



**POWERLINK'S COMMENTS ON
P.B. ASSOCIATES CONSULTANCY REPORTS**

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1. Comments pertaining to PB's Asset Valuation Review

PB REVIEW

In reading the PB report, it is important to be aware that PB's terms of reference involved reviewing the ERU valuation of Powerlink's assets. PB did not undertake a comprehensive valuation of Powerlink's assets, rather it was a review which drew on "high level comparisons" with data available from the ACCC's revenue decision for TransGrid.

In 1999, the ERU, acting as Queensland's interim transmission regulator, engaged independent consultants (referred to as the "consortium" in PB's report) to carry out a comprehensive full scale asset valuation of Powerlink's assets as required under clause 6.2.3 of the National Electricity Code. The "consortium" which did that comprehensive full scale valuation included the same engineering consultants which had just previously done the valuation of Transgrid's assets. Given the time and effort devoted by the same engineering consultants to both asset valuation exercises, Powerlink believes that the outcomes of those valuations represent a much more robust assessment of the comparison of the asset values between the 2 entities.

VALUE OF EASEMENTS

We note that PB Associates concluded that Powerlink's proposed approach to the valuation of easements is more robust than the alternatives, but that it is not a recognised regulatory model.

Powerlink believes that, since the ACCC's regulatory principles are still in draft form, this represents an opportunity for the ACCC to adopt the Powerlink approach as a part of its principles. The Powerlink approach recognises that the "non-land" components of Powerlink's costs for obtaining easements, eg environmental studies, cultural heritage work etc are identical in nature to other studies such as line design options which are accepted as part of the line costs which are valued on a replacement cost basis.

Powerlink believes it is fundamental to regulatory clarity over the long term that these elements of an inherently similar nature are treated identically. To do otherwise would not only be inconsistent, but would also open the way for "gaming of the boundaries" between easements and lines.

Thus, the key decision for the ACCC is one of delivering a robust regulatory principle for the long term.

We also note that, even with the increase in easement value which would result for Powerlink, easements would still comprise a substantially lower percentage of overall asset value (16%) than is the case for Transgrid (39%). If anything, this would suggest that the Powerlink value for easements is still on the low side.

INDEXING THE TRANSMISSION CAPITAL BASE FORWARD

This section of the PB report contains material which is not relevant to the Powerlink situation and a some hypotheses which are unproven in the Australian or Queensland environment.

PB have hypothesised that the introduction of electricity markets etc will result in more competition between suppliers of transmission equipment. There is no evidence in the Australian or Queensland context to support that hypothesis. The transmission industry is characterised by a small number of suppliers, with few, if any, changes over the past 15 years. Competitive tendering between these suppliers has been in force for at least the last 15 years – it is not a new phenomenon. Nor has Powerlink seen any evidence in its most recent tenders of lower prices – indeed, the contrary has been observed as metal prices (eg aluminium) have recovered and the \$A has dropped against the major world currencies.

PB have also hypothesised that asset acquisition and construction costs would be driven lower by "technology". Again, there is no evidence of this. There have been no fundamental changes in transmission technology or construction technology over the past 15 years. Technology change has occurred at the margin eg secondary systems, but the acquisition costs for this technology are actually higher than for conventional technologies. On the other hand, changes in workplace health and safety and environmental legislation have added to construction costs. For example, recent legislation requires workers to now be harnessed whilst climbing towers – this has added significantly to the time taken for workers to climb towers for construction work. More stringent environmental management plans add to the costs of construction, and the costs of monitoring compliance. Additional costs are incurred in additional measures to reduce visual, social and ecological impacts.

In short, there is no evidence to support PB's hypotheses in the Queensland context, and, indeed, evidence to support an opposite view.

The material issue in relation to indexation of the Powerlink asset base in the period following a formal valuation is the degree to which the replacement value of the assets have changed over that period. In essence, the issue is about the trends in costs for acquiring and constructing such assets in Queensland in the period 2000 and 2001.

In its report, PB state that *"It would seem that transmission system project costs might currently not be increasing in line with movements in the CPI"*.

The report indicates situations where asset costs have moved at greater and lesser rates than the general consumer price movements. In order to address this issue, PB have recommended two possible approaches to capturing movements in replacement costs, viz:

- ❖ develop a composite industry specific index reflecting changes in the costs of inputs used for transmission system construction; or
- ❖ undertake a periodic revaluation of the asset base, basing each revaluation on current replacement costs. This second approach mirrors the standard CPI-X approach to regulation, with its regular revenue resets. If the second approach is adopted it might be appropriate to allow some indexation of the value of the asset base between valuations.

Powerlink believes that to make the regulatory process robust over the long term, the ACCC needs to use an indexation approach, to reflect changes in replacement costs.

Powerlink recognises that CPI, which is a general measure of prices for consumer goods and services, may not be the most pertinent for transmission assets. However, one advantage of the CPI is that it is independently published and cannot be influenced by the purchasing activities of a transmission entity.

In the event that CPI (which is based on a bundle of goods and services comprising) is not considered to provide a reasonable representation of the key input costs of transmission assets, Powerlink would support the development and application of an industry specific composite index. There is presently no single published index for acquisition and construction of transmission assets. However, it would be possible to construct a composite index, based on published data for the movement of the past 12 months in:

- ❖ construction/engineering labour rates
- ❖ costs (in \$A) of imported electrical equipment
- ❖ costs (in \$A) of aluminium (for conductors)
- ❖ costs (in \$A) of copper (for transformers)
- ❖ costs of freight between Brisbane and remote locations in the State (or, as a proxy, costs of diesel fuel).

Powerlink would note that such an index would likely exhibit more volatility than the CPI, and therefore result in more volatile transmission prices for customers. In that regard, use of CPI provides customers with a less volatile price path.

In the absence of a composite index at this point, and in line with other regulatory decisions, Powerlink has used CPI to index the asset base forward.

Powerlink is particularly concerned with any suggestion which effectively says *"any time there is uncertainty, give the transmission entity nothing"*. This approach runs contrary to the ACCC's accrual building block methodology outlined in its Draft Statement of Regulatory Principles.

SEPARATION OF REGULATED FROM NON-REGULATED ASSETS

In its report, PB state

"We .. note that there appear to be no guidelines on what assets are to be included in the regulatory asset base and what assets lie outside the regulatory framework. We suggest that the Commission include relevant guidelines in its document on ODRC asset valuation to be issued by the end of 2002."

While Powerlink supports separation guidelines being developed by the ACCC, we feel it is important to point out that Powerlink does have clear guidelines for separation of assets associated with contestable activities from those used to support the regulated business.

The "consortium valuation" carried out for ERU was applied to Powerlink's total asset base. ERU later separated out the non-regulated assets prior to setting the regulated revenue caps for Powerlink, and we have similarly excluded our (small amount of) non-regulated assets in our submission to the ACCC.

2. Comments pertaining to PB's O & M Expenditure Review

GRID SUPPORT

In its report, PB suggest

"Although the maximum annual average grid support costs reaches \$15.4m, there is considerable variation about this average depending on which scenario eventuates. Due to the variability and uncertainty in these costs, the revenue provision to cover these costs should be subject to a mid-term reset at the same time as the revenue provision for capitalised network augmentations is reset."

During the public consultation undertaken by Powerlink on its Discussion Papers associated with probabilistic capex and grid support, it was generally accepted that annual adjustments were preferable where variable costs were passed through. However, it was also recognised that, due to the lead times associated with capex roll-in, a single mid term adjustment would be more appropriate for capex. Such a practicality problem would not occur with grid support costs.

Powerlink believes annual adjustments for actual grid support costs should apply.

We also point out that PB used the term "reset", however we believe it was used by PB in the context of a cap adjustment rather than a revenue cap reset.

EFFICIENCY AND EFFECTIVENESS OPPORTUNITIES

In its report, PB identified an item for potential future efficiency gains.

"Powerlink is expensing some dismantling refurbishment activities. Some of this work may be associated with capital projects and could be treated as capital although this approach may result in the value not being captured in future valuations."

In relation to this issue, Powerlink wishes to clarify the following two points:

- ❖ Powerlink's approach of expensing these costs is in line with its documented capitalisation policy which is based on accepted accounting principles; and

- ❖ In any case, the issue raised is about allocation (to capital expense versus operating expense accounts), and is not about exclusion of these valid costs.

Powerlink believes there are sound accounting principles which support such costs being recognised as an operating expense, and that there is no reasonable basis for them to be treated as capital.

Further if the cost of dismantling assets was included in the capitalised cost of all assets, it would add substantially to the value of the existing asset base.

In relation to the efficiency of Powerlink's operating costs, we note that PB have confirmed that Powerlink's maintenance and operating costs are the lowest in the NEM.

3. Comments pertaining to PB's Capital Expenditure Review

QUEENSLAND-NSW INTERCONNECTOR EFFICIENCIES

In its report, PB state:

"Of the \$40.5m claimed as QNI efficiency gains, we recommend all but \$6.5m be allowed. The \$6.5 m related to the hedging of aluminium construction should not be allowed due to the speculative nature of the gain."

Powerlink believes that this exclusion is both unwarranted and fundamentally unsound in the context of delivering robust regulatory signals. Powerlink does not believe that hedging the entire 7,500 tonnes of aluminium was speculative – rather it was an efficient management decision. As such, it should be included as an efficiency gain. From a regulatory perspective, disallowing this item would send a signal to transmission entities that in future they should not hedge and simply pass the price risk through to customers. There is no doubt that the replacement cost of that conductor today is at least \$6.5M higher than the cost at which it was procured by Powerlink.

Further, had Powerlink believed that the \$6.5M was speculative, it could have adopted an alternative procurement and accounting treatment which saw the project allocated with the full spot price of the aluminium, and the \$6.5M "speculative gain" treated as non-regulated revenue.

In relation to the costs savings from selecting an unproven contractor, which PB endorsed, we would clarify PB's comment that the contractor had experience overseas. This refers to engineering input from KG's UK partner – the work "on the ground" was undertaken by KG, who at that stage had never undertaken a transmission project of this magnitude.

PB's hypotheses about the likely costs of future construction work are speculative, and not evident in recent tenders.

GLIDE PATH

In its report, PB suggests that capital efficiency gains be shared between the TNSP and customers using a glide path defined as

"ramped down to zero at a linear rate over the next regulatory period, in accordance with Section 7.2.2 of the Commission's Draft Principles."

Powerlink is concerned that PB have taken it upon themselves to design the glide path envelope for Capex efficiency gains – Section 7.2.2 of the DRP does not define the glide path.

Clearly a capital related glide path needs to be somewhat different to an O&M glide path. O&M benefits are captured in total by the TNSP up front, and passed on to users later. Capital gains are returned to the investor gradually over the asset life (40-50 years). Therefore, the sharing regime needs to be extended over many regulatory periods. Powerlink expects the ACCC will develop an appropriate glide path under this decision which will form the basis for inclusion in the DRP.

4. Comments pertaining to PB's Service Standards Review

GENERAL

Powerlink supports the view expressed in PB's report that service standards should not be linked to Powerlink's revenue outcomes during the 2002-2007 reset period. The ACCC's Draft Statement of Regulatory Principles is far from finalisation on this matter. In fact, when preparing its Application for this revenue reset, Powerlink found the DRP, in relation to service standards,

- ❖ Generally inconclusive;
- ❖ Ambiguous in relation to definition of measures; and
- ❖ Based on an unsound statistical approach.

PB indicated they were impeded in their review due to the incompleteness of the DRP.

Notwithstanding this, Powerlink proposed a comprehensive range of measures and targets. These measures included those accepted by the ACCC in TransGrid's decision plus an additional suit of measures Powerlink considers to be more mathematically robust than those which apply to TransGrid.

There were several measures/targets proposed by Powerlink which were not fully supported by PB. We believe that this difference was a result of:

- ❖ The limited time PB had to assess the statistically – based approach proposed by Powerlink;
- ❖ The lack of guidance given by the DRP; and
- ❖ The paradigm shift in approach proposed by Powerlink compared with the DRP position.

Powerlink believes its approach represents a positive step forward from the DRP and does not agree that PB's modifications to Powerlink's targets are appropriate. One such example is outlined in the following section.

We understand that the ACCC propose to progress the service standards section of the DRP in the near future. Powerlink believes this would provide the appropriate avenue for furthering service standards, rather than through the current regulatory revenue reset process. However, should the ACCC choose to impose financial impacts in relation to service standard targets within this reset, Powerlink would need to discuss the PB targets further.

PERFORMANCE MEASUREMENT TARGETS

In Section 5.5.2 of its report, PB state:

"In the case of loss of supply events annual targets based on the mean performance over a long period of time are not meaningful. This can be illustrated by considering the target of point 0.07 for the winter loss of supply events per quarter. There are only two winter quarters in any one year and you cannot have a fraction of an event. If there are no qualifying winter outages in any year the reported mean will be 0.0. If there is one qualifying outage the reported mean will be 0.5. No intermediate values between 0.0 and 0.5 are possible so, in this context, a target of 0.07 is meaningless.

One approach to overcome this difficulty would be to report a rolling average over a number of years, using a similar approach to that proposed for system minutes. Powerlink does not favour this approach and argues that it is not sound as it does not effectively filter out background noise to give an underlying reliability trend. As discussed in Section 5.4, we do not believe this would be a problem providing the rolling average is taken over a sufficiently long period.

An alternative approach would be to express the target in terms of the number of events in a particular year. If this approach is taken the annual targets could be expressed as shown below:

| | |
|---|----------|
| <i>Total number of loss of supply events greater than 0.2 system minutes – summer</i> | <i>3</i> |
| <i>Total number of loss of supply events greater than 0.2 system minutes – winter</i> | <i>2</i> |
| <i>Total number of loss of supply events greater than 1.0 system minutes – summer</i> | <i>1</i> |
| <i>Total number of loss of supply events greater than 1.0 system minutes – winter</i> | <i>0</i> |

We consider these targets to be more meaningful for regulatory purposes than those proposed by Powerlink and recommend that they be adopted in the interim.”

In making these comments, PB has misunderstood the meaning and application of the mean performance targets. These targets are not a mean value to be achieved in a particular year as suggested above. They represent the long term average of events which exhibit a Poisson distribution. Whilst each event has an integer value, the long term average can be, and typically is, non-integral. The mean is used in analysing trend movements in the performance. Powerlink use Poisson control chart techniques to monitor the trend in reliability. The target of 0.07 should be interpreted as

“The long term average number of events for a winter quarter will be 0.07”.

The mean for a two-quarter period is not determined as it is not a meaningful figure. Rather the actual number of events occurring is tested for the hypothesis that there has been no change in the level of reliability given the target long run average.

The application of this number is as follows –

Given that the mean is 0.07, then the Poisson distribution can be used to determine that the probability of having 0, 1, 2 etc events in a winter quarter is as follows –

| | | | |
|---------------|-----|----|------|
| No. of Events | 0 | 1 | 2 |
| Probability | 93% | 7% | 0.2% |

Therefore, it would normally be expected that there will be 2 or less events per quarter. Normal control chart techniques could be used to determine whether trends were occurring (ie two quarters in a row with 1 events etc).

The Powerlink approach is based on sound statistical principles – we believe that PB, in an attempt to simplify the underlying statistical nature of the data, has actually proposed targets which are not supported by the underlying statistics. Powerlink recognises that the use of statistical mathematics may add a degree of complexity – but that any serious measurement of system performance cannot avoid that.

Powerlink is cognisant of the interest of market participants in ensuring that planned outages of the transmission system are undertaken in a way which minimises the market impact of those outages. Whilst we don't have access to such measurements of market impact, we are supportive of recording and reporting outages on a more detailed basis eg peak vs off-peak.