



28 February 2003

Mr Sebastian Roberts  
Acting General Manager Regulatory Affairs - Electricity  
Australian Competition and Consumer Commission  
GPO Box 520J  
MELBOURNE VIC 3001

Dear Sebastian

**PLANNING COUNCIL SUBMISSION - MURRAYLINK'S APPLICATION FOR CONVERSION**

This submission outlines a range of issues that the Planning Council believes should be considered by the ACCC in relation to Murraylink's 18 October 2002 Application for Conversion to a Prescribed Service and a Maximum Allowable Revenue for 2003-12.

Our submission relates primarily to Murraylink's Application but we have also commented on matters raised in the ACCC's February 2003 Issues Paper dealing with the Application and the related consultants' reports prepared by PB Associates and SAHA Energy International.

Our submission comprises this covering letter, which canvasses a number of matters related to Murraylink's Application, and an attachment that provides additional comments on the related PB Associates reports.

**CAPACITY**

In assessing the gross market benefits associated with the Application, the Planning Council would highlight the fundamental importance of the size of the transfer capabilities that Murraylink can achieve.

Unfortunately, this capability cannot be reduced to a single number and it is inherently misleading to so propose. Instead the factors that need to be determined to enable any rational assessment of benefits include:

- the transfer capacity that Murraylink provides between South Australia and Victoria at average load conditions;

- the transfer capacity that Murraylink provides between South Australia and Victoria at peak load conditions; and
- the impact, if any, that Murraylink has on the systems ability to transfer power from NSW to the combined SA/Vic region at peak periods.

In addition, the Code requires the network to be designed and operated in such a manner that the loss of the single most significant network element would not result in customer load shedding (so called N-1 reliability). This impact may significantly reduce the raw physical capacity of the wires under any of the above operating configurations.

The Planning Council notes that the above, prerequisite set of information is not available in either the original Application or the PB Associates review. The Planning Council makes some specific comments in the attachment regarding proposals to lift the transfer capacities of Murraylink by undertaking various associated network improvements. Without any agreement at an IOWG level as to the efficacy of those proposals, the Planning Council, in its comments on benefits in the next section has relied on the most recent formal statement of capacity as contained in section 8.2.9 of NEMMCO's 2002 Statement of Opportunities, namely that:

"... transfer limits determined by the Interconnection Options Working Group (IOWG) and individual TNSP's indicate that at times of peak demand the Murraylink interconnector will not provide any significant additional transfer capability between the two regions [Victoria and South Australia] or between Snowy and the combined Victorian and South Australian regions."

#### **OVERALL QUANTUM OF GROSS BENEFITS ESTIMATED BY MURRAYLINK**

The following summary of costs and benefits can be deduced from the Murraylink Application and other published information. The summary relates to interconnector transfers between the SA Riverland region and the western NSW/Vic areas.

<b>Project</b>	<b>Capacity</b>	<b>Proposed regulatory cost</b>	<b>Gross benefits</b>
Murraylink as TNSP	180MW claimed, not verified	\$177m	\$214m claimed
SNI (no Murraylink)	250MW verified	\$110m	\$261m
SNI + Murraylink as MNSP	250MW verified	\$110m	\$219m
SNI + Murraylink as TNSP	250MW verified	\$287m	Not calculated

Murraylink's Application claims that the gross market benefits of the Murraylink interconnector are of the order of \$214m. We believe this figure is materially overstated and that an economic assessment conducted on a similar basis to that used in the recent SNI and SNOVIC400 assessments would reveal much lower gross market benefits, possibly in the range of \$0 to \$30m.

In this regard it is instructive to compare the level of gross benefits claimed by Murraylink with indicative gross benefits identified in the recent SNI and SNOVIC400 evaluations<sup>1</sup>.

<b>Benefit category</b>	<b>Murraylink</b>	<b>SNI</b>	<b>SNOVIC400</b>
Fuel, variable O&M and related benefits	\$79m	\$32m	\$2.1m
Capacity deferral - market entry	\$51m	\$0m	\$37.8m
Capacity deferral – reliability	\$0m	\$166m	\$244m
Other reliability benefits	\$59m	\$0m	\$0m
Riverland deferral benefits	\$26m	\$20m	\$0m
<b>Total Gross Benefits</b>	<b>\$214m</b>	<b>\$219m</b>	<b>\$284m</b>

In comparing the differences between the figures it is important to note the following:

- Although both Murraylink and SNI offer interconnection between SA and eastern state transmission networks via the Riverland region, Murraylink offers a less robust physical interconnection and has a lower transport capacity than SNI. We would therefore expect Murraylink, in the absence of SNI, to offer fuel and related savings plus market entry capital deferral benefits below the \$32m estimated for SNI, not \$130m as implied in the Application.
- The Application assumes SNI will not be commissioned. However, as SNI has passed the Regulatory Test and is approaching the stage where it will be regarded as a committed project<sup>2</sup>, we believe that Murraylink’s gross benefits should be estimated using a base case that assumes SNI is commissioned. In these circumstances, we believe Murraylink’s gross benefits (including Riverland deferral benefits) will be close to zero. We would also observe that the SNI evaluation has already counted the Riverland deferral benefits and question the legitimacy of double counting these benefits in the Murraylink assessment.
- The overwhelming majority of benefits attributed to SNI and SNOVIC400 are associated with reliability driven capacity deferral. This is appropriate, given that those interconnectors offer links between regions that do not have coincident peak demands. In comparison, Murraylink connects SA and Victoria, regions that are regarded as having coincident peak demands. It appears to the Planning Council that Murraylink does not increase the potential for reserve sharing under peak load conditions and so cannot defer the entry of new plant required to maintain reserve standards. Although Murraylink has not explicitly claimed benefits in this category, a completely different modelling approach has been used by Murraylink compared to the approach used in assessing SNI and SNOVIC400 and a very significant value of \$59m has been attributed to ‘other reliability benefits’.

There are many particular features of Murraylink’s approach to estimating gross benefits that we believe may have contributed to this wide divergence from what we believe to be a reasonable level

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<sup>1</sup> SNI and SNOVIC figures have been taken from the SRMC, medium growth, 9% discount rate case. The comparison presented here is intended to be indicative only and we note that the SNI and SNOVIC evaluations included a range of results.

<sup>2</sup> TransGrid has recently informed NEMMCO that it expects to achieve committed status by July 2003.

of gross benefits. In this regard, we believe the ACCC should consider the following matters in assessing the robustness of Murraylink's estimated gross benefits.

- Notwithstanding the PB Associates reports, there has not yet been an independent verification of the physical capacity and representation of Murraylink and other critical network elements that underpin the Application's estimate of economic benefits<sup>3</sup>. This should be undertaken as an essential first step prior to assessing Murraylink's claimed benefits, including Riverland deferral benefits.
- We believe that SNI has been incorrectly excluded from the base case and that Murraylink's benefits should be estimated on the assumption that SNI proceeds to commissioning in the near future. We also believe that the Riverland deferral benefits have been double counted.
- There has not been any consideration of alternative market development scenarios such as the future commissioning of Basslink, nor has there been any stress testing or sensitivity analysis using different assumptions and parameters.
- Murraylink's assessment is based on assumptions of SRMC bidding behaviour and market driven new entry in combination with a quite separate and unproven modelling approach (in the NEM context) to forecasting unserved energy, resulting in the inclusion of the very high level of 'other reliability benefits'. There has been no consideration of alternative bidding scenarios or reliability driven (least cost) new entry, which we understand are required by the Regulatory Test, and there is no indication in the material presented that the reserve margins required throughout the NEM have been met in each year<sup>4</sup>. We therefore believe that Murraylink's results should be stress tested by benchmarking the level of benefits derived using Murraylink's 'dual model' approach against estimated benefits using the well established modelling approach adopted in the SNI and SNOVIC evaluations. If the two approaches yield materially different results, we believe that further public consultation should be considered by the ACCC in regard to the merits of each approach. The outcome of such a review would be important not only from the perspective of this Application, but also because of possible ramifications for the future optimisation of all regulated asset values and the consequent price effects on consumers.
- At a more general level, we do not consider Murraylink's Application presents sufficient detail, particularly regarding intermediate modelling outputs, for a third party to be able to critically review and comment on the specific modelling results. We would also question the use of a single discount rate, noting that the SNI and SNOVIC evaluations used 9%, 11% and 13%, and believe that the issues raised in the SAHA Energy report regarding application of the CPI throughout the model should be addressed. We do not believe the choice of historic load traces used by Murraylink in the assessment is appropriate and note that recent NEMMCO work on reliability standards has adopted different historic load traces as being representative of a 10% maximum demand year. Finally, we believe that Murraylink's O&M

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<sup>3</sup> Additional comments on this issue are included in the first section and our Attachment dealing with the PB Associates report.

<sup>4</sup> In this regard we would note that the SNI Stage 2 Report in section 3.2.3 noted that "The modelling approach [adopted in the SNI evaluation] assumes reliability plant enters the market as required to maintain minimum reserve levels. This approach delivers very little variation in unserved energy (USE) between alternatives."

costs, which form an important element of the proposed regulated asset value (RAV), should also be scrutinised closely by the ACCC.

#### **RIVERLAND DEFERRAL BENEFITS**

The Planning Council notes that, as part of its estimate of market benefits, Murraylink has claimed a \$26m Riverland deferral benefit on the basis of its assessment of Murraylink's ability to support supply into the Riverland region. The application states that "Murraylink provides additional supply capacity to the Riverland area, from the summer of 2002-03, deferring the need for major transmission augmentation up to 2012-13."<sup>5</sup> Such a conclusion is contrary to the Planning Council's analysis of the Riverland.

The Riverland Augmentation Final Technical Report published by the Planning Council in December 2001 concluded at page 19 that "Murraylink alone does not provide adequate security for the Riverland beyond 2007-08."

The forecasts used by the Planning Council in conducting its review of the Riverland network were based on an observation of actual demand and power factors in the region for the summers prior to 2001-02. These demands were escalated in accordance with historical patterns.

As is the case with most forecasts, they are refined as more information becomes available. The 2002 South Australian Annual Planning Report (APR), published by the Planning Council, took account of the most recent summer observations as well as any revisions that the local distributor, ETSA Utilities, had made to its forward demand projections. The resulting figures display a demand forecast for the Riverland region lower than that used in the Riverland study to the extent that the total demand originally forecast to occur in 2007-08 is, according to the estimates, now unlikely to occur until 2008-09. Over a ten year planning horizon, and given the inherent uncertainties in load growth, demand profile and local distribution reinforcement, a one or two year variation would not be considered to be particularly significant.

Notwithstanding publishing the revised forecast information in the APR which has been prepared based upon information forecast by other parties, the Planning Council habitually cautions all users of this information against assuming these forecasts accurately represent future years demand characteristics. The Planning Council has some specific reservations as to whether the significant improvement in power factor forecasts for the years 2002-03 onwards will be achieved in practice according to the forecast, or, in any event be at such levels by the summer of 2007-08.

As such, the Planning Council's original assessment of Murraylink's ability to support the Riverland has not changed significantly. Accordingly, Murraylink as a regulated asset would serve to defer the capital involved in a new 275kV line, estimated at around \$35m, for 5-6 years resulting in an estimated Riverland deferral benefit of approximately \$10-15m. This benefit is significantly reduced should it be assumed that SNI goes ahead.

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<sup>5</sup> Section 4.7.3 of Murraylink's Application for Conversion to a Prescribed Service and a Maximum Allowable Revenue for 2003-12, 18 October 2002

**SA RISKS PAYING TWICE FOR INTERCONNECTION THROUGH THE RIVERLAND CORRIDOR**

We believe that close attention should be given to the fact that SNI has already passed the Regulatory Test even though this status is under challenge in the Victorian Supreme Court. Notwithstanding the ongoing appeal process, the Planning Council believes there is a significant likelihood that SNI will eventually proceed to construction. Against this background, Murraylink has proposed a RAV of \$177m, a figure that makes no allowance for the prospect of SNI proceeding.

Electricity consumers therefore face the risk that Murraylink’s Application is successful and that SNI eventually proceeds to commissioning. Consumers would then be required to pay TUoS based on a combined RAV of almost \$300m for both projects. This would be an unacceptable outcome, given that we believe most, if not all, of the benefits associated with these two projects would be secured by SNI on its own at a RAV of the order of \$110m.

It may be appropriate for Murraylink’s RAV to be set initially with regard to benefits estimated on the basis that SNI does not exist, with the requirement that, if and when SNI is commissioned, the RAV would be adjusted downwards. The Planning Council believes that it would clearly be inappropriate in these circumstances to lock in a RAV for Murraylink for 5 years (or 10 years as sought in the Application) on the basis of Murraylink’s implied assumption that SNI will not proceed<sup>6</sup>.

Given the proposed framework for deriving the RAV, it will be important to treat SNI correctly within the overall evaluation process. The framework being proposed is as follows:

$$\text{Minimum of } \left\{ \begin{array}{l} \text{PV of Murraylink’s gross benefits} \\ \text{PV of Murraylink’s actual total costs} \\ \text{PV of total costs of lowest cost alternative} \end{array} \right. \quad \text{Less PV of Murraylink’s operating costs} = \text{RAV}$$

SNI could be treated as either an alternative project or part of the background environment assumed when estimating Murraylink’s gross benefits. The Planning Council believes that the latter of these treatments is the appropriate one, given that both projects may coexist. The former approach may result in Murraylink being attributed a similar RAV to SNI in circumstances where Murraylink may offer little or no incremental market benefits if SNI exists.

Murraylink’s Application does not canvass these issues and it is not possible from the information presented to determine Murraylink’s gross benefits if SNI is assumed to exist. Further modelling work would clearly be required to estimate these values.

**SELECTION AND COSTING OF ALTERNATIVE PROJECTS**

The range of alternative projects considered in Murraylink’s modelling is too narrow in our view and we have concerns that some of the costs are inflated.

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<sup>6</sup> While we do not wish to contribute further to the current debate as to the duration of the regulatory control period, we observe that the ACCC in its recent determinations has consistently determined about a 5½ year period before further review and we unaware of any compelling argument to justify a different approach specifically for Murraylink other that the issue noted above.

The alternative projects nominated by Murraylink have been specifically chosen to “offer the same technical service (and hence, the same market benefits) as Murraylink.” This has meant each of the AC alternatives included both SVC and a phase shifting transformer specifically to mirror the functional characteristics of the DC technology. Hence alternative projects 1, 2 and 3 are fundamentally the same and equivalent to Murraylink.

Alternative 1 is formed around building a Buronga to Monash 275kV line and operating it at 220kV. This alternative is scoped with 5 transformers (3 installed and 2 spare). As such, this project's estimated costs are significantly inflated above alternative 3 (an almost identical AC augmentation to a different terminal point using 1 transformer installed with 1 transformer spare). In the context of Murraylink's alternative projects, there is no rationale provided for such embellishment of alternative 1 compared with the other alternatives; indeed, we would anticipate that the ACCC would optimise downwards project 1 so that projects 1, 2 and 3 were approximately equal in value. It appears to the Planning Council that alternative 1 is not consistent with Murraylink's own criteria for projects that are direct substitutes for Murraylink.

The Planning Council notes the degree of undergrounding costs included in projects 1, 2 and 3. We also note SAHA Energy's comments regarding the lack of justification for undergrounding works and their valuation for regulatory test purposes and concur with those comments.

We believe that a reasonable set of alternatives should include projects without undergrounding, as there is no particular requirement for this, and ideally would include the obvious alternatives of a project very similar to SNI with a capital cost of the order of \$110m, a possible upgrade of the Heywood interconnector and generation options.

#### **THE MANNER IN WHICH THE REGULATORY TEST IS APPLIED**

Murraylink has, in effect, back-engineered a hypothetical capital value that purportedly demonstrates that the project passes the Regulatory Test, albeit with zero net market benefits. There has been no separate assessment of the gross benefits of alternative projects, nor has there been any consideration of different scenarios or stress testing of various assumptions. This approach is inconsistent with the recent assessment of other proposed regulated interconnectors. Assessment of those projects involved application of the Regulatory Test in an *ex ante* sense and, importantly, involved ranking the alternatives to each project according to the present value of their respective net market benefits. The same approach will also be applied to assessing other proposed new regulated interconnectors.

The Planning Council believes that considerations of equity and a level playing field for regulated investments require that a consistent approach be applied to Murraylink's Application. That is, the Regulatory Test should be applied in an *ex ante* sense and the net benefits of alternative projects compared under different scenarios and assumptions. If Murraylink passes the Test on this basis it would be entitled to shift to regulated asset status.

We would anticipate that a decision to change Murraylink's operating functionality from that of MNSP to TNSP would require demonstrating that Murraylink will provide benefits to the NEM from functioning as a TNSP over and above those available while operating as an MNSP. In this context, we see some merit in the ACCC considering the proposal outlined in the recent NERA report

commissioned by TransGrid and which comments on the Application. That is, the Regulatory Test could have regard to the incremental market benefits of Murraylink changing status. Or put another way, the loss of amenity from Murraylink ceasing to act as an MNSP would be allowed for in the estimation of net market benefits.

This approach, as well as being fair to other proponents, should ensure that Murraylink's conversion maximises net market benefits. As it stands, the Application seeks conversion at a value that offers zero net market benefits and does not allow for the loss of benefits associated with changing status.

In this regard we would also note that Riverland compliance augmentation is likely to be a large augmentation project which will also be required to pass the Regulatory Test. Given the potential synergies involved in this regard, we believe that the Regulatory Test should be applied such that it encompasses and addresses both interconnector issues and Riverland compliance requirements in order to demonstrate to the NEM an integrated solution that is optimal with respect to both interconnector transfer capability and Riverland network security needs. Such an integrated solution (which is likely to be implemented in strategic stages and might also consider elements of 'unbundled SNI') will lead to efficient and optimal use of all regulated transmission assets in the Riverland region of South Australia. Consequently the Planning Council does not believe the Murraylink Application as presented before the ACCC is adequate to fully support its conversion to regulated status.

#### **CONCERNS ABOUT GAMING THE CONVERSION PROCESS**

We believe there is a risk that the approach being proposed in the Application may set a precedent that will open the way for gaming the overall investment process. For example, it is not difficult to imagine a project which offers very strong initial cash flows, but in the longer run is not financially viable nor would it pass the Regulatory Test. Such an asset might be constructed as an entrepreneurial investment with the owners securing the high initial cash returns, then as the project becomes unprofitable, elect to convert to regulated asset status with zero net market benefits. The proponents would be better off to the extent that the initial cash returns outweighed the subsequent capital write down required to achieve regulated status, and consumers would be left to underwrite what was obviously an unwarranted project from a broader economic perspective.

The SAHA Energy report also expresses concerns with regard to gaming the investment and conversion process and we would therefore encourage the ACCC to develop safeguards against this type of outcome.

Yours sincerely



Ron Morgan  
CHIEF EXECUTIVE

attach



Attachment

**SPECIFIC COMMENTS ON “REVIEW OF MURRAYLINK TRANSMISSION PARTNERSHIP SERVICE STANDARDS,”  
REPORT BY PB ASSOCIATES**

Section 4 of this PB report includes logic that since Murraylink is an inter-regional transmission link, “intra regional performance measures are not relevant”. Whilst this statement is not disputed assuming the classic role of an interconnector, the Planning Council makes the observation that the particular location of Murraylink as a regulated asset is quite likely to have a significant impact upon local Riverland network performance measures. Consequently the Planning Council does not unreservedly agree with PB Associates’ conclusion on this point.

The Planning Council suggests that further definition of performance measures may be necessary to adequately reflect the combination of both Murraylink and ElectraNet SA’s transmission networks in contributing to Riverland service standards.

In all other aspects, the Planning Council concurs fully with the recommendations made in the PB Associates’ report on service standards applicable to MTC as a TNSP.

**SPECIFIC COMMENTS ON “TRANSFER CAPABILITY REVIEW OF MURRAYLINK APPLICATION TO ACCC”,  
REPORT BY PB ASSOCIATES**

Comment 1

PB Associates clearly and succinctly state that their report:

“... is based on the information contained in the revenue cap application and additional supporting information provided to PB Associates by MTC. ... PB Associates has not undertaken any audit of the accuracy or validity of the power system studies or underlying models on which this information was based.”

And

“MTC provided a presentation to PB Associates on the TransEnergie Australia (TEA) and Power Technologies International (PTI) reports. ... Formal discussions with transmission network service providers (TNSPs) or other stakeholders have not been held ...”

And

“The main documents from the Murraylink revenue cap application to the Commission reviewed for this report were the TEA Murraylink transfer Capability Assessment (Appendix A of application) and the PTI Due Diligence on Power Transfer Studies (Appendix B of application).”

As such, the report can do nothing more than review consistency between the TEA and PTI conclusions. The report does not provide any independent assessment or evaluation of TEA claims. The report has not addressed any interactions with the owners and operators of the transmission networks and facilities affected by Murraylink, in particular, Transgrid, VenCorp (some limited reference is acknowledged), SPI PowerNet, ElectraNet SA and NEMMCO.

Consequently the Planning Council does not view the report as contributing additional relevant information to Murraylink's Application.

#### Comment 2

Section 2.1 attempts to explain the difference between "rated capacity" (being an upper design figure for a network element in isolation from any other elements) and "transfer capability" (being what will flow through it as a result of any particular power system network, loading and generation configuration). It argues that Murraylink's transfer capability may be lower than its rated capacity as a result of AC network conditions and demands either side of Murraylink.

The transfer capability of an AC interconnector is likewise determined by the AC network conditions and demands either side of the interconnector and are likely to be lower than the rated capacity of the AC interconnector.

In this regard Murraylink, a DC transmission element, is no different from an AC transmission element. What is different though, is the fact that a DC link introduces an additional parameter into the network performance and transfer considerations, viz Murraylink can control actual power transfer amount (and direction) from zero through to this transfer capability.

As the physics associated with power flows and practical operational considerations of an electrical network are fundamentally the same regardless of whether the interconnector utilises AC or DC technology, any power transfer constraints that determine Murraylink's transfer capability to be lower than its rated capacity are not factors that uniquely penalise Murraylink.

#### Comment 3

Section 2.2 introduces run back schemes and tripping schemes as methods of "increasing an interconnectors transfer capability when it is constrained by potential network overloads or voltage control violations." This statement needs to be considered carefully in the light of the practical NEM integrated transmission network.

For much of the time, it is reasonable that a power system is operating under ideal network and loading conditions (typically, all transmission lines in service, average rather than peak demands, generation dispersed amongst the regions, more than adequate reserves available). Under such ideal conditions, it is feasible (and indeed expected) that power system despatch and operation optimisation may result in high transfers across interconnectors. However NEM security requirements dictate that the attainment of such efficiencies is only feasible provided there are accompanying control mechanisms that monitor and readjust network configuration/performance in the event of a failure of a critical transmission link (i.e. the network must be able to tolerate a credible network link failure without loss of customer supply). Such interconnector control schemes may involve run back schemes (typically for DC transmission links) and/or tripping schemes (typically for AC transmission links) in order to change the power system to a different state (ie non optimised) that still maintains the required network performance without loss of supply to end customers.

Thus the power transfer capability of any interconnector must be determined as that what occurs under worst case scenarios, viz:

- peak load demands imposed upon networks for the year(s) in question, and

- a coincident outage of the most critical single power system network element, and
- any relevant interconnector control scheme (run back, tripping) has operated if necessary to maintain network performance.

Consequently the Planning Council is of the opinion that the parameter of most interest (as it determines capacity deferral benefits for regulatory tests) is the transfer capability of an interconnector following operation of any relevant run back and tripping schemes. This transfer is likely to be much lower than transfers under other operating scenarios.

#### Comment 4

Section 2.4 discusses previous SNOVIC400 and SNI assessments. The report states the "... Murraylink transfer capability proposed in the recent MTC application is a revised transfer capability from the original IOWG assessment. ... The assumed base year for this revised assessment is 2003/04. MTC have assumed SNOVIC is in service for this assessment, but have assumed SNI is not in service at this time."

The Planning Council agrees with this basis. However it notes from section 4.2, the analysis is based upon a network model from IOWG of the "combined SNI and SNOVIC (note: components related to SNI were switched out)". The performance of the existing western NSW network (that also provides components of SNI) has a significant impact upon Murraylink transfer capability. The Planning Council observes that report does not document any evidence (such as agreement with TransGrid as the owner an operator of the affected network) that that the current (as at the date of MTC's Application) NSW network configuration and parameters are accurately modelled in MTC's work.

Claims of Murraylink transfer that are optimistic based upon possible erroneous network model parameters need verification to provide confidence amongst NEM participants likely to be affected. The Planning Council believes it would be prudent for the ACCC to commission additional studies (by the IOWG or other independent consultants) to determine the relevant technical transfer capabilities of Murraylink that are relevant input parameters for regulatory test economic analyses.

#### Comment 5

In section 2.4, "MTC propose that the transfer capability can be raised provided a number of additional network augmentations and runback schemes are implemented." TEA intend providing additional shunt capacitors at 6 locations on the grid to increase Murraylink's transfer capability.

Whilst shunt capacitors may improve voltage profile and lead to reduction in losses, the incremental increase in power transfer capability is generally a second order effect and not substantial.

The Planning Council believe that the claimed improvements to Murraylink transfer capability need independent verification of their value prior to being incorporated into regulatory test economic analyses.

#### Comment 6

Section 3.3.1 of the report indicates that Murraylink's transfer capability used in the Application has been determined by the IOWG. However the Planning Council observes that the equations stated in Section 3.3.1.2 do not appear in the IOWG published documentation. Appendix A of MTC's

Application states that equations stated in Sections 3.3.1.2 and 4.3.1.1 have been developed by MTC without reference to the network owners in SA, NSW and Vic.

Comment 7

As previous studies have shown, and repeated in the PB Associates' report, several network contingencies have been identified that require Murraylink to run back its throughput from its optimised value to a much lower value so as to ensure no overloading of other power system network plant. The Planning Council also understands the SA run back scheme will run Murraylink back to a reduced real power transfer situation and the Victorian schemes may permit some small transfer (expected to be considerably less than 100MW) in the run back mode.

The Planning Council believes the transfer capabilities summarised in report's Table 3.2 may be erroneous.

Comment 8

The Planning Council notes that in section 4, the report highlights a number of instances of network constraints that have not been adequately investigated by TEA and/or PTI. The report's Table 4-2 is likely to be overly optimistic.

The Planning Council endorses the guarded references by PB Associates to the accuracy and completeness of the TEA reports; the Council suggests it is pertinent for the ACCC to resolve and remove such issues before proceeding with the Application.

Comment 9

The Riverland transmission network requires augmentation to enable it to meet the N-1 reliability standards imposed by the SA Transmission Code. Given that the Murraylink interconnector terminates in the Riverland, it is foreseeable that any additional transmission augmentations necessary to ensure Riverland compliance may have an impact upon Murraylink.

The PB Associates' report has not identified any Riverland compliance issues. Without reference to this factor, the Planning Council believes the content of its report is deficient.