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Your Ref:



20 February 2012

Mr Warwick Anderson  
General Manager  
Network Regulation  
Australian Energy Regulator  
GPO Box 520  
MELBOURNE VIC 3011

Dear Warwick

### **Submission to AER's Draft Decision for Powerlink**

Transend welcomes this opportunity to lodge a submission in response to the AER's Draft Decision for Powerlink for the period 1 July 2012 to 30 June 2017. Whilst each decision raises a number of important company-specific issues, Transend's particular interest is focused on matters that raise issues of regulatory precedent and approach. With this focus in mind, our submission addresses the following four issues:

- Cost estimation risk factors;
- Labour productivity adjustments;
- Efficiency adjustments to capital expenditure; and
- the debt risk premium.

Each of these matters is addressed in turn.

#### **Cost estimation risk factors**

The Draft Decision explains that Powerlink applies a 'cost estimation risk factor' to capital projects that have not yet obtained Board approval. The AER described the cost estimation risk factor as intending to account for risks that are beyond Powerlink's control. In disallowing the cost estimation risk factor, the AER commented as follows<sup>1</sup>:

"The AER concludes that Powerlink's annual BPO [Base Planning Objects] update accounts for risks faced in the past. Good project management, planning and risk mitigation should minimise risks and cost overruns. A service provider's capex forecasts must appropriately account for risks likely to be experienced during a regulatory control period. The AER considers that the cost estimation risk factor represents a premium above forecasts that already include adjustments based on previous experience, including risk."

<sup>1</sup> AER, Draft Decision, Powerlink Transmission Determination, 2012/2013 – 2016/2017, November 2011, page 30.

Transend considers that the AER's comments mischaracterise the purpose of the cost estimation risk factor and, on the basis of this misunderstanding, the AER incorrectly concludes that the risk factor should already be addressed in the BPO estimates. Contrary to the AER's analysis, the cost estimation risk factor is intended to reflect systematic cost estimation errors that are unavoidably present in cost forecasts of capital projects that are scheduled to commence a number of years into the future. Powerlink's Revenue Proposal explained the purpose of the cost risk estimation factor as follows<sup>2</sup>:

“Actual project costs are often higher than initial estimates, due to the level of uncertainty prior to the development of the project's detailed scope and the risks associated with events during the life of a project that were not foreseen at the time of estimation. For example, in preparing a Revenue Proposal, a TNSP is required to develop scopes and estimates for projects which may not be commissioned until some 7-10 years into the future. Under normal business operating conditions, preparation of a detailed scope and estimate for such projects does not occur until much closer to the time of making the investment decision, which is typically three years prior to project completion.

Given this inherent difficulty in estimating, Powerlink has commissioned Evans & Peck to provide expert analysis and opinion on the expected risk distribution of Powerlink's capital project portfolio in the 2013-17 regulatory period. Evans & Peck undertook statistical modelling of the estimated and actual project costs delivered by Powerlink in the current regulatory period to derive a risk adjustment factor. From this data, a risk adjustment factor of 3% has been established. This factor has been incorporated into Powerlink's capital accumulation model for unapproved network projects only, and hence into Powerlink's future expenditure forecasts.”

Contrary to the AER's conclusions, the analysis undertaken by Evans & Peck recognises that Powerlink will update its cost estimates to reflect experience. However, Evans & Peck explained that an asymmetric risk remains in relation to forecasting capital projects. It is this asymmetric risk that warrants the application of a cost estimation risk factor, as explained below<sup>3</sup>:

“Our underlying assumption is that Powerlink will address many of these issues in their base estimating procedure. Notwithstanding that we would expect to see an upward adjustment in base costs, our expectation is that estimates in relation to the forthcoming decision will still be based on the “most likely” outcome. As a consequence, our approach has been to separate the “asymmetric” risk component from the average shift to provide an estimate of the appropriate factor(s) to apply to the cost estimation risk factor going forward.”

It is evident from the Evans & Peck work that the cost estimation risk factor has distinguished between:

- the experience of higher-than-expected costs, which should be captured by updating the unit costs; and
- the remaining risk of cost overruns that arises from the asymmetric nature of capital projects.

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<sup>2</sup> Powerlink Revenue Proposal 2013-2017, May 2011, page 65.

<sup>3</sup> Evans & Peck, Appendix G Capital Program Estimating Risk Analysis, 16 May 2011, section 3.

The AER conclusions noted earlier<sup>4</sup>, however, do not appear to recognise the approach adopted by Evans & Peck. The analysis undertaken by Evans & Peck is consistent with actual experience that capital projects are subject to asymmetric risk, which is a distinct and different issue to the accuracy of unit costs.

In previous regulatory decisions for transmission networks, the AER accepted the fact that capital projects are subject to asymmetric risk and, consequently, a cost estimation risk factor should be applied to forecasts. The AER's conclusions in Powerlink's Draft Decision are out-of-step with the AER's previous decisions, which were noted in the Evans & Peck report<sup>5</sup>:

“In Powerlink's 2007/08 to 2011/12 regulatory proposal, Evans and Peck, based on working knowledge of the range of risks incurred on typical projects, assessed a risk premium of 2.6% should apply to Powerlink's project estimates. In their decision, the AER's final determination concluded:

“Overall, the AER considers it reasonable to apply a cost estimation risk factor of 2.6 per cent to Powerlink's forecast capex estimates, to reflect risks outside Powerlink's control when estimating project costs.”

Evans & Peck has subsequently acted to establish a cost estimation risk factor for other transmission operators including Electranet, TransGrid, Transend and SPAusnet.”

In summary, the cost estimation risk factor is a well-substantiated, standard forecasting method applied by all TNSPs, and it has previously been accepted by the AER. In view of these considerations, Transend submits that the AER should revisit its conclusions on this issue.

### **Labour productivity**

The AER's Draft Decision explains that labour price changes are driven by both productivity effects and other effects. The AER notes that productivity effects drive labour price changes since more productive labour receives higher wages. In making this observation, the AER commented that it is important to distinguish between labour prices and labour costs. The AER's consultant, Deloitte Access Economics, explained the distinction as follows<sup>6</sup>:

“... labour costs will rise at a different rate [than labour prices] due to the effects of labour productivity growth. Effectively, labour productivity measures the number of units of output an individual employee can produce in a given time period. The more units of output each worker can produce, the fewer workers are required to create a given level of industry output. If productivity is rising, the total cost of labour (the price of each employee multiplied by the number of employees) will rise less rapidly than the individual employee's price.”

The AER explained that numerous labour price measures are available. Powerlink proposed the use of Average Weekly Ordinary Time Earnings (AWOTE), as forecast by BIS Shrapnel, to escalate its forecast labour costs.

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<sup>4</sup> AER, Draft Decision, Powerlink Transmission Determination, 2012/2013 – 2016/2017, November 2011, page 120.

<sup>5</sup> Evans & Peck, Appendix G Capital Program Estimating Risk Analysis, 16 May 2011, section 2.

<sup>6</sup> AER, Draft Decision, Powerlink Transmission Determination, 2012/2013 – 2016/2017, November 2011, pages 55 and 56.

The AER explained that it is not satisfied that forecast growth in AWOTE reasonably reflects a realistic expectation of the change in labour costs. It considers LPI forecasts, adjusted for productivity effects, will most reasonably reflect labour costs in the next regulatory period. The AER explains its preference for LPI as follows<sup>7</sup>:

“AWOTE measures average employee earnings from working the standard number of hours per week. It is not strictly a price index (that measures the pure price effect) because the composition of labour is not held constant. It captures composition productivity effects, worker productivity effects and other effects. In contrast the LPI is a Laspeyres type price index. As a Laspeyres type price index the LPI measures the change in the labour costs with the quantity and quality of work performed held constant. It measures the pure price effect, showing how much the same quantity of labour costs in the current period, relative to the base period. The weights used are for the base period and are updated annually to represent job distribution.

The AER concludes that the LPI provides a more accurate measure of labour price change (by holding labour composition fixed). The composition of labour issue is best illustrated by the following discussion in the AER’s Draft Decision<sup>8</sup>:

“BIS Shrapnel stated it prefers AWOTE because promoting employees to a higher occupation does not necessarily show up in the LPI, but the employer’s total wages bill (and average unit labour costs) is higher, as is AWOTE.

However, the AER does not consider this to be a problem, nor does it agree that the average unit labour costs would increase. To illustrate, the following impacts occur if workers undergo training, increase productivity and are promoted. Assuming wage rates are held constant for both skilled and unskilled labour:

- Labour productivity, total output and total labour cost all increase by the same amount. The total labour cost per unit of output is unchanged because output and total labour cost both increase equally.
- AWOTE also increases by the same amount as labour productivity. Thus the labour productivity adjusted AWOTE does not change, reflecting the constant total labour cost per unit of output.
- The LPI remains constant. Quality adjusted labour productivity (weighted by the base period cost share) is also constant and thus so is the productivity adjusted LPI.

Both labour price measures, therefore, accurately reflect a constant unit labour cost, per unit of output, when adjusted by their matching labour productivity measures. However, as a result of the analysis above, the AER does not agree with BIS Shrapnel that AWOTE should be used to compensate Powerlink for shifts in workforce composition.”

Transend notes that the AER’s preference for the LPI is predicted on a view that its task is to define a ‘pure’ labour price index, which can be adjusted readily for forecast productivity improvements. More broadly, however, the Revenue and Pricing Principles in the National Electricity Law require the AER to ensure that:

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<sup>7</sup> AER, Draft Decision, Powerlink Transmission Determination, 2012/2013 – 2016/2017, November 2011, page 57.

<sup>8</sup> Ibid, page 59.

“A regulated network service provider should be provided with a reasonable opportunity to recover at least the efficient costs the operator incurs in—

- (a) providing direct control network services; and
- (b) complying with a regulatory obligation or requirement or making a regulatory payment.”

In light of the above principle, the AER’s task is to establish capital and operating expenditure allowances that provide Powerlink with a reasonable opportunity to recover at least the efficient costs. In Transend’s view, the choice of labour escalation index should therefore be governed by this overarching requirement. This view is consistent with the following comment from Synergies Economic Consulting, in a report for Powerlink<sup>9</sup>:

“the most important issue is that a wages series is chosen for forecasting purposes that is likely to accurately reflect the labour costs of a TNSP.”

The AER’s focus in calculating a ‘pure’ labour index, adjusted for anticipated (but not yet achieved) productivity improvements is unlikely to be a valid method for ensuring that the TNSP has a reasonable opportunity to recover at least its efficient costs. For example, the AER assumes that a change in labour composition will yield productivity improvements that do not need to be recognised in the forecast labour costs. While such an approach may be supported by economic theory<sup>10</sup>, it is not credible to apply this theory to forecast total labour costs for a TNSP.

The difficulty with the AER’s approach arises because a TNSP’s output is not akin to a widget manufacturer where labour can be measured and remunerated according to productivity, and where labour productivity improvements reduce the total amount of labour required. A TNSP’s output is substantially more complex and multi-dimensional than a textbook labour cost analysis may imply. For example, it is incorrect to assume that increased training and skills to improve safety or reliability outcomes will have no impact on the total labour costs. The AER’s assumption is that any increase in labour rates will be exactly offset by increased productivity and a reduction in the quantity of labour required. In reality, a more skilled TNSP labour force delivers better outcomes for customers and safety improvements for its workers, but it does not produce savings in labour requirements.

By far the best approach in choosing between alternative labour indices is to test their performance against actual data. Transend notes the AER’s concern that the AWOTE index is volatile, and this issue is a legitimate one in examining the practical performance of the index. By the same token, weaknesses in the AER’s preferred index, LPI, arise in its lack of regional focus, especially given the divergence of labour cost movements in different states. Transend is also concerned that the LPI is a ‘black box’ index which lacks transparency in relation to its construction. This is a serious shortcoming which the AER should address in its Final Decision.

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<sup>9</sup> Synergies Economic Consulting, Review of Labour Cost Escalation Issues under National Electricity Rules, Appendix E, Powerlink’s Revised Revenue Proposal, January 2012, page 14.

<sup>10</sup> Marginal revenue productivity is a theory of wages where workers are paid the value of their marginal revenue product to the firm.

A further difficulty with the AER's approach is that it seeks to anticipate productivity improvements, and adjust labour costs downwards, on the assumption that these improvements will be achieved in the forthcoming regulatory period. As already noted, for a TNSP it is doubtful whether productivity improvements will produce cost savings. Instead, productivity improvements, if achieved, are more likely to deliver a change in the quality of the output; for example, improved reliability; better performance data and reporting; improved processing of connection enquiries; or enhanced safety outcomes. More broadly, the regulatory regime is required under the law to encourage efficiency improvements by setting expenditure allowances that provide the TNSP with an opportunity to recover at least the efficient costs incurred in providing services. In light of this requirement, and the other matters noted above, the AER's anticipation of labour productivity improvements is not appropriate.

### **Efficiency adjustment to capital expenditure**

The AER included a \$45 million efficiency adjustment to Powerlink's forecast capital expenditure on the basis that Powerlink could improve the efficiency with which it undertakes its investment program. This efficiency adjustment is supported by the AER's consultant, EMCa, who considered that Powerlink had the potential to improve the efficiency of its capital expenditure by formally instituting a performance improvement program. EMCa suggests that this might include measures such as resource smoothing, proactive facilitation of viable non network solutions, smart grid initiatives and focused identification of synergies between projects. The AER comments as follows<sup>11</sup>:

“EMCa note that, while Powerlink does not appear to have such a program and does not yet appear to be realising these potential gains, Powerlink have achieved a reduction in historical expenditure by comparison with its allowance.

Based on its experience with past transmission reviews and assessments of network service provider costs in various jurisdictions, EMCa considers that an efficiency adjustment ought to be applied to Powerlink's proposed capex. EMCa recommended a one per cent reduction in forecast capex in the second year of the regulatory control period followed by a two per cent annual reduction thereafter. This efficiency adjustment results in a reduction in capex of approximately \$45 million (\$2011-12).”

In the absence of conducting a detailed analysis, Transend is not able to comment on whether Powerlink's proposed capital expenditure satisfies the Rules requirements. However, it is worth noting that Rule 6A.6.7(c) states:

“The AER must accept the forecast of required capital expenditure of a Transmission Network Service Provider that is included in a Revenue Proposal if the AER is satisfied that the total of the forecast capital expenditure for the regulatory control period reasonably reflects:

- (1) the efficient costs of achieving the capital expenditure objectives;
- (2) the costs that a prudent operator in the circumstances of the relevant Transmission Network Service Provider would require to achieve the capital expenditure objectives; and

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<sup>11</sup> AER, Draft Decision, Powerlink Transmission Determination, 2012/2013 – 2016/2017, November 2011, pages 107.

- (3) a realistic expectation of the demand forecast and cost inputs required to achieve the capital expenditure objectives.”

If the AER determines that a substituted capital expenditure should be adopted instead of the proposed capital expenditure, clause 6A.14.1(2)(ii) requires the AER to set out its reasons for that decision and an estimate of the total capital expenditure for the regulatory control period that the AER is satisfied reasonably reflects the capital expenditure criteria, taking into account the *capital expenditure factors*, which are set out in clause 6A.6.7(e).

It follows from these Rules provisions that:

- The AER must have a high degree of confidence that Powerlink’s forecast capital expenditure exceeds the “costs that a prudent operator in the circumstances of the relevant Transmission Network Service Provider would require to achieve the capital expenditure objectives”; and
- The adjustments suggested by EMCa must ensure that the substituted capital expenditure amount satisfies the Rules requirements, taking into account the *capital expenditure factors*.

From Transend’s review of the Draft Decision, it appears that neither of these conditions have been met. In particular, EMCa concludes that Powerlink should institute a performance improvement program, with the aim of achieving cost efficiency savings in the forthcoming regulatory period. The magnitude of these savings is estimated to be 1% of total capital expenditure in the second year of the regulatory period followed by 2% per annum for each year thereafter. It is evident that:

- It is speculative whether the implementation of a performance improvement program will achieve cost efficiencies. The magnitude of any cost savings is also speculative.
- If the cost savings can only be achieved by introducing a new performance improvement program, EMCa’s assessment does not reflect Powerlink’s circumstances as required by rule 6A.6.7(c). Instead, EMCa has anticipated efficiency savings that may be achieved, providing that Powerlink makes a number of internal changes. The assessment is therefore predicated on a change in circumstance, rather than Powerlink’s actual circumstances.
- EMCa has not developed its proposed adjustment with reference to the *capital expenditure factors* in clause 6A.6.7(e), and therefore is inconsistent with the Rules.

It is worth recapping that the Rules are designed to ensure that the TNSP has responsibility for achieving compliance with its regulatory and service performance obligations. It follows that TNSPs should have reasonable scope to establish capital expenditure forecasts that do not compromise their ability to satisfy these obligations. For this reason, the Rules require TNSPs to provide sufficient information to support the requested forecast expenditure and in turn require the regulator to provide sufficient information to justify any adjustments to the TNSP’s proposed capital expenditure. As explained above, EMCa’s assessment does not meet this requirement and instead applies a speculative and arbitrary adjustment. For the Final Decision, it will be important for the AER to

ensure that any adjustment to Powerlink's capital expenditure forecast meets the Rules requirements.

Transend is also concerned that the AER's approach to assessing Powerlink's forecast capital expenditure anticipates future efficiency improvements. As a result, the AER is effectively returning efficiency savings to customers before they are achieved by the company. Incentive based regulation is supposed to mirror competitive market processes in which companies retain the benefit of efficiency improvements for a period of time. Contrary to this important design principle, the AER approach denies TNSPs a 'fair sharing' of efficiency gains in relation to capital expenditure. For this reason, Transend considers that the AER should not anticipate future efficiency improvements in its determination of Powerlink's capital expenditure allowance.

### **Debt Risk Premium (DRP)**

Powerlink proposed a DRP using Bloomberg's fair value curves extrapolated to a term to maturity of 10 years. Powerlink recognised that the AER will re-estimate the debt margin applicable to its 2013-17 regulatory period closer to the time of making its Final Decision. Notwithstanding this, Powerlink considered that the methodology used to estimate the debt margin should be appropriate and robust.

The AER rejected Powerlink's proposed approach because of a perceived sustained divergence between the fair value curve and market evidence. According to the AER, relevant market data and expert commentary suggests that debt market conditions have improved since the global financial crisis, although this has not been reflected in the Bloomberg fair value curves (FVC). Specifically, the AER comments as follows<sup>12</sup>:

- The Bloomberg FVC is an estimate made using a proprietary methodology that is neither transparent nor verifiable. Bloomberg stated that the FVC is not a predictive source of price information. It is therefore not consistent with the AER's approach, comprised exclusively of observed bond data.
- The Bloomberg 7 year BBB rated FVC (the longest BBB rated FVC currently published) does not currently reflect the available market evidence for long dated bonds, or the stated views of other independent market commentators. The AER considers the Bloomberg BBB rated FVC does not reflect the prevailing cost of debt for the benchmark Australian corporate bond.

The AER's Draft Decision concluded that its method to calculate the DRP, based on the average of observed bond yields, appropriately incorporates relevant information from the market. In the AER's view, this approach is consistent with a forward looking rate of return that is commensurate with prevailing conditions in the market for funds and with the risk involved in providing prescribed transmission services.

Transend notes that the AER has recently made a number of decisions in relation to the DRP which have been successfully appealed by network companies, including ActewAGL and Jemena Gas Networks. In the most recent case, Jemena

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<sup>12</sup> AER, Draft Decision, Powerlink Transmission Determination, 2012/2013 – 2016/2017, November 2011, pages 218 and 219.



Electricity Networks (JEN) appealed the AER's decision to estimate the DRP with reference to a single bond issue for APT. The Australian Competition Tribunal reached the following conclusions in its decision<sup>13</sup>:

"The Tribunal emphasises that it is important for the AER to estimate the DRP and other WACC components with rigour and transparency, using comprehensive market-accepted data and offering some degree of certainty about the way in which it will apply the various estimating formulae (including the DRP formula) to a regulated company. Its estimating practices, data sources and reference periods must be well articulated, consistent and communicated to the parties and must, generally speaking, follow the precedents well-established in previous decisions made by the Tribunal in *Application by ActewAGL Distribution and Application by Jemena Gas Networks (NSW) Ltd (No 5)*.

The Tribunal therefore proposes to vary the AER's decision in respect of the DRP pursuant to s 71P of the NEL, in accordance with JEN's proposal to rely only on the Bloomberg FV curve for the derivation of the DRP. This produces a DRP of 4.34% for JEN."

In reaching its conclusion, the Tribunal made the following comments in relation to the Bloomberg fair value curve:

"The Tribunal in *Application by Jemena Gas Networks (NSW) Ltd (No 5)* endorsed the suitability of using only the Bloomberg FV curve to estimate a regulated firm's DRP."<sup>14</sup>

"JEN submitted, and the Tribunal agrees, that it was unreasonable for the AER to reject its proposal to rely only on the Bloomberg FV curve and instead to incorporate also the yield from a single bond which it had not demonstrated in any way to be a relevant benchmark or comparator bond."<sup>15</sup>

"In addition, there was evidence before the AER to show that the Bloomberg fair value curve provided an accurate representation of the yields on benchmark corporate bonds and that it was widely accepted by market practitioners."<sup>16</sup>

Transend notes that the AER has developed a new method for testing and rejecting the Bloomberg fair value curve in its Draft Decision for Powerlink. However, the Australian Competition Tribunal's decision in relation to Jemena Electricity Network's appeal makes a number of important comments in support of the Bloomberg fair value curve. On the basis of this appeal decision, it is doubtful that the AER would be able to sustain its current view that the Bloomberg fair value curve is an invalid method for estimating the DRP.

Furthermore, the Australian Competition Tribunal determined that a DRP of 4.34% should be adopted for Jemena Electricity Networks. In its Revenue Proposal, Powerlink's proposed methodology also resulted in a DRP of 4.34% at the time of its proposal, but this methodology was rejected by the AER in favour of a method that yielded a DRP of 3.19%.

It is noteworthy that the AER's Draft Decision was published in November 2011, some two months prior to the Australian Competition Tribunal's decision for

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<sup>13</sup> Application by United Energy Distribution Pty Limited [2012] ACompT 1 (6 January 2012), paragraphs 461 and 462.

<sup>14</sup> Ibid, paragraph 431.

<sup>15</sup> Ibid, paragraph 434.

<sup>16</sup> Ibid, paragraph 436.

Jemena Electricity Networks. It is highly questionable whether the AER could have reasonably rejected Powerlink's proposed methodology for the DRP, if the AER had been aware of the Tribunal's impending decision.

In its Revised Revenue Proposal, Powerlink proposed a lower DRP than 4.34% as explained below<sup>17</sup>:

“For the purposes of its Revised Revenue Proposal, Powerlink has adopted an estimate of 391 basis points for the DRP, being the upper end of the range recommended by PwC and within the range recommended by QTC. Powerlink has adopted a conservative approach as recommended by PwC, having regard to current market uncertainty and the specific data concerns raised by its expert advisers in relation to the AER's bond sample.”

Transend considers that regulatory stability and confidence will be promoted if the AER now accepts Powerlink's methodology in its Revised Revenue Proposal in relation to DRP. It would be disappointing if the AER continued to promote its view that the Bloomberg fair value curve is invalid, even though the Australian Competition Tribunal has continued to reaffirm its appropriateness in estimating the DRP.

Yours sincerely



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<sup>17</sup> Powerlink, Revised Revenue Proposal, 2013-2017, page 23.