

17 April 2009

Dr John Tamblyn  
Chairman  
Australian Energy Market Commission  
PO Box A2449  
Sydney South NSW 1235

Dear John,

### **Review into a national framework for electricity distribution planning**

SP AusNet supports the AEMC's establishment of a review considering a national framework for electricity distribution planning, and provides the attached submission in response to the Scoping and Issues Paper.

This review provides an opportunity to develop an effective and more consistent national electricity distribution planning framework. This will involve developing an efficient planning process and an appropriate investment decision-making test for augmenting distribution networks. In this respect, SP AusNet considers that the planning arrangements should include a distribution-specific regulatory test, which takes account of distribution system factors, rather than a test designed for transmission.

A sound national planning framework can deliver more effective network planning and performance. However it is important that this review balances the need to provide useful planning information to market participants with the need to establish a streamlined and efficient planning process which will facilitate timely investment.

SP AusNet would be pleased to discuss the attached submission in further detail with you at your convenience.

Yours Sincerely,

[Signed Patrick Murphy]

Patrick Murphy

**MANAGER ECONOMIC REGULATION**

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## **1. Introduction and Overview**

The review seeks to recommend to the Ministerial Council of Energy (MCE) appropriate national arrangements for electricity distribution planning.

SP AusNet supports efficient and practical distribution planning arrangements which:

- streamline project consultation and decision-making processes;
- provide consistent project assessment principles; and
- provide useful information to market participants and facilitate consideration of non network alternatives.

Any national planning arrangements need to strike the right balance between providing market participants with useful information whilst facilitating timely network investment. The level of depth and detail required in annual planning reports needs to be commensurate to the likely benefit of such information to the market. Also, planning arrangements should include a distribution-specific regulatory test, which takes account of considerations in a distribution context, rather than a test designed for transmission.

More detailed views of how a national framework should develop are set in the body of this submission which is structured as follows:

- Section 2 discusses the development of an effective annual planning framework;
- Section 3 addresses the coverage and specification of project assessment principles (regulatory test) for distribution and appropriate thresholds;
- Section 4 briefly addresses dispute resolution issues; and
- Section 5 sets out our concluding comments.

In addition, Attachment 1 provides responses to selected questions in the AEMC's list of issues.

## **2. Annual planning framework**

SP AusNet considers that one of the objectives of an annual planning report is to inform market participants about upcoming network developments and constraints. In light of this, SP AusNet recognises the value of an annual planning report to facilitating non-network alternatives such as demand side response (DSR), and distributed and embedded generation through the publication of targeted and useful information. At the same time it is important that the regulatory burden imposed by planning requirements be proportionate to potential benefits that may result from the work involved.

### **2.1 The Victorian distribution planning framework**

SP AusNet is required under license condition to publish a Distribution System Planning Report (DSPR) detailing its distribution network development plans over the next five years to meet forecast demand and reliability standards and improve reliability to customers. Clause 3.5 of the *Electricity Distribution Code* sets out these requirements.

SP AusNet publishes its DSPR towards the end of the calendar year (November or December). As peak demand occurs mostly in summer, demand forecasts are prepared in the 3 months after summer (April and May). This allows up to 6 months to complete the augmentation planning process identifying constraints, risks, augmentation options, preferred options, etc which allows up to publish our DSPR prior to the end of the year.

SP AusNet's annual DSPR provides information on:

- historical and forecast demand from, and capacity of, each zone substation;
- assessments of the magnitude, probability and impact of loss of load for each subtransmission line and zone substation;
- SP AusNet planning standards;
- feasible options to meet forecast demand including opportunities for embedded generation and demand management;
- where identified, the preferred option for meeting forecast demand including estimated costs; and
- the value placed on options that would defer or avoid augmentation of the distribution system.

The report also sets out information on:

- the nature, timing, cost and expected impact on performance of SP AusNet's reliability improvement programs; and
- an evaluation of the reliability improvement programs undertaken to date.

SP AusNet views the Annual Planning Report (APR) as a summary of key information. It should not be considered as either the sole or complete source of information. The report encourages genuine proponents of embedded generation and demand side management to contact SP AusNet with a view to securing data specific to their proposals under a confidentiality agreement.

### *Connection network planning*

SP AusNet considers that a gap in the scope of the review is its consideration of connection planning, and the responsibility for connection planning.

In Victoria, distribution network service providers (DNSPs) have responsibility for planning and directing the augmentation of the facilities that connect their distribution systems to the shared transmission network under their licence obligations. This covers transmission connection assets which include transformers, associated switchgear, plant and equipment.

The Victorian DNSPs jointly publish an annual Transmission Connection Planning Report (TCPR) which provides information on every terminal station relating to load forecasts, energy at risk, expected cost of unserved energy, network solutions and possibilities for non-network solutions such as demand side management or embedded generation.

SP AusNet recommends that the Victorian arrangements for connection planning should continue for Victorian DNSPs. It is also important that any national framework clarify that a DNSP is responsible for planning a project from end to end. This includes where it involves transmission connection and augmentation to the shared transmission network. In this instance only one test should apply. SP AusNet considers that where the project involves distribution assets, the regulatory test for distribution should apply to the whole project. While VENCORP and the DNSP could plan jointly, it should be the DNSP which is responsible for conducting the regulatory test analysis as it is ultimately responsible to its customers for its network service.

## **2.2 A national planning reporting framework**

### *Objective and contents of an annual distribution plan*

Developing a national framework for distribution planning requires consideration of the objective of an annual distribution planning report.

SP AusNet considers that the annual planning report should be focused on providing information to market participants with a view to:

- assisting users to decide where and when to connect to the distribution system; and
- informing proponents of non-network alternatives about potential opportunities for alternative solutions.

In light of this, the annual planning report should be focused on current and future network constraints and development. As such, it should be a forward looking plan which provides sufficient information to the market to make informed decisions about locating and timing new connections and identifying opportunities for alternative solutions.

In developing a national distribution planning framework it is imperative that the regulatory burden imposed by planning requirements be proportionate to potential benefits that may result from the work involved. This means that annual reporting should not require significant additional resources and effort where benefits would be limited. Consistent with this, SP AusNet considers an Annual Planning Report should be a summary of key information, rather than a complete source of information. SP AusNet considers that its current annual planning processes and publications work well, and that these strike the right balance in providing relevant and useful information in a succinct form.

While SP AusNet is interested in facilitating non-network alternatives such as DSR and embedded generation through the publication of targeted and useful information in its planning reports, it is recognised that these reports are a summary of the annual network plan and cannot cover every single detail of a project. As such, in its DSPR SP AusNet invites non-network alternative proponents to contact SP AusNet to obtain further information and discuss feasible alternative options. However, SP AusNet is open to including other information which would be practical and useful for market participants eg: information on fault levels.

Further, SP AusNet considers that a targeted and robust system planning report is a much more useful information resource and cost-effective process than imposing unreasonably resource-intensive and time-consuming consultation obligations on top of the current arrangements. While a full consultation process may be warranted for significant major projects (for example, those valued greater than \$10 million), it would not deliver much

benefit in relation to smaller projects (those less than \$10 million) which are numerous and already included in the annual planning report.

SP AusNet opposes the inclusion of any historical data and network performance information in the annual planning report.<sup>1</sup> Requiring the annual planning report to include historical information and data would duplicate current reporting obligations and significantly increase the reporting and regulatory burden on DNSPs. Distributors currently publish network performance data and the AER will publish historical data and performance information as part of its annual performance and regulatory reports. It is not necessary to impose further reporting obligations with potentially different reporting timetables.

#### *Interaction between Transmission and Distribution Network Planning.*

SP AusNet notes that clause 5.6.2 of the NER sets out broad joint planning obligations between TNSPs and DNSPs. The AEMC may wish to consider how this review may enhance joint planning activities through giving thought to how joint planning should work in practice and whether clear obligations and responsibilities in relation to joint planning need to be established.

SP AusNet notes that SPI Electricity currently conducts joint planning in a number of ways:

- examining opportunities for joint/integrated projects where a solution to a distribution network constraint could also provide shared network benefits and to scope the augmentation project such that it takes due consideration of future shared network requirements.
- conduct regular planning meetings with VENCORP and consider VENCORP's long term planning documents (APR and Vision 2030) when preparing our distribution plans and selecting options to alleviate network constraints (both distribution and transmission connection networks) whilst ensuring efficient outcomes for users.
- consult with SPI PowerNet regarding planned transmission asset replacement and station redevelopment projects to seek out synergies, align plans and to ensure efficient outcomes for end consumers.
- participating in industry (planning) forums to address identified issues, eg. Fault Level Working Group.

An issue which arises in relation to joint planning is how projects which involve both distribution and transmission elements are treated and progressed. Currently, the RIT-T covers all transmission works, and in Victoria VENCORP applies it to any transmission component of a project.

SP AusNet submits that where a project arises from a distribution need, a single test, (preferably the RIT-D) should apply to the feasible options from end-to-end, including any transmission connection assets and shared transmission network assets. While the planning of such projects should be conducted jointly, it should be led by the DNSP and

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<sup>1</sup> SP AusNet notes that it currently reports on historic demand (from the previous 3 years) as part of its demand forecasting information in the DSPR. This is distinguished from 'network performance data' in that it is key to planning and options analysis.

the DNSP should conduct the regulatory test. This is because ultimately, the DNSP is responsible for its network and accountable to its customers.

Consistent with this, the Rules should be clarified to reflect the principle that transmission charges (including TUOS and transmission connection asset costs) incurred by DNSPs should be able to be passed through via distribution tariffs. Previously, the Essential Services Commission has considered that DNSPs have adequate incentives to plan connection assets efficiently, and as such, all transmission charges should be automatically passed through to customers.

### 3. Project assessment principles and consultation process

SP AusNet considers that in designing a regulatory test for distribution, the AEMC and AER need to ensure that the test itself is efficient ie: the resources and effort required to assess projects against the test are not disproportionate to the transparency and information benefits provided.

#### 3.1 Scope of Regulatory Test for Distribution (RIT-D)

The Regulatory Investment Test for distribution should cover all augmentation projects initiated for the purposes of addressing a distribution need. Where a project is a combination of augmentation and replacement, the augmentation component will be the relevant component with respect to regulatory test thresholds.

There would be no benefit in applying a regulatory test to network replacement expenditure as these projects are necessitated by asset condition rather than demand growth and provide very little scope for alternatives to defer or remove the need to replacement these assets. Further, these projects have been justified on the basis of efficiency and prudence within a regulatory review process.

SP AusNet believes the following minimum thresholds for conducting a regulatory test assessment, and for conducting an assessment with full public consultation, are appropriate:

**Table 1: Recommended thresholds for a RIT-D**

Project	Threshold	Consultation requirements
Other	<\$5 million	No formal regulatory test assessment required
Small augmentation	=> \$5 million to <\$10 million	Regulatory test analysis and publication in annual planning report. Invite non-network proponents to seek further information.
Large augmentation	=> \$10 million	Regulatory test analysis with full consultation process. Provide a minimum 30 business days for responses to request for proposals (RFP). Provide 30 business days for interested parties to respond to draft regulatory test report.

SP AusNet considers that these thresholds balance the regulatory burden of conducting a regulatory test assessment with the transparency and market information benefits of such a process.

SP AusNet considers that setting the minimum thresholds at the above levels would provide for an appropriate number of projects to be captured within the scope of the regulatory test assessment and allow for significant projects to be subject to public consultation. The suggested thresholds maintain the current public consultation threshold (\$10 million) and simply updates the minimum threshold to \$5 million in light of the volume of projects which now cost more than \$1 million. These would be minimum thresholds, and businesses should be able to choose to conduct consultation on projects which do not meet the threshold if they consider it necessary. SP AusNet notes that information about projects valued at less than \$5 million is usually published in our DSPR (as all zone substation and subtransmission system constraints are identified with proposed augmentation options). These thresholds should be reviewed periodically to take inflation and input cost changes into account.

SP AusNet considers that the regulatory test analysis should apply to the whole end-to-end project and include any transmission connection and shared transmission network components. In these situations joint planning should occur where appropriate, but ultimately the regulatory test analysis should be led by DNSPs as they are responsible for delivering solutions required to address the needs of their networks. SP AusNet recommends that any joint planning arrangements need to be workable and practical, and provide clear responsibilities.

The scope of the regulatory test should only apply to standard control services and should not extend to negotiated services, which lie outside the intended ambit of the test.

### **3.2 Specification of the regulatory test**

The RIT-D needs to be designed specifically for distribution and should be simplified to reflect the narrower range of likely market benefits, the larger number of investment decisions undertaken and the generally shorter timeframe available to plan distribution investments. Treatment of environment costs under the RIT-D should only be included where there are clear links to legislative requirements. Essentially, SP AusNet considers the RIT-D should take the form of a least cost assessment which has the flexibility to accommodate the Victorian probabilistic planning approach.

Under the probabilistic approach, the deterministic N-1 criterion is relaxed and simulation studies are undertaken to assess the amount of energy that would not be supplied if an element of the network were out of service. The application of this approach can lead to the deferral of distribution capital works that might otherwise proceed if a deterministic standard were strictly applied. This is because in a network planned in accordance with the probabilistic approach, there may be conditions under which all the load cannot be supplied with a network element out of service (hence the N-1 criterion is not met); however, under these conditions, the value of the energy that is *expected* to not be supplied is not high enough to justify additional investment, taking into account the probability of a forced outage of a particular element of the distribution network.

The probabilistic planning approach involves estimating the probability of a plant outage coinciding with the peak loading season, and weighting the costs of such an occurrence by its probability to assess:

- load at risk of being interrupted if no augmentation is undertaken, and therefore
- whether it is economic to augment distribution network capacity to reduce expected supply interruptions.

The quantity and value of energy at risk is a critical parameter in assessing a prospective network investment. Probabilistic network planning aims to ensure that an economic balance is struck between the cost of providing additional network capacity to remove any constraints; and exposure to loading levels beyond the network's capability. In other words, it recognises that very extreme loading conditions may occur for only a few hours in each year, it may be uneconomic to provide additional capacity to cover the possibility that an outage of an item of network plant may occur under conditions of extreme loading. Rather, the probabilistic approach indicates that network augmentation should take place only when loading has increased to the extent that the value of energy at risk justifies expenditure on the distribution system to reduce the level of energy at risk.

This approach provides a sound estimate of the expected net present value to consumers of distribution system augmentation. However, implicit in its use is acceptance of the risk that there may be circumstances when the planned distribution network (zone-substation/sub-transmission line) capacity will be insufficient to meet actual demand.

In exceptional circumstances where an unforeseen event and unavoidable time pressures apply, a full regulatory test process may not be possible. In these cases, a fast-tracked process would be necessary. SP AusNet notes that it does not intend to use a fast track provision to avoid its planning obligations. Rather, we would only seek to rely on fast tracking a regulatory test consultation process in circumstances where it is absolutely necessary to meet network requirements. For example, at Watsonia, SP AusNet is adding an additional transformer ahead of schedule due to rapid customer load growth in a nearby large shopping centre development. The rapid load growth at this location was unforeseen and compressed the time frame for project delivery by around twelve months.

#### **4. Dispute resolution**

The dispute resolution process established for the RIT-T should be mirrored for distribution. The scope of dispute resolution should remain limited to due process and the distributor's compliance with the NER and the test. It is inappropriate for it to extend to the merits of a regulatory test analysis. Further, it is highly problematic if disputes could be raised as to the content of an annual planning report. These reports are forward looking documents intended purely for information purposes. Distributors cannot be held responsible for any commercial decisions made by market participants based on information in the annual planning reports, and dispute resolution arrangements should reflect this principle.

#### **5. Concluding comments**

SP AusNet considers that an effective national electricity distribution planning framework should feature:

- planning report requirements which balance the need to provide useful planning information to market participants with the need to establish streamlined and efficient planning process to facilitate timely investment. SP AusNet considers that the Victorian requirements for DNSPs' annual planning reports provide a sound foundation for this; and
- a distribution-specific regulatory test, which is simplified to reflect the narrower range of likely market benefits, the larger volume of projects undertaken and the generally shorter timeframe available to plan. SP AusNet considers the RIT-D should take the

form of a least-cost assessment which has the flexibility to accommodate the Victorian probabilistic planning approach.

SP AusNet considers that DNSPs should be able to have carriage of all regulatory test processes related to addressing a distribution network need, and that the RIT-D analysis should apply to the whole end-to-end project and include transmission connection and shared transmission network components SP AusNet recommends that any joint planning arrangements need to be workable and practical, and provide clear responsibilities.

## Attachment 1

	Issue	Comment
	<b>Scope and Approach</b>	
1-3	All questions	The review needs to include transmission connection planning in its scope.
	<b>Annual Planning</b>	
4	In addition to emerging constraints, what other types of potential problems of the distribution network should be included in annual planning reports?	Fault level increases can often be an issue and problem for new generation proposals. This issue could be identified in both distribution and transmission APRs so that participants are aware of the issue.
5	How could the interaction between transmission and distribution planning be reflected in the annual planning and reporting process?	The distribution planning report and the transmission connection planning report should provide information on planned shared transmission network projects were appropriate.
6	Should the annual planning report include reporting on work carried out by DNSPs including reporting of actual network performance information and historical data?	With the consultation process and the APR there should not be a need to provide historical reporting on projects. In regards to performance the AER will be publishing annual performance reports so this should not be included in the planning reports.
7	What factors need to be considered to ensure the level of detail of the information provided is useful and appropriate to stakeholders?	Existing DSPR provides comprehensive data on loads, capacities, load at risk, MWhrs at risk and hours at risk to enable proponents of non-network solutions to understand opportunities and seems to work well in conveying opportunities.  Proponents should contact the DNSP if they require more detailed information and need a better understanding of the issues surrounding any potential opportunity.
8	For areas that are to be reported on, what specific factors should be considered? For example for emerging constraints, how should emerging constraints be classified and how could they be consistently set out?	Planning document should identify factors that may affect future performance and reliability of the network such as: <ul style="list-style-type: none"> <li>• Transfer capability – energy at risk over time, benchmark project cost, reliability and availability of non network service required</li> <li>• Quality of service – issue, timing and cost</li> <li>• Contingency planning for high stress events – issue, timing and cost</li> <li>• Compliance to jurisdictional reliability and planning standards – standard non conformance, cost, timing, reliability and availability for non network solution</li> </ul> <p>There should be a general rule that IT, protection and control projects are all excluded unless associated with a network primary project. Safety, environmental, noise and contingency planning for high stress events should be excluded.</p>

	Issue	Comment
9	Should a distinction be made between general information that is publicly available and more detailed information for embedded generators and demand side response proponents?	More detailed information would always be required for individual proposals and the high level publication of information relating to opportunities should be sufficient to get communication between proponents and DNSP's started. The planning report will provide enough high level information for a proponent to identify an opportunity and seek further information as required. It would be essential for any proponent to discuss the finer detail with the DNSP before proposing a solution to a highly integrated network.
10	Would the Australian Energy Market Operator's website be the appropriate central location for the planning reports to be stored and published?	Information could be published on both DNSP and AEMO websites.
	<b>Project Assessment and Consultation Process</b>	
11	What would be the appropriate timeframe for the publication of the DNSP annual planning report (noting the relationship between the timeframe for the publication of the TNSP annual planning report and the DNSP/TNSP joint planning requirements)?	The current planning processes which tie in with the transmission planning processes should remain. SP-AusNet prefers to publish its planning report at the end of the calendar year (November/December). See section 3 for detailed discussion.
12	What types of investments should be subject to the project assessment process?	Augmentation projects only. Where a project involves both augmentation and replacement, the threshold should apply to the augmentation component only.
15	<p>What factors should be considered in a RFP process and how should this be specified in the Rules compared to AER guidelines?</p> <ul style="list-style-type: none"> <li>• What defines a credible option?</li> <li>• What information is needed to enable market participants to raise alternatives?</li> <li>• How long should the consultation take place?</li> <li>• Should an RFP process include elements to deal with the potential issue of DNSPs seeking assurance from non-network proponents for the performance of a non-network option?</li> </ul>	<ul style="list-style-type: none"> <li>• Should be a 'credible option' consistent with the definition under the AEMC's proposed RIT-T Rules.</li> <li>• Should include a minimum reliability level, and information on the nature, duration and location of constraints.</li> <li>• 30 business days to respond to an RFP notice</li> <li>• Yes- it is a crucial for analysing options. A non network proponent must accept contractual penalties for non performance if they are to receive the full value of the deferred augmentation, i.e. they must deliver equivalent service to the network augmentation. A DNSP could consider a reduced non-network support payment in return for reduced penalties for non performance.</li> </ul>
16	What is the appropriate list of costs and benefits associated with distribution projects, and should that list be mandated in the NER?	Improved customer reliability through reduced risk should be included. Any other benefits could be included if they are justifiable. That list should not be mandated but should be left to the AER to determine in developing the RIT-D.

	<b>Issue</b>	<b>Comment</b>
<b>19</b>	How should a net benefit test be designed for distribution investments assessments? What are appropriate circumstances where a least cost assessment should be applied, and if so, should the two limbs of the regulatory test be maintained?	The two limbs should remain. A least cost analysis should be applied where a risk of unserved energy is not a factor. Otherwise a cost-benefit assessment taking into account the risk of unserved energy should be included in the analysis. A full 'market benefit' test should not be required for distribution as the benefits related to transmission assets are not relevant to distribution.
	<b>Dispute Resolution Process</b>	
<b>21-27</b>	All questions.	The scope of dispute resolution should remain limited to due process and the distributor's compliance with the NER and the test. It is inappropriate for it to extend to the merits of a regulatory test analysis or to the content of an annual planning report.
	<b>Common Issues</b>	
<b>29</b>	Should "urgent" investments be exempt from aspects of the national framework?	In exceptional circumstances where there are unforeseen and unavoidable time pressures related to network augmentation, a full regulatory test process may not be possible. In these cases, a fast-tracked process would be necessary.