

ElectraNet SA

*Murraylink Application for
Conversion and Maximum
Allowable Revenue*

Submission - July 2003



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1. Introduction

On 18 October 2002, the Australian Competition and Consumer Commission (ACCC) received an application from Murraylink Transmission Company (MTC) for:

- the market network service provided by the Murraylink interconnector to be given regulated status; and
- maximum allowable revenue to be recovered from transmission customers in South Australia and Victoria.

The ACCC released its Preliminary View on 14 May 2003 proposing conversion of Murraylink from a market network service to a prescribed service and a regulated revenue cap of between \$12 and \$15 million per annum over a ten year regulatory period.

The ACCC held a public forum on 8 July 2003 at which interested parties, including ElectraNet, presented their views on the ACCC's Preliminary View.

ElectraNet is now pleased to make this submission as input to the ACCC's final decision. ElectraNet would be happy to discuss any of the matters raised in more detail with the ACCC.

2. ElectraNet's Interest in the Decision

As the principal Transmission Network Service Provider (TNSP) in South Australia, ElectraNet has the following interest in the ACCC's decision:

- Murraylink is connected to ElectraNet's transmission network and conversion to regulated status will directly impact on the need for transmission network support in the Riverland;
- ElectraNet will be required as Coordinating TNSP to collect a proportion of Murraylink's regulated revenue from transmission customers in South Australia;
- The ACCC's decision is an important test of the credibility of the NEM framework for Market Network Service Providers; and
- The decision will set important precedents for future transmission investment and revenue cap decisions.

3. Conversion Process

Clause 2.5.2(c) provides for conversion of a market network service to a prescribed service at the discretion of the ACCC as regulator. However, the Code does not provide any guidance for the ACCC on how to exercise its discretion.

In the Preliminary View, the ACCC refers to the intention of the NECA Working Group to provide for conversion to ensure investment is not inefficiently inhibited and focuses its assessment on whether or not the service provided by Murraylink is a prescribed service.

ElectraNet agrees that in the absence of any guidance in the Code for exercising its discretion the ACCC should have regard to the intent of the Code provision as stated by the NECA Working Group:

“... It might be argued that as well as the usual commercial risks, the proponent of a non-regulated interconnector may face additional risks related to market design deficiencies that may only become apparent once the first interconnectors are operational.

Providing a right to apply for regulated status may help ensure that investment is not inefficiently inhibited by such non-commercial market design risks. However it is important that the conversion option should not shield the proponent from normal commercial risks, e.g., the risk of having over-judged the future demand for the interconnection service”

However, the intent of the Code provision was to ensure that investment is not inefficiently inhibited by **non-commercial market design risks**. It was not intended that the conversion option should shield the applicant from normal commercial risks.

The ACCC's assessment has not considered these important pre-requisites for conversion. Conversion was not intended to be an automatic right without these conditions being satisfied.

ElectraNet submits that before exercising its discretion, the ACCC must be satisfied that:

- Changes in market design have occurred (unforeseen at time of investment) that have materially disadvantaged the applicant; and
- Conversion to regulated status will not simply shield the applicant from the consequences of normal commercial risks; e.g. risk of having over-judged demand for the network service.

Failure to properly address these important questions would leave the ACCC's process open to challenge that it has failed to protect consumers from inefficient transmission investment.

We acknowledge that MTC has offered reasons for why the ACCC should exercise its discretion. However, these do not provide convincing arguments that would justify conversion to regulated status. In responding to specific stakeholder issues, MTC listed the following specific uncertainties they have experienced (MTC submission, 8 April 2003, p3):

- Controversy surrounding whether SNI is justified
- Lack of network support agreement for the Riverland

ElectraNet cannot see that either of these uncertainties is related to **non-commercial market design risks**.

Moreover we would think that if anything the controversy surrounding SNI has had a beneficial rather than a detrimental impact on Murraylink by allowing Murraylink to displace the SNI interconnector, which had already passed the regulatory test.

The second point is also a commercial risk issue and is, therefore, not relevant. Slower than forecast load growth has until very recently delayed the requirement for network support in the Riverland. ElectraNet initiated a public process in October 2002 seeking to identify potential solutions for Riverland network support. A number of proposals were received. Assessment of these proposals has been temporarily put on hold pending the outcome of the ACCC's decision on Murraylink conversion. However, it is important to understand that there is no guarantee that support from unregulated Murraylink would be the option that passes the regulatory test.

ElectraNet is unaware of any **non-commercial market design changes** that have taken place that would have had a material detrimental impact on Murraylink.

On the other hand it is not difficult to understand that adverse commercial impacts may have occurred in the light of having **over-judged demand for the network service**:

- Increased generation in South Australia has led to a reduced demand for the network service. At present the Heywood interconnector between South Australia and Victoria is rarely constrained leading to minimal requirement for the Murraylink interconnector.
- Murraylink's current earnings from the market are estimated to be of the order of \$4-6 million per annum compared to the ACCC's proposed revenue cap of over \$12 million per annum.
- The apparent expectation that Murraylink would be required to provide network support to the Riverland (as discussed earlier this service has not been required until now and Murraylink is not the only potential service provider).

The ACCC should amend its conversion process to ensure that it has proper regard for the intent of the Code provision for conversion to regulated status before exercising its discretion in this regard.

4. Application of the Regulatory Test

Following a decision that the application to convert to regulated status is warranted; the next step in the ACCC's proposed conversion process is to apply the regulatory test to assess whether the project delivers a positive nett market benefit.

Having established a positive nett market benefit the Preliminary View identifies a number of alternative projects that are considered to provide an equivalent service to Murraylink and hence are assumed to provide similar market benefits.

An opening regulated asset value has been determined as the least cost of these alternative projects.

ElectraNet has a number of specific concerns about the way the regulatory test has been applied in this process. These concerns are discussed in the following subsections.

4.1 Review of Technical Assessment

Murraylink's assessed market benefits and the selection and costing of alternative projects are highly dependent on a range of technical details, including the capacity of the interconnector, the definition of works required to

support its capacity (e.g. phase shifting transformers and SVCs), and the treatment of losses.

Under normal circumstances, an augmentation such as Murraylink, that has a material inter-network impact, would be referred to the *Inter-regional Planning Committee* (IRPC) for preparation of an *augmentation technical report* in accordance with clause 5.6.3(j) of the Code.

The Code requires that the *Inter-regional Planning Committee* must undertake a review to assess the *augmentation* proposal and determine:

- the performance requirements for the equipment to be *connected*;
- the extent and cost of *augmentations* and changes to all affected *transmission networks*; and
- the possible material effect of the *new connection* on the *network power transfer capability* including that of other *transmission networks*.

ElectraNet notes the wide range of views that have been put forward on the capacity of Murraylink, its assessed market benefits and the cost of alternative projects.

ElectraNet notes the ESIPC's recommendation that details of the technical assessment of Murraylink and alternative projects be referred to the IRPC.

ElectraNet supports a review of technical details by the IRPC within a limited timeframe.

4.2 Riverland Deferral Benefits

ElectraNet does not agree with the claim of the ACCC's consultant that there is "*only one provider for Riverland support*".

As noted earlier, ElectraNet initiated a public process in October 2002 seeking to identify potential solutions for Riverland network support. A number of alternative proposals were received including:

- generation options; and
- demand side management options (coupled with embedded generation).

MTC valued Riverland deferral benefits at \$41 million in 2002/03 based on the capital cost of building a Robertstown to Monash 275 kV transmission line.

However, the alternative proposals received suggest that this deferral benefit may be overvalued. Preliminary assessment has identified a least cost feasible option that is estimated to cost approximately \$1 million per annum (based on a 5 year term).

ElectraNet notes that a short term solution to Riverland network support may also be prudent given recent slower demand growth in the Riverland and the potential for this to be slowed down even further given current and/or proposed River Murray water restrictions.

Further assessment of proposals for Riverland network support has been temporarily put on hold pending the outcome of the ACCC's decision on Murraylink conversion.

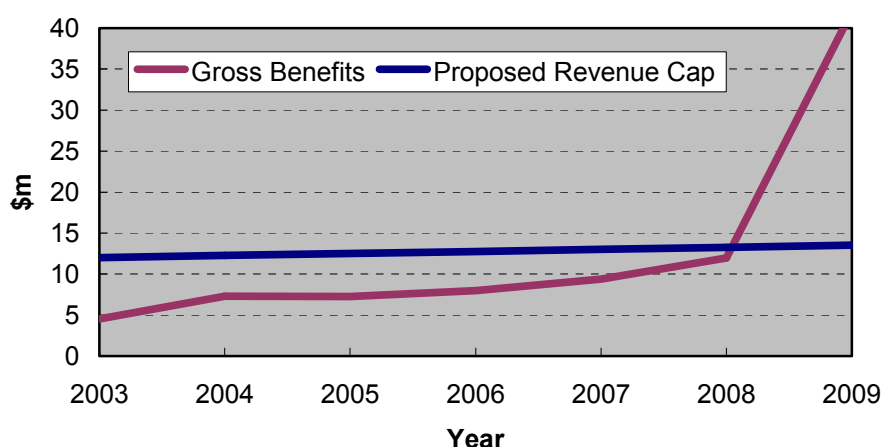
4.3 Project Timing

Application of the regulatory test in normal circumstances requires that the proponent optimise the timing of the project. The timing of a project that passes the regulatory test will not be earlier than when the project demonstrates positive nett market benefits. This principle should be applied in the case of Murraylink conversion.

Substituting the lower Riverland deferral benefit of \$1 million per annum in MTC's base case analysis results in total gross market benefits of \$4.5 million in 2003 increasing to \$12 million in 2008.

Not until 2009 does the analysis show gross market benefits exceeding the annual revenue cap of more than \$12 million per annum proposed by the ACCC. This comparison is illustrated in the following figure.

Figure 1: Comparison of Gross Market Benefits and Proposed Revenue Cap



Note: Gross market benefits are MTC's base case figures with amended Riverland deferral benefits.

ElectraNet submits that the ACCC should not allow the regulated revenue cap to exceed the gross market benefits of the interconnector or the benefits of conversion to regulated status.

The ACCC should be guided in its assessment by the very low gross market benefits assessed for at least the first five years and estimates of Murraylink's current annual earnings in the market (of the order of \$4-6 million).

5. Alternative Projects

5.1 Selection of Alternative Projects

The Preliminary View identifies a number of alternative projects that are considered to provide an equivalent service to Murraylink and hence are assumed to provide similar market benefits.

ElectraNet is concerned that other valid alternative projects have been excluded from the analysis because they are not considered to have equivalent capacity to Murraylink.

For example, the ACCC writes:

“An upgrade of the Heywood interconnector has been proposed as a potential substitute for new interconnection. However, the Commission’s consultants advise that an upgrade would not provide a sufficient level of service to the South Australian region, nor would it alleviate constraints in the Snowy/NSW and Snowy/Victoria interconnections. By contrast, Murraylink, in conjunction with augmentations in NSW and Victoria will address these constraints.”

ElectraNet submits that a Heywood upgrade in conjunction with the same augmentation works in NSW and Victoria would provide similar market benefits to Murraylink at a significantly reduced cost.

Because Murraylink connects the South Australian and Victorian regions in a similar manner to the Heywood interconnector, the Murraylink development is similar in operation to an expansion of the existing Heywood interconnector.

However, the capability of an expanded Heywood interconnector would be determined by optimising the cost of the augmentation against the cost of the works involved (in this case, for approximately \$50 million an additional 150 MW of capacity can be obtained).

ElectraNet has not seen any work undertaken that optimises the capacity of Murraylink against the benefit it delivers to the market. In our view, alternative projects should not be excluded on the basis that they do not deliver equivalent market benefits without carrying out a proper assessment.

The capacity decision for Murraylink was made based on an entrepreneurial investment. If the regulatory test was applied now to expanding interconnection capacity between South Australia and Victoria, we question whether the same decision would be made or whether a lower capacity but lower cost option might be the optimum solution.

5.2 Costing of Alternative Projects

ElectraNet has not attempted to analyse the proposed costs of the alternative projects in detail, but observes that some cost components appear to be inflated and would set new cost benchmarks for the purpose of costing capital projects and valuation of existing assets.

ElectraNet expects that if these new cost benchmarks are adopted the ACCC will allow the same treatment in any future valuation of ElectraNet's regulated assets.

ElectraNet makes the following specific comments:

- We agree with the principle of using the equivalent overhead line costs for determining the regulated asset value.
- Alternative projects should be made up of commonly used electrical equipment and not with equipment that has performance beyond what is not required.
- We support the inclusion of all valid project costs, including project management, planning and environmental approvals, regulatory approvals, easements, licences and spares.
- The level of spares allowed in the Preliminary View includes duplication of major plant items plus 6% of general switchyard costs. This level of spares is high compared to industry practice in Australia that suggests an upper bound of 1% of asset value (in total).
- Interest During Construction (IDC) of 20% was allowed in the Preliminary View (based on a five-year project timeframe) compared to IDC of 7.5% allowed in ElectraNet's December 2002 revenue cap decision.
- We are uncertain about the validity of including the 10% allowance for contractor profit and overheads and a separate contingency allowance for the purpose of valuing alternative projects.

5.3 SVC at Monash

ElectraNet does not agree that an SVC is required at Monash to provide fast acting voltage control in support of an alternative AC interconnector.

ElectraNet studies of both a 220 kV AC interconnector and Murraylink show that voltage regulation is the dominant voltage control factor rather than system stability.

The critical contingency in terms of voltage regulation for the Riverland region is the unscheduled loss of Murraylink when importing 200 MW into SA. For a 220 kV AC interconnector the same critical contingency would apply. Therefore, the voltage regulation outcomes are identical for the two alternatives assuming the same power transfer level before the contingency.

ElectraNet is satisfied that in both cases all voltage control requirements can be met without an SVC at Monash.

The TransEnergie Australia Pty Ltd report included with MTC's initial response to the Preliminary View (dated 30 June 2003) appears to support the above conclusions.

ElectraNet notes the comments made by BRW in its letter of 2 April 2003 regarding the provision of SVC's on existing interconnections. However, we can advise that in the South Australian situation, the SVC (fast response reactive plant) was not required to cater for the loss of the interconnector itself, but to cater for the loss of a large generating unit in the state and the subsequent increase in reactive power losses over the link itself.

Similar situations have been modelled with the SNI development in place and it was found that the inherent rebalancing of power flows that occur on an interconnected AC system results in lower reactive requirements in SA under the most critical contingency. This would in fact permit an increase in the size of the largest generating unit that could be supported in SA without any need to increase the quantity of fast acting reactive plant.

5.4 Scope of Monash Substation Works

MTC has included \$10.4 million for Monash 132 kV connection costs in each of the alternative projects. BRW explain that this includes the costs of establishing the Monash substation, which implies that the substation was developed solely to provide a connection for Murraylink.

However, the Monash substation performs a dual function and was first required to reinforce 132/66 kV connection point capacity in the Riverland.

In early 2000, the ESIPC conducted a review of the electricity supply system in the Riverland. The review separated the needs of the Berri region into two parts:

- (i) The need for increased connection point capacity; and
- (ii) The need for increased electricity supply.

The ESIPC and BRW recommended in 2001 that ElectraNet proceed with the establishment of the Monash substation to reinforce connection point capacity independent of the need to provide a new source of supply to the Riverland.

It was noted that if this work could be undertaken jointly with a third party wishing to connect new supply, a cost saving would result for both parties. The ESIPC recommended this approach and recommended that costs be shared between the two functions.

MTC chose to build and fund a greater proportion of the Monash substation to expedite its construction and maximise Murraylink's deliver to market.

However, for costing alternative projects, Monash 132 kV connection costs should be reduced to approximately \$6-7 million.

5.5 Benefits of AC and DC Interconnectors

MTC's application and the Preliminary View claim a number of benefits for the Murraylink DC interconnector over an equivalent AC interconnector.

ElectraNet notes that a DC interconnector also has disadvantages compared to an AC interconnector.

For example, an AC interconnector will typically respond in a beneficial manner to power system disturbances. Murraylink's response is limited:

- Murraylink cannot supply an isolated, islanded portion of the power system (e.g. the Riverland following loss of both 132 kV transmission line circuits from Robertstown to North West Bend).
- Pre-dispatch of Murraylink will be required to provide network support under certain operating conditions because it does not respond automatically to changes in demand, which could lead to uneconomic dispatch of generation.

6. Regulatory Control Period

ElectraNet supports the principle that a longer regulatory control period (e.g. 10 years) provides greater certainty and encourages private sector investment.

However, the ACCC should be consistent in its future revenue cap decisions for other TNSPs.

7. Cost of Capital

ElectraNet supports the use of a 10-year term to determine the risk free rate and debt margin parameters of the cost of capital (WACC).

However, as we have strongly argued on previous occasions, this should be linked to the long life of the assets involved and not the term of the regulatory period.

8. Operating and Maintenance Expenditure

ElectraNet agrees with MTC that it is inappropriate to set an opex allowance based on a simple "percentage of capital value". This approach is too simplistic and can significantly disadvantage TNSPs that have a higher proportion of fixed costs (smaller TNSPs will tend to be in this category). Applying a simple percentage to the depreciated value of the asset base (rather than replacement cost) also disadvantages relatively older networks.

ElectraNet has not attempted to analyse Murraylink's opex allowance, but makes the following observations:

- Staffing levels do appear high for maintaining and operating a single asset; and
- TNSPs would normally expect to replace circuit breakers at 45-year intervals rather than the shorter 5 or 10-year intervals assumed for Murraylink.

ElectraNet supports the determination of an appropriate opex allowance based on appropriate consideration of estimated costs at a detailed breakdown level.

9. Revenue Cap Recovery

If Murraylink is allowed regulated status, ElectraNet will be required to recover a proportion of Murraylink's revenue requirement through higher transmission charges in South Australia.

The Code indicates that MTC is responsible for allocating its revenue requirement between the South Australian and Victorian regions. MTC proposed in its application to make this allocation based on geographic investment in those regions.

ElectraNet supports this approach as consistent with the treatment of other interconnectors in the NEM. However, we note that the ACCC's Preliminary View is silent on this issue.

10. Conclusion

The key points made in ElectraNet's submission are summarised as follows:

- The Code provides for conversion to regulated status to ensure that investment is not inefficiently inhibited by **non-commercial market design risks**. It was not intended that the conversion option shield the applicant from normal commercial risks.
- The ACCC's assessment has not considered these important pre-requisites for conversion. Conversion was not intended to be an automatic right without these conditions being satisfied.
- Before exercising its discretion, the ACCC must be satisfied that changes in market design have occurred (unforeseen at time of investment) that have materially disadvantaged the applicant; and that conversion will not simply shield the applicant from the consequences of normal commercial risks; e.g. risk of having over-judged demand for the network service.
- The outcome of the ACCC's assessment of Murraylink is dependent on a range of technical details and assumptions. ElectraNet recommends that these be reviewed by the IRPC within a limited timeframe in the same way as would be required for other augmentations having a material inter-network impact.
- The Riverland deferral benefit claimed by Murraylink appears to be overvalued in the early years.
- Substituting the least cost feasible option for Riverland network support in MTC's base case analysis shows that the gross market benefits do not exceed the annual revenue cap of more than \$12 million per annum proposed by the ACCC until 2009. The revenue cap should not exceed the gross market benefits or the benefits of conversion to regulated status.
- Murraylink should receive the same treatment as in other TNSP revenue cap decisions. Any decision where the outcome for Murraylink is different than for other TNSPs needs to be considered very carefully.

- Some of the cost components of alternative projects appear to be inflated and would set new cost benchmarks for costing capital projects and valuation of existing assets.
- ElectraNet's assessment shows that the alternative AC interconnector project does not require an SVC at Monash.
- Monash 132 kV connection costs included in the alternative projects do not recognise the dual function provided by the Monash substation.

ElectraNet would be happy to discuss any of the matters raised in this submission in more detail with the ACCC.