Parsons Brinckerhoff Associates Ltd

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ACCC
Regulatory Affairs Division
GPO Box 520J
Melbourne VIC 3001

Attention: Sebastian Roberts
General Manager - Electricity

Dear Mr Roberts

Operations and Maintenance Costs for Murray Link Transmission Company Alternative 3

Further to our phone discussions and subsequent e-mails, PB Associates has reviewed the proposed operations and maintenance (O&M) costs for alternative 3, as provided by Burns and Roe Worley (BRW) in the Murray Link Transmission Company (MTC) interim response of 30th June 2003. We note your comment that MTC's full response of 18th July 2003 does not contain additional information regarding these costs.

In particular, you requested PB Associates review of:

- The breakdown of estimated costs for alternative 3 (pages 6 and 7 of BRW's report)
- The degree to which the cost elements are fixed or variable in relation to the capital costs of alternative 3
- The differences in costs between a stand alone ac link and if the ac link was managed and owned by an existing TNSP

1. BRW Estimated Costs for Alternative 3

Alternative 3 consists of 155km of 220kV single circuit transmission line between Red Cliffs and Monash, 25km of undergrounding near the town ships of Red Cliffs and Lyrup, a 220/132kV phase shift transformer, a +/-120MVAr SVC, control systems to manage overloads, line protection communications and spares. The BRW capital cost estimate for alternative 3 was $201.6M.

In their letter dated 30th June 2003, BRW provided O&M estimates for alternative 3. MTC provided BRW with a July 2002 projection of particular cost elements and BRW amended them, as they considered appropriate. BRW's estimated O&M costs for alternative 3 are shown in Table 1. MTC confidential information reviewed by PB Associates was based on Price Waterhouse Coopers' letter dated 7 April 2003 to the ACCC.

Table 1 BRW Estimated OPEX for Alternative 3

	Cost Element	Alternative 3 Annual Cost ($000)
1	Management and operations	550
2	Maintenance costs	600
3	Connection, commercial and regulatory	770
4	Communications and energy	300
5	Insurance	700
6	Accounting, audit, bank guarantee and taxes	310
7	Overhead, miscellaneous and contingency	270
	TOTAL	**3,500**

For alternative 3, BRW noted that the most significant costs were for connection. They estimated insurance based on the nature of the line and the increase in premiums that occurred in 2002. The overhead line risk due to bushfires, exposure to natural events, vehicle collisions, vandalism or sabotage was factored into their evaluation.

BRW assumed constant annual O&M costs on the basis that costs in the initial year of operation could be higher due to commissioning of plant, establishing procedures, training etc.

2. Appropriateness of BRW estimates

PB Associates reviewed each component, based on industry experience, in order to establish the appropriateness of the estimates, taking into account fixed and variable costs for the standalone option. The fixed costs were assumed to be for alternative 3 as proposed by BRW with costs varying below this level when components were eliminated. The results of this review are shown in Table 2.

Maintenance costs would reduce on a percentage basis more than other costs as capital costs are reduced. BRW noted even if the phase shifting transformer was eliminated, conventional step up transformers would still be required. Maintenance costs would therefore not be significantly impacted.

Table 2 Cost Comparisons

Cost Element		Standalone Alternative 3	Alternative 3 owned by incumbent TNSP
1	Management and operations	BRW estimate is significantly lower than the actual MTC costs. The estimate of $550k is considered appropriate and is unlikely to vary significantly with variable capital costs.	A local incumbent TNSP would be able to manage alternative 3 on a marginal basis, with costs expected to be 20-30% of those estimated by BRW.

2	Maintenance costs	Average transmission line maintenance costs per transmission km for other TNSPs are Transend ($1,300/km), Powerlink ($750/km) and Transpower ($900/km- for 220kV towers). Average line and cable annual costs would therefore be in the order of $250k/year assuming cable and line costs per km were comparable. Overall long-term annual maintenance cost for line, cable, transformer, SVC and secondary equipment is estimated to be approximately $400k. Costs during the early years of the asset life would be below this, but when economies of scale are considered, $400k is considered appropriate for the first 10 years of operation. BRW costs of $600k appear to be too high, especially when compared with actual MTC maintenance cost estimates and other TNSP information. The estimated $400k annual costs would decrease marginally with reducing capital costs.	Estimated annual costs of 400k would be lower if owned by a local incumbent TNSP due to economies of scale that could be applied. Risks would be lower as existing TNSP would also be managing comparable equipment.
3	Connection, commercial and regulatory	Costs are considered appropriate based on proposed connection fees for actual MTC link. Providing connection configuration with each TNSP remains the same, connection costs are unlikely to vary significantly with variable capital costs.	Marginal reduction in costs expected as commercial and regulatory requirements could be provided by existing TNSP capabilities.
4	Communications and energy	Communication costs are for line leasing between transmission locations and energy to provide external supply (not for energy consumption). Communication and energy requirements for alternative 3 should be less than the actual MTC link, which is reflected in the slight difference between the BRW estimate and the actual MTC link cost. Varying capital costs are likely to have minimal impact on communications and energy cost, subject to similar functionality.	Costs comparable to standalone alternative 3.
5	Insurance	Transend annual insurance costs are 0.18% of depreciated asset value ($1.0m) and SPI PowerNet 0.19% ($2.7m), equating to $380k for alternative 3.	On incremental basis for an existing TNSP, costs could be expected to be in the order of $400k.

		On a standalone basis, the insurance cost would be higher but should not be as high as that projected by BRW. They could be in the order of $500k. Varying capital costs may impact on the insurance estimates but not in a linear manner.	
6	Accounting, audit, bank guarantee and taxes	BRW costs for alternative 3 are comparable with actual MTC costs. Costs in the order of $300k are considered appropriate and varying capital cost would have minimal impact on these.	These costs would be reduced to just taxes if managed by a local TNSP, in the order of $80k. Accounting, audit and bank guarantees requirements would have marginal imp-act on the existing TNSP costs.
7	Overhead, miscellaneous and contingency	BRW costs for alternative 3 are very similar to actual MTC costs. MTC previously advised that these costs were calculated on a % basis of other costs. As other costs are lower for BRW estimate than actual MTC costs, overheads etc should also be reduced. A level of $200k would be more appropriate which would not vary significantly as capital costs were reduced providing similar functionality was maintained.	The overhead, miscellaneous and contingency requirements should be minimal when operated by local TNSP

PB Associates considers the costs for alternative 3 should be closer to $3.0m than the $3.5m determined by BRW. The estimated costs could reduce to approximately $2.0m if alternative 3 was owned and operated by a local TNSP.

We trust that this information meets the Commission's requirements and look forward to discussing these issues further, if required.

Yours faithfully,

For Parsons Brinckerhoff Associates

Anthony Seipolt
Manager Australia - PB Associates