

# ELECTRICITY TRANSMISSION NETWORK owners forum

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Dear John,

## RULE CHANGE PROPOSAL

The following Rule change proposal is made on behalf of electricity transmission network owners ElectraNet Pty Ltd, Powerlink Queensland, SP AusNet, Transend Networks Pty Ltd and TransGrid.

The Rule change proposal relates to augmentation asset thresholds under the Regulatory Test and information disclosure requirements for network replacements.

If you have any queries or require clarification of any aspect of the Rule change proposal, please contact Merryn York on (07) 3860-2143.

Yours sincerely,



Gordon Jardine  
**CHAIRMAN**



ELECTRICITY TRANSMISSION NETWORK owners

# Regulatory Test Thresholds

Rule Change Proposal

21 November 2007

## Thresholds for Application of Clauses 5.6.6 and 5.6.6A - Rule Change Proposal

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### 1. Proponents

Proponents of this Rule change proposal include:

- Electranet Pty Limited - a private limited liability company and Registered Participant in the National Electricity Market. The company is located at 52-55 East Terrace, Rymill Park, Adelaide, SA, 5000;
- Powerlink Queensland - a Government Owned Corporation established under the *Government Owned Corporations (GOC) Act 1993* and a Registered Participant in the National Electricity Market. Powerlink Queensland's address is 33 Harold Street, Virginia, QLD, 4014;
- SP AusNet - a publicly listed company on the Australian and Singapore Stock Exchanges and Registered Participant in the National Electricity Market. The company address is Level 31, 2 Southbank Boulevard, Southbank, VIC, 3006;
- Transend Networks Pty Ltd - a State owned company and Registered Participant in the National Electricity Market. Transend is located at 1-7 Maria Street, Lenah Valley, TAS, 7008; and
- TransGrid is a Statutory State Owned Corporation established under the *Energy Services Corporations Amendment (TransGrid Corporatisation) Act 1998* and is a Registered Participant in the National Electricity Market. TransGrid's address is Levels 9-12, 201 Elizabeth Street, Sydney, NSW, 1235.

### 2. Subject Matter for Rule Change

The AEMC's power to change the National Electricity Rules (Rules) is limited to the subject matter of the Rules set out in the National Electricity Law (NEL). Section 34 of the NEL describes the subject matter of the National Electricity Rules (Rules) as regulating:

- the operation of the national electricity market (NEM);
- the operation of the national electricity system for the purposes of the safety, security and reliability of that system; and
- the activities of persons (including registered participants) participating in the national electricity market or involved in the operation of the national electricity system.

As set out in section 34 (schedule 1) of the NEL, this Rule change proposal relates to:

the augmentation or expansion in the capacity of transmission systems.

Therefore, ETNOF considers that this Rule change proposal falls within the matters upon which the AEMC has the power to change the Rules.



### **3. Proposed Rule Change**

ETNOF proposes essentially two Rule changes – the first relates to augmentation asset thresholds under the Regulatory Test and the second relates to information disclosure requirements for network replacements. Further details are provided below.

#### *Asset Thresholds*

ETNOF proposes that the current thresholds applying to new small transmission network assets and new large transmission network assets under the National Electricity Rules (and hence the Australian Energy Regulator's Regulatory Test) be amended as follows:

- new small transmission network assets be increased from \$1 million to \$5 million (amendment to clause 5.5.5); and
- new large transmission network assets are increased from \$10 million to \$35 million (amendment to clause 5.5.6A).

To ensure that the monetary thresholds are not diminished by movements in cost inputs and/or prices over time, ETNOF also proposes that the monetary thresholds be indexed over time by an appropriate escalator. ETNOF considers that the Producer Price Index released by the Australian Bureau of Statistics is such an escalator, in particular, as it appears to better reflect the general movement in the prices facing the construction sector than the Consumer Price Index.

#### *Network Replacements*

ETNOF also proposes that transmission network service providers (TNSPs) be required to disclose certain information on all network projects (including replacements) in excess of \$5 million in their respective Annual Planning Reports (amendment to clause 5.6.2A(b)). In addition to current disclosure requirements in relation to forecast loads, future connection points, forecast constraints, proposed augmentations and new small transmission network assets, the Rule proposal would effectively require TNSPs to disclose information about replacement projects, such as:

- a brief description of the project; and
- the planned commissioning date.

### **4. Issues with Existing Rules**

#### *Asset Thresholds*

The current monetary thresholds in the Regulatory Test were established in 2001 as part of the Network and Distributed Resources Code changes. At that time, some TNSPs expressed concern that the thresholds for small and large transmission network assets were set without proper consideration to the then actual cost of network developments, and were set too low. Those TNSPs considered that more appropriate thresholds would be of the order of \$7-25 million for new small network assets and >\$25 million for new large network assets.

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In recognition of the “newness” of the regulatory arrangements, the rule-maker at that time decided to err on the side of conservatism in setting the thresholds on the low side.

Since 2001, there have been substantial increases in the input cost of materials used in transmission assets (eg. steel, aluminium, copper) and in construction labour costs. The TNSP with the largest capex spend over the intervening period, Powerlink, reports that the cost of constructing a kilometre of transmission line has more than doubled.

In addition, the “newness” argument no longer applies as the process has been applied to a large number of augmentations across all NEM regions.

Therefore, the TNSPs who have submitted this Rule change proposal believe that the asset thresholds need to be increased to more realistic levels.

### New Small Network Assets

ETNOF considers that the small network asset threshold of \$1 million - \$10 million is too low for the following reasons:

- a very limited number of transmission network augmentations can be constructed for a capitalised value of less than \$10 million. Such augmentations might include capacitor banks, the installation of small transformers where minimal substation works are required and minor upratings of existing transmission lines. For example, over the 2002-2007 regulatory period, one TNSP, Powerlink, undertook around 40 augmentation projects with an expected capitalised value of between \$1 million - \$10 million. Of these, approximately 70% involved the installation of capacitor banks, with the remainder largely pertaining to transformer installations;
- market participants and interested parties have demonstrated negligible interest in these types of assets, apart from being informed at a high level that such network developments are being proposed. In light of some six years experience in conducting the Regulatory Test and undertaking the necessary public consultation under the Rules, only one submission has ever been lodged with a TNSP in response to consultations on small network assets (and this submission did not propose a non-network solution); and
- in the majority of these cases, there are few, if any, feasible network alternatives and no non-network alternatives. For example, the requirement for an additional small transformer due to load growth is unlikely to be able to be addressed by any generation or other market solution. Experience indicates that market participants are unlikely to develop alternatives to defer these low cost, long life assets. Voltage control limitations for which a capacitor bank would be proposed as a solution cannot usually be met through any other network mechanism, except by the installation of assets costing upwards of five times the cost of a capacitor bank. The provision of information regarding the ranking of options and Regulatory Test analysis for assets under \$10 million is therefore considered to be of very limited value.

A significant benefit from raising the small asset threshold would be to increase the responsiveness of market participants to identified and emerging network



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developments. Small augmentations are generally required to meet localised load increases which can arise at relatively short notice. Increasing the threshold would also reduce the unnecessary and inefficient use of resources to develop and provide information that is of minimal interest to market participants.

A new threshold of \$5 million should ensure that the development of routine and non-controversial assets such as capacitor banks are not unproductively captured by the relevant consultation requirements under the Rules and thereby improve the efficiency of consultation and approval processes within the businesses.

### New Large Network Assets

ETNOF also considers that there is a clear and practical need to establish a higher and more appropriate threshold for new large network assets of \$35 million. As with the small network asset threshold, the primary driver for this change is to improve the efficiency of consultation and approval processes associated with such developments.

As identified by the AEMC, the purpose of the Regulatory Test is to promote efficient investment. In doing this:

... it acts as a filter for investment proposals, by revealing information regarding likely investment alternatives, ensuring that inefficient proposals are rejected and efficient proposals are identified and have incentives to proceed.<sup>1</sup>

The process by which this objective is achieved is by means of a cost benefit analysis to identify *new network* or *non-network alternative options* which maximise net economic benefits in the market or minimise the present value of costs associated with meeting certain legislative and other requirements. The Rules require TNSPs to undertake varying degrees of formal consultation with market participants and interested stakeholders depending on the total capitalised dollar value of the likely augmentation investment. Namely:

- new large network assets (>\$10 million) – the public release of an Application Notice and Final Report; and
- new small network assets (\$1 million - \$10 million) – publication in the Annual Planning Report or other means detailed in the Rules.

The primary reason for the difference in the level of consultation and disclosure requirements between new small and large network assets under the Rules is to ensure that TNSPs provide sufficient notice and information to the market to enable prospective non-network option proponents to consider, develop and put forward legitimate non-network alternatives to address an identified emerging network limitation. Notwithstanding the specific consultation for a new large network asset noted above, TNSPs also provide regular and advance notice of such potential developments to stakeholders through the Annual Planning Report.

ETNOF's collective experience with applying the Regulatory Test and public consultation processes over the last six years clearly indicates that the overwhelming majority of opportunities for efficient non-network alternatives

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<sup>1</sup> AEMC (2006), Final Rule Determination, National Electricity Amendment (Reform of the Regulatory Test Principles) Rule 2006, 30 November, p27.



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arise at thresholds much greater than the current \$10 million threshold established in the Rules. Data from ETNOF businesses in relation to new transmission network consultations demonstrates that:

- a total of 111 submissions were received in response to formal Regulatory Test consultations undertaken under the Rules in relation to 144 identified emerging needs;
- 64% of the submissions received through the Application Notice/Final Report process related to routine and uncontroversial matters, with the remaining 36% offering potential non-network options;
- of the 110 submissions received in response to consultations on identified emerging limitations in the new large network augmentation category since 2001, only seven proposals across the entire NEM were demonstrably commercially and technically feasible. These non-network options were made in response to transmission line augmentations estimated to cost over \$33 million (\$2001/02), rather than transformer or capacitor bank installations. Specifically, the Regulatory Test analysis and consultation resulted in recommendations to construct new large network assets estimated to cost \$33 million, \$48.9 million, \$73 million, \$320 million and \$340 million, respectively. As the cost of these projects would be much higher in 2007 dollars, they would all still be captured under the proposed new threshold of \$35 million; and
- significant augmentation projects of broad interest to market participants and non-network solution proponents were unlikely to be constructed for less than \$25 million historically, or \$35 million more recently. For example, of the 44 consultations undertaken by TNSPs on large augmentation projects in the last six years, 54% of these were estimated to cost well in excess of \$35 million. A further 23% of such consultations fell within the \$25 million - \$35 million category. This information indicates that, on the basis of history alone, \$10 million falls well short of the baseline for network augmentations the consultation process is designed to address. Indeed, projects which were regarded as small network assets at that time can now find themselves (inappropriately) cast as large projects, due solely to the significant escalation in input costs since 2001.

Based on the information provided herein, ETNOF believes there is compelling evidence to demonstrate that the new large network asset threshold of \$10 million is, at today's construction costs, clearly out of step with what constitutes an appropriate hurdle value upon which to initiate investigations. It is also significantly lower than the historical project value at which technically and commercially feasible non-network options have been proposed.

### *Recent AEMC Deliberations*

Whilst the issue of potentially broadening application of the Regulatory Test to large network replacements was raised in the context of the AEMC's (Stanwell) Rule change consultation on transmission network replacements and reconfigurations in 2006/07, in its Final Determination the AEMC decided that, on the basis of submissions received, it was not clear that such a proposal would promote the NEM Objective.

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Importantly, the AEMC concluded that more targeted and specific consideration of the appropriate threshold for the Regulatory Test was the appropriate way forward. In its deliberations, the AEMC postulated a threshold of \$35 million – being the midpoint of the \$20 million to \$50 million range it perceived as appropriate<sup>2</sup>.

Proponents of this Rule change proposal believe those deliberations of the AEMC to be a realistic reflection of today's construction costs for significant augmentations.

### *Information on Replacements*

In its submission to the AEMC's (Stanwell) Rule change deliberations, ETNOF nevertheless acknowledged the importance of ensuring the market is properly informed of new transmission investments and therefore proposed that all projects over \$35 million be included in the Annual Planning Report process set out in clause 5.6.2A, irrespective of whether they have an augmentation component or not.

Indeed, some TNSPs voluntarily included information on proposed replacement projects over \$35 million in their 2007 Annual Planning Reports.

The second Rule change proposal herein seeks to formalise that process.

## **5. Contribution to the NEM Objective**

For a Rule change proposal to be accepted, section 88 of the National Electricity Law requires the AEMC to be satisfied that such a proposal will or is likely to contribute to the NEM Objective, namely:

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.

In reaching its decision, the AEMC may also give weight to any aspect of the NEM Objective as it considers appropriate, having regard to any relevant MCE statement of policy principles.

### *Asset Thresholds*

ETNOF considers that raising the asset thresholds under the Regulatory Test contributes to the NEM Objective by promoting efficient investment in electricity transmission networks.

Evidence provided in section 3 demonstrates that market participants and other stakeholders have shown negligible response to consultations on small network assets identified in the Annual Planning Report, with TNSPs having received only a single submission over the last six years. TNSPs do not consider this surprising, given the limited and uncontroversial nature of the assets which are constructed within the \$1 million to \$10 million range (namely, capacitor banks and small transformer installations) and, given that TNSPs initially expressed

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<sup>2</sup> AEMC (2006), Draft Rule Determination, Draft National Electricity Amendment (Transmission Network Replacement and Reconfiguration) Rule 2006, October.



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concerns that the thresholds were being set at an unrealistically low level. On balance, ETNOF considers that the cost of continuing to provide such information for investments within the current new small network asset range outweighs the benefit to the market and is therefore inefficient.

In light of experience applying the Regulatory Test and conforming to consultation requirements under the Rules, ETNOF believes that \$5 million provides a more cost-effective and appropriate threshold for new small network assets as it removes the potential for the increasing volume of low value, routine and uncontroversial assets from being unproductively considered in the public arena.

In relation to new large network assets, evidence provided in section 3 also demonstrates that the current \$10 million threshold does not reflect the reality of modern day construction costs and does not align with the notional hurdle value upon which non-network option proponents have demonstrated viable alternatives to augmentation of the transmission network. TNSPs incur relatively significant resource and administrative costs in complying with the Regulatory Test and extended formal consultation processes described in the Rules for new large network assets. ETNOF considers that the inefficient allocation of a TNSP's resources to produce relevant documents and undertake requisite consultations with stakeholders detracts from achievement of the NEM Objective by adding undue cost to such transmission investments. These are costs which are ultimately passed through to electricity consumers.

Raising the large network asset threshold to \$35 million will allow TNSPs and potential non-network solution proponents in particular, to focus their efforts on Regulatory Test assessments that are likely to generate genuine non-network options. The consequential reduction in regulatory burden upon TNSPs as a result of not being required to apply the extended Regulatory Test consultation process to future new large network assets below \$35 million will not only improve the efficiency of the consultation and approval process, but will promote timely decision-making on network investments to enhance the reliability, safety and security of electricity supply. Such an outcome is considered to be in the long term interests of consumers.

ETNOF believes that raising the asset thresholds as proposed above provides both an efficient and practical approach to meeting the NEM Objective. Efficiency is a concept which requires that the best use be made of available resources to deliver the best possible or most desired outcomes to society as a whole. From the information provided above, it is clear that TNSP resources could be better utilised if diverted away from the production of information and analysis which provides little or no value to the market, toward those which do. A further important dimension of efficiency is that the market be able to adapt to change over time. ETNOF considers that it would be dynamically efficient to increase the asset thresholds on the basis of historical information.

The argument appears to be even more compelling given that there is no evidence to suggest that the thresholds have contributed to a TNSP's ability to meet its regulatory obligations in terms of ensuring the delivery of efficient and prudent investment outcomes, ie. productive efficiency. For example, in the recent Powerlink (Final) and SPAusNet (Draft) revenue decisions, the AER, having engaged specialist consultants to undertake a prudency review of past capex, decided that 100% of Powerlink's past capital expenditure and 99.6% of SPAusNet's past capital expenditure was prudent and efficient. The Australian

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Energy Regulator's ex-post prudency test involves a three-stage assessment of whether:

- there was a clear and demonstrable need for action to be taken by the TNSP in the first place;
- the most efficient investment option was proposed to meet that need; and
- the selected investment was implemented efficiently.

This assessment is applied to *all* projects – whether or not they have been subject to public scrutiny under the Rules consultation process.

ETNOF's Rule change proposal must also be considered in the context of the regulatory framework. At the proposed higher asset thresholds, ETNOF believes that the regulatory framework will continue to provide strong disciplines upon TNSPs to ensure that efficient investment takes place, and that feasible non-network options will be able to be publicly evaluated for those augmentations where they are viable.

### *Indexation*

ETNOF also proposes that the thresholds be indexed every three (3) years, in line with movements in the Producer Price Index (PPI), which is believed to be a better indicator of movements in construction input costs than the Consumer Price Index (CPI).

### *Replacements*

ETNOF proposes to include a requirement in the Rules that *all* proposed network projects estimated to cost over \$5 million be identified in the Annual Planning Report.

In addition to network augmentations, such an arrangement would provide market participants with advance notice of large forthcoming network replacement requirements. This reflects the AEMC's deliberations in 2006/07, and formalises the voluntary publication of that information by some TNSPs in their 2007 Annual Planning Reports.

## **6. Specific Issue for Victorian Arrangements**

In Victoria, VENCORP has the obligation to publish the electricity transmission APR. This obligation is set out in Chapter 9, Part A, clause 9.3.2 of the Rules. Acceptance of this Rule change proposal will require a consequential minor amendment to the Victorian derogation to ensure that the proposal operates effectively in Victoria. The minor amendments to the derogation would simply need to specify that the obligation to publish information on replacement works belongs to SP AusNet.

Specific drafting related to this issue has not been included in the attached Rule change drafting.



## **ATTACHMENT 1 – PROPOSED DRAFTING OF NEW RULE**

In clause 5.6.2A(b) (“Annual Planning Report”) insert the following new sub-clauses:

“(6) For all proposed *replacement network assets*, a brief description of the project and the period in which the proposed asset is estimated to become operational;

(7) Clauses 5.6.2A(7), (8) and (9) provide for the indexing of the total capitalised expenditure amount referred to in the definition of “*replacement network amount*” (“Replacement Amount”).

(8) If the Current PPI, for a PPI Adjustment Date, is more than the Previous PPI, then the Replacement Amount from and including that PPI Adjustment Date is the Replacement Amount immediately before that PPI Adjustment Date multiplied by the Current PPI and divided by the Previous PPI. In this clause:

“PPI Adjustment Date” means each anniversary of [Rule change date];

“Current PPI” means the *PPI* number for the quarter ending immediately before the relevant PPI Adjustment Date;

“Previous PPI” means the *PPI* number for the quarter ending immediately before the PPI Adjustment Date preceding the relevant PPI Adjustment Date; except that in the case of the first PPI Adjustment Date it will be the quarter immediately before [Rule change date].

(9) *Amounts indexed under clause 5.6.2A(8) will be rounded up to the nearest million dollar.*”

In clause 5.6.6 (“Applications to establish new large transmission network assets”) insert the following new sub-clauses:

### **“Indexing of total capitalised expenditure threshold**

(t) Clauses 5.6.6(t), (u) and (v) provide for the indexing of the total capitalised expenditure amount referred to in the definition of “*new large transmission network asset*” (“Threshold Amount”).

(u) If the Current PPI, for a PPI Adjustment Date, is more than the Previous PPI, then the Threshold Amount from and including that PPI Adjustment Date is the Threshold Amount immediately before that PPI Adjustment Date multiplied by the Current PPI and divided by the Previous PPI. In this clause:

“PPI Adjustment Date” means each anniversary of [rule change date];

“Current PPI” means the *PPI* number for the quarter ending immediately before the relevant PPI Adjustment Date;

“Previous PPI” means the *PPI* number for the quarter ending immediately before the PPI Adjustment Date preceding the relevant PPI Adjustment Date; except that in the case of the first PPI Adjustment Date it will be the quarter immediately before [Rule change date].

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- (v) Amounts indexed under clause 5.6.6(u) will be rounded up to the nearest million dollar.”

In clause 5.6.6A (“Construction of new small transmission network assets”) insert the following new sub-clauses:

### “Indexing of total capitalised expenditure threshold

- (f) Clauses 5.6.6A(f), (g) and (h) provide for the indexing of the total capitalised expenditure amount referred to in the definition of “new small transmission network asset” (“Threshold Amount”).

- (g) If the Current PPI, for a PPI Adjustment Date, is more than the Previous PPI, then the Threshold Amount from and including that PPI Adjustment Date is the Threshold Amount immediately before that PPI Adjustment Date multiplied by the Current PPI and divided by the Previous PPI. In this clause:

“PPI Adjustment Date” means each anniversary of [rule change date];

“Current PPI” means the *PPI* number for the quarter ending immediately before the relevant PPI Adjustment Date;

“Previous PPI” means the PPI number for the quarter ending immediately before the PPI Adjustment Date preceding the relevant PPI Adjustment Date; except that in the case of the first PPI Adjustment Date it will be the quarter immediately before [Rule change date].

- (h) Amounts indexed under clause 5.6.6(g) will be rounded up to the nearest million dollar.”

In Chapter 10, change the definitions of “new large transmission network asset” and “new small transmission network asset” to as follows:

### **new large transmission network asset**

An asset of a *Transmission Network Service Provider* which is an *augmentation* and in relation to which the *Transmission Network Service Provider* has estimated it will be required to invest a total capitalised expenditure in excess of \$35 million (which amount is indexed in accordance with clause 5.6.6(u)). The *AER* may publish a requirement that a *new large transmission network asset* is to be distinguished from a *new small network asset* if it involves investment of a total capitalised expenditure in excess of another amount, or satisfaction of another criterion. Where such a specification has been made, an asset must require total capitalised expenditure in excess of that amount or satisfaction of those other criteria to be a *new large transmission network asset*.

### **new small transmission network asset**

An asset of a *Transmission Network Service Provider* which is an *augmentation* and:

- (a) in relation to which the *Transmission Network Service Provider* has estimated it will be required to invest a total capitalised expenditure in



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excess of \$5 million (which amount is indexed in accordance with clause 5.6.6A(g)). The AER may publish a requirement that an asset will be a *new small transmission network asset* if it involves investment of a total capitalised expenditure in excess of another amount, or satisfaction of another criterion. Where such a specification has been made, an asset must require total capitalised expenditure in excess of that amount or satisfaction of those other criteria to be a *new small transmission network asset*; and

- (b) is not a *new large transmission network asset*.

In Chapter 10, add a new definition for “replacement network asset” as follow:

### **replacement network asset**

An asset of a *Transmission Network Service Provider* that is:

- (a) planned to replace an existing *transmission network asset* that is a transmission circuit, transformer, circuit breaker or reactive plant;
- (b) not a *new large transmission asset* or a *new small transmission network asset*; and
- (c) estimated to require a total capitalised expenditure in excess of \$5 million, (which amount is indexed in accordance with clause 5.6.2A(8)).