncertain project costs or timing.”

In light of the detailed work and extensive consultation process undertaken by the AEMC in developing the Chapter 6A Rules, it is highly unlikely that its incentive properties are askew and in need of immediate revision. As noted in section 1 of this submission, a revenue cap form of control provides a natural incentive for TNSPs to adopt the most efficient solutions to address an identified network need. In doing so, TNSPs are able to retain the difference between any potential capex spend on a network solution and the cost of implementing the non-network solution. A less powerful incentive to adopt non-network solutions exists under other forms of price control where the allowed revenue within a regulatory period is a function of actual sales volumes.

Whilst ETNOF does not accept TEC’s reasoning in support of a DM mechanism, ETNOF is sympathetic to the view that stronger financial incentives could be introduced to encourage DM solutions. The incentive mechanism proposed by TEC would provide incentives to reduce load and peak demand at critical points of the network and at critical times. ETNOF has some concerns with this type of mechanism because it may place too much emphasis on load and peak demand forecasting, rather than providing more direct incentives to adopt DM measures.

Nevertheless, ETNOF considers that incentive mechanisms are to be preferred to administrative reviews. ETNOF also notes that incentive mechanisms can work in isolation from the Regulatory Test process (much like the S-factor service incentive mechanism) and thereby ensure that investment appraisal is not systematically tilted in favour of DM solutions (or any other solution for that matter). As previously noted, ETNOF believes that changes to the Regulatory Test to give priority to DM solutions would be contrary to the National Electricity Objective.

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[21] AEMC, Rule Determination, National Electricity Amendment (Economic Regulation of Transmission Services) Rule 2006 No.18, 16 November 2006, page 94.

As discussed in section 2, any decision to encourage DM further through an additional incentive mechanism is ultimately, a matter for the AEMC, and must be consistent with the National Electricity Objective.

## 4.4 Financial Cover for DM investments

### *4.4.1. Overview of TEC's Proposed Rule Changes*

TEC argues that although Chapter 6A provides extensive detail on the recovery of expenditure on the transmission networks' regulated asset base, there is scant detail on how a transmission network is to recover either operating or capital expenditure on demand side activities. In terms of a solution, TEC comments that:

- the circumstances in which transmission networks can recover expenditure on demand side activities needs to be clearly specified; and
- transmission networks must be able to include a return of and return on DM expenditure, including recognition of the opex/capex trade-off that DM activities often entail and the implications of this for network revenue.

It is noted that the meaning of the second dot point is not clear, however, the matters raised in it do not appear to have been fully reflected in TEC's proposed Rule changes.

### *4.4.2. ETNOF Response*

ETNOF agrees with TEC that greater clarity could be provided in the Chapter 6A Rules regarding the recovery of DM costs. In particular, the Rules could be clearer that the costs of non-network solutions can be included in a TNSP's Revenue Proposal. (It is noted that the costs of non-network solutions can be recovered by a TNSP through the *network support pass through* provisions contained in clause 6A.7.2 and the definition of *network support,* which is in Chapter 10 of the Rules). While ETNOF notes that 'non-network' solutions are not specifically mentioned in Chapter 6A, such solutions can reasonably be expected to be put forward to meet the operating expenditure or capital expenditure objectives in the Rules.

It is questionable, however, whether TEC's proposed changes would materially improve the current drafting. For example, TEC proposes a new clause to be inserted after 6A2.2(4), which would require a TNSP's transmission determination to include:

> (5) a determination that specifies the circumstances under which a Transmission Network Service Providers is able to recover operating and capital expenditure on *demand side* activities.

This drafting alone[22] would not clarify the current arrangements, and could create additional uncertainty. Notwithstanding this concern, ETNOF is generally supportive of appropriate Rule changes that would clarify the arrangements for recovering the costs of non-network solutions.

[22] It is noted that further drafting is suggested by TEC under "Revenue Determination", which is discussed next in this submission.

## 4.5 Revenue Determinations

### *4.5.1. Overview of TEC's Proposed Rule Changes*

TEC's rationale for these proposed Rule changes is not explained clearly. ETNOF notes that the proposed changes do not align with TEC's description of "the problem" and "the solution", the latter being described as follows[23]:

> "It is necessary to prioritise DM activities to ensure they are prioritised, properly investigated and integrated into revenue determinations."

However, TEC's intention appears to be to give better recognition of DM solutions in revenue determinations. For example, by making it clear that the costs of non-network solutions can be included in operating and/or capital expenditure forecasts.

### *4.5.2. ETNOF Response*

As previously noted, ETNOF cannot support Rule changes that give priority to DM solutions. Such an approach is contrary to the National Electricity Objective. However, it appears that the proposed Rule changes are actually focused on ensuring that the arrangements for TNSPs to recover DM costs are clearly described in Chapter 6A. As noted above, ETNOF is generally supportive of appropriate Rule changes that would further clarify the arrangements for recovering the costs of non-network solutions.

## 4.6 Acknowledgment of Modest DM Expenditure

### *4.6.1. Overview of TEC's Proposed Rule Changes*

TEC claims that a major barrier to the implementation of DM by networks is related to the contention that networks are unable to recover expenditure on modest DM investments. This proposed Rule change is intended to ensure that small scale DM applications are considered even if deferral of network solutions is for a period of less than 12 months.

### *4.6.2. ETNOF Response*

As a matter of principle, ETNOF agrees that small scale DM solutions can provide broader network benefits. There is no reason in principle that prevents small scale DM solutions from deferring transmission augmentations for relatively short periods of time. Such solutions are generally implemented at the distribution level and are taken into account at the transmission level by means of the demand and energy forecasts from distributors. For example:

> "Powerlink's demand and energy forecasts include all existing and foreseen DSM initiatives incorporated in ENERGEX's load forecast for the South West Brisbane Area. These initiatives, which include routine hot water switching activities, are therefore already being used to defer augmentations for as long as practical[24]."

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23 TEC, Rule Change Proposal, 6 November 2007, page 34.

24 Final Report - Proposed New Large Network Assets South West Brisbane Area, Powerlink Queensland and Energex Limited Joint Report, 17-Dec-2004.

From a transmission planning perspective, however, it is often impractical to consider DM solutions on the transmission network that defer the need for augmentation for periods of only a few months. It is likely that the transaction costs of such an approach would outweigh any other cost savings. Moreover, the timing of demand-driven augmentations is generally determined by (seasonal) temperature-sensitive peak loads, so there is likely to be very little benefit attributable to the deferral of demand-driven augmentation for a few months.

In light of these observations, ETNOF does not support this proposed Rule change as it fails to recognise that DM initiatives involving modest expenditure are much more likely to occur on the distribution network and would be reflected in the distributor's load forecasts. As noted above, distributors' load forecasts are a key consideration in a TNSP's investment planning process.

## 4.7 Prudency Review

### *4.7.1. Overview of TEC's Proposed Rule Changes*

TEC's proposed Rule changes would require a prudency review to be conducted into whether the TNSP undertook or procured an efficient level of demand side activities so as to avoid undertaking inefficient capital expenditure and to achieve the lowest sustainable cost of delivering the prescribed transmission services. To achieve this, the proposed Rule change would require the AER to develop a methodology to determine the efficient level of demand side activities.

### *4.7.2. ETNOF Response*

The practicability and effectiveness of using ex-post optimisation as a mechanism for encouraging efficient investment was examined in detail by the ACCC in finalising its *Statement of Regulatory Principles* in 2003/04, and more recently by the AEMC in the development of Chapter 6A. In relation to the transmission revenue rules, the AEMC noted that[25]:

> "A key mechanism for managing the investment risk for TNSPs was to 'lock-in' and roll forward the RAB from one regulatory period to the next. This aimed to give greater security to investors in the transmission system that their investments would be treated in an appropriate way over time. More specifically, the RAB would not be subject to optimisation at regulatory resets to reflect the economic value of the assets to users, which would otherwise present a significant risk to investors."

The AEMC decided to remove the arrangements for ex-post reviews, focussing instead on improving ex-ante incentives. This position is also consistent with the AER's *Statement of Regulatory Principles*.

The use of ex-post optimisation in the manner suggested by the TEC is inconsistent with the position adopted by the AEMC in relation to this matter.

[25] AEMC, Rule Determination, National Electricity Amendment (Economic Regulation of Transmission Services) Rule 2006 No.18, 16 November 2006, page 98.

### 4.8 Regulatory Test

TEC's proposed Rule changes in relation to the Regulatory Test have been discussed at length in section 3 of this submission. In a number of important respects, TEC's proposed Rule changes are based on factual errors regarding the current Rules requirements. Furthermore, the nature of the proposed Rule changes is contrary to the requirements of the National Electricity Objective as they would have the effect of giving priority to DM solutions. For the reasons outlined in section 3 of this submission, and reiterated in section 4.1.2, giving priority to DM solutions would lead to less efficient outcomes for consumers where more efficient solutions are foregone because of a requirement to give priority to DM solutions. Therefore, the AEMC should reject the proposed Rule changes.

### 4.9 Short-Term and Long-Term Price for DM

*4.9.1. Overview of TEC's Proposed Rule Changes*

TEC argues that setting a price for DM in the market pool will encourage greater investment in DM and facilitate growth of DM aggregation as a market commodity. The TEC proposed Rule change would require NEMMCO to do all things necessary to operate and administer a spot market for the sale and purchase of demand management services.

*4.9.2. ETNOF Response*

In ETNOF's view it is unrealistic to simply require NEMMCO to operate and administer a spot market for the sale and purchase of DM services. This is a highly complex area, and not something that NEMMCO could be instructed to introduce without extensive industry consultation and analysis. ETNOF notes that the AEMC's broader review of demand side participation, which is currently underway, is the more appropriate vehicle for examining the case for introducing such significant change.

## 5. Conclusions and Recommendations

In light of the discussion presented in this submission, ETNOF does not support TEC's proposed Rule changes in relation to:

- transmission network planning;
- APRs;
- acknowledgment of modest DM expenditure;
- ex-post prudency reviews;
- the Regulatory Test; and
- short-term and long-term price for DM.

In broad terms, the proposed Rule changes:

- are based upon inaccurate and unsubstantiated propositions regarding existing arrangements (for example, the proposed Rule changes in respect of Transmission Planning; APRs and the Regulatory Test);

- are not consistent with the National Electricity Objective (for example, the proposed Rule changes in respect of Transmission Planning, APRs and the Regulatory Test); and/or

- are unlikely to be capable of being implemented without significant practical difficulty (for example, the proposed Rule changes in respect of acknowledgment of modest DM expenditure; and short-term and long-term price for DM).

Whilst ETNOF would be generally supportive of measures designed to further encourage efficient DM participation (subject to the requirements of the National Electricity Objective), in ETNOF's view the proposed Rule changes are unlikely to provide any overall improvement compared to the existing arrangements. In a number of respects, the proposed Rule changes would have an adverse impact on the achievement of National Electricity Objective.

ETNOF is, however, more supportive of TEC's proposed Rule changes in relation to:

- additional DM incentives;

- financial cover for DM investments; and

- revenue determinations.

ETNOF notes that the second and third of these proposed Rule changes both appear to be aimed at clarifying the arrangements for TNSPs to recover non-network costs.

ETNOF supports the introduction of additional incentives to undertake non-network solutions and measures to improve the clarity of the arrangements for TNSPs to recover non-network costs.