

**IN THE NATIONAL ELECTRICITY TRIBUNAL**

**APPLICATION NO. 1 OF 2001**

**IN THE MATTER OF AN APPLICATION FOR REVIEW OF A NEMMCO DETERMINATION ON  
THE SNI INTERCONNECTOR DATED 6 DECEMBER 2001**

**Murraylink Transmission Company Pty Limited**

ABN 42 089 875 605

Applicant

**National Electricity Market Management Company Limited**

ABN 94 072 0100 327

Respondent

**Yallourn Energy Pty Limited**

ABN 47 065 325 224

**NRG Flinders Operating Services Pty Limited**

ABN 36 094 130 837

**TransGrid**

**NSW Minister for Energy**

**SA Minister for Energy**

Additional Parties

**Reasons for Decision**

**The Hon Jerrold Cripps QC (Chairperson)**

**Professor Douglas Williamson RFD, QC (Member)**

This is an appeal to the National Electricity Tribunal (*Tribunal*) by Murraylink Transmission Company Pty Limited (*Murraylink*) against a decision by the National Electricity Market Management Company Limited (*NEMMCO*) made on 6 December 2001 that the SNI Option proposed by TransGrid for the establishment of an interconnector between New South Wales (*NSW*) and South Australia (*SA*) was, in its opinion, justified.

TransGrid is a regulated Transmission Network Service Provider (**TNSP**) within the meaning of the National Electricity Code (**Code**) - a code of conduct approved by Ministers of the participating jurisdictions in accordance with s6(1) of the *National Electricity Law (Law)*, set out in the Schedule to the National Electricity (South Australia) Act 1996.

On the 29th day of October 1998 TransGrid requested NEMMCO and the Inter-regional Planning Committee (**IRPC**) to review the economic and technical effects of the SNI Option as required by the Code to determine whether the proposed interconnector satisfied the regulatory test based on a premise that all *transmission systems* are to be planned and operated as if they form a single *transmission system*.

To satisfy the regulatory test the IRPC and NEMMCO had to be satisfied that TransGrid's proposal maximised the *net present value* of the *market benefit* in accordance with the test as promulgated by the ACCC pursuant to clause 5.6.5(q) of the Code.

Previously TransGrid had made an application to establish an interconnector between NSW and SA (referred to as SANI). TransGrid's application failed because, in the opinion of NEMMCO, it did not satisfy the then regulatory test (expressed by reference to 'customer benefit'). It is unnecessary to discuss TransGrid's previous application beyond observing that the regulatory test as it then was

was considered too volatile and was later changed. TransGrid's present application is to be determined in accordance with the test as it now is and not as it then was.

### **TransGrid's Application (the SNI Option)**

TransGrid's proposal, as it developed, and which it sought to justify is set out in the determination of NEMMCO dated 6 December 2001. It encompasses:

- (a) "the construction of a new Buronga-Robertstown 275kV line via Monash with switched shunt reactors at each end of the line;
- (b) upgrading the Darlington Point-Balranald-Buronga line to a 275kV operation including the installation of switched shunt reactors at each of this line;
- (c) upgrading the lower Tumut/Wagga Wagga 330kV line;
- (d) upgrading the 132kV lines between Yass and Wagga Wagga and between Wagga Wagga and Darlington Point;
- (e) the installation of a 330kV/275kV transformer at Darlington Point;
- (f) the installation of a 275kV/220kV transformer at Buronga;

- (g) the installation of a fourth 330kV/220kV transformer at Dedarang;
- (h) the installation of capacitor banks at Wagga Wagga, the Dedarang area, Buronga, Robertstown, Darlington Point area and Jindarra;
- (i) control and communication systems;
- (j) a switching upgrade on the Dedarang-Glenrowan-Shepparton 220kV network;
- (k) the installation of a phase shifting transformer at Jindarra; and
- (l) the installation of network control schemes.

The regulatory test was promulgated by the ACCC pursuant to clause 5.6.5(q) of the Code. It is contained in a lengthy publication headed '**Regulatory Test for New Interconnectors and Network Augmentations**' and dated 15 December 1999. The regulatory test commences at page 19. Certain words appearing in the regulatory test and the Code are written in italics. That is because the Code defines italicised words. Accordingly when setting out provisions of the regulatory test and the Code we will use the same italicised words.

## The Regulatory Test

The regulatory test relevantly provides:

### Preamble

The Australian Competition and Consumer Commission promulgates this regulatory test in accordance with clause 5.6.5(q)(i) of the National Electricity Code (the **Code**).

The regulatory test is to be applied:

- (a) to *transmission system or distribution system* augmentation proposals in accordance with clause 5.6.2 of the Code (**Augmentation**);
- (b) by NEMMCO and the Inter-regional Planning Committee to augmentation options identified under clause 5.6.5 of the Code, other than applications for new interconnectors in accordance with clause 5.6.6 of the code (**Augmentation Option**); and
- (c) by NEMMCO and Inter-regional Planning Committee to applications for new interconnectors across regions in accordance with clauses 5.6.5 and 5.6.6 of the Code (**New Interconnectors**).

In this test, *augmentations, augmentation options and new interconnectors* are called *proposed augmentations*.

## The Regulatory Test

The Commission has determined the regulatory test is as follows:

A *new interconnector* or an *augmentation option* satisfies this test if it maximises the *net present value* of the *market benefit* having regard to a number of alternative projects, timings and market development scenarios; and an *augmentation* satisfies this test if:

- (a) ....; and
- (b) in all other cases - the augmentation maximises the net present value of the *market benefit*

having regard to a number of alternative projects, timings and market development scenarios.

For the purpose of the test:

- (a) market benefit means the total net benefits of the proposed augmentation to all those who produce, distribute and consume electricity in the National Electricity Market. That is, the increase in consumers' and producers' surplus or another measure that can be demonstrated to produce equivalent ranking of options in most (although not all) credible scenarios;
- (b) cost means the total cost of *augmentation* to all those who produce, distribute or consume electricity in the National Electricity Market.  
Any requirement in notes 1-9, inclusive, on the methodology to be used to calculate the *market benefit* of a *proposed augmentation*

should also be read as a requirement on the methodology to be used to calculate the *cost* of an *augmentation*;

- (c) the net present value calculations should use a discount rate appropriate for the analysis of a private enterprise investment in the electricity sector;
- (d) the calculation of *market benefit* or *cost* should encompass sensitivity analysis with respect to the key input variables, including capital and operating costs, the discount rate and commissioning date, in order to demonstrate the robustness of the analysis;
- (e) a *proposed augmentation* maximises the *market benefit* if it achieves a greater *market benefit* in most (although not all) credible scenarios; and
- (f) an *augmentation* minimises the *cost* if it achieves a *lower cost* in most (though not all) credible scenarios.

#### **Notes on the methodology to be used in the regulatory test of a proposed augmentation**

1. In determining the *market benefit* the following information should be considered:
  - (a) the cost of the *proposed augmentation*;
  - (b) reasonable forecasts of:
    - (i) electricity demand (modified where appropriate to take into account demand side options, variations in economic growth,

variations in weather patterns and reasonable assumptions regarding price elasticity);

- (ii) the value of energy to electricity consumers as reflected in the level of VoLL (i.e., value of lost load);
  - (iii) the efficient operating costs of competitively supplying energy to meet forecast demand from existing, *committed*, *anticipated* and *modelled projects* including demand side and generation projects;
  - (iv) a capital cost of *committed*, *anticipated* and *modelled projects* including demand side and generation projects and whether the capital costs are completely or partially avoided or deferred;
  - (v) the cost of providing sufficient ancillary services to meet the forecast demand; and
  - (vi) the capital and operating cost of other regulated network and market network service provider projects that are augmentations consistent with forecast demand and generation scenarios.
- (c) the proponent's nominated *construction timetable* must include a *start of construction*, *construction time* and *commissioning*, where:
- (i) *start of construction* means the date at which the construction is required to commence in order to meet the *commissioning*



*date*, taking into consideration the *construction time* nominated by the proponent;

- (ii) *construction time* is the time nominated by the proponent to order equipment and build the project and does not include the time required to obtain environmental, regulatory or planning approval; and
- (iii) *commissioning* means the date, nominated by the proponent, on which the project is to be placed into commercial operation.

2. In determining the *market benefit*, it should be considered whether the *proposed augmentation* will enable:

- (a) a *Transmission Network Service Provider* to provide both *prescribed* and other services; or
- (b) a *Distribution Network Service Provider* to provide both *prescribed distribution services* and other services.

If it does, the costs and benefits associated with the other services should be disregarded. The allocation of costs between *prescribed* and other services must be consistent with the *Transmission Ring-Fencing Guidelines*. The allocation of costs between *prescribed distribution services* and other services must be consistent with the relevant *Distribution Ring-Fencing Guidelines*.

3. The costs identified in determining the *market benefit* should include the cost of complying with existing and anticipated laws, regulations and administrative determinations such as those dealing with health and safety,

land management and environmental pollution and the abatement of pollution. An environmental tax should be treated as part of a project's costs. An environmental subsidy should be treated as part of the project's benefits or as a negative cost. Any other costs should be disregarded.

4. In determining the *market benefit* any benefit or cost which cannot be measured as a benefit or cost to producers, distributors and consumers of electricity in terms of financial transactions in the markets should be disregarded. The allocation of costs and benefits between the electricity and other markets must be based on principles consistent with the *Transmission Ring-Fencing Guidelines* and/or *Distribution Ring Fencing Guidelines* (as appropriate). Only direct costs and benefits (associated with a partial equilibrium analysis) should be included and any additional indirect costs or benefits (associated with a general equilibrium analysis) should be excluded from the assessment.
5. In determining the *market benefit*, the analysis should include modelling a range of reasonable alternative market development scenarios, incorporating varying levels of demand growth at relevant load centres (reflecting demand side options), alternative project *commissioning* dates and various potential generating investments and realistic operating regimes. These scenarios may include alternative *construction timetables* as nominated by the proponent. These scenarios should include projects undertaken to ensure that relevant reliability standards are met.

These market development scenarios should include:

- (a) projects, the implementation and construction of which have commenced and which have expected commissioning dates within 3 years (*committed projects*).
  - (b) projects, the planning for which is at an advanced stage and which have expected commissioning dates within 5 years (*anticipated projects*);
  - (c) generic generation and other investments (based on projected fuel and technology availability) which are likely to be commissioned in response to growing demand or as substitutes for existing generation plant (*modelled projects*); and
  - (d) any other projects identified during the consultation process.
6. Modelled projects should be developed within market development scenarios using two approaches: 'least-cost market development' and 'market-driven market development'.
- (a) The least-cost market development approach includes modelled projects based on a least-cost planning approach akin to conventional central planning. The proposals to be included would be those where the net present value of benefits, such as fuel substitution and reliability increases, exceeds the costs;
  - (b) The market-driven market development approach mimics market processes by modelling spot price trends based on existing generation and demand and includes new generation developed on the same basis as would a private developer (where the net present

value of the spot price revenue exceeds the net present value of generation cost). The forecasts of spot price tends (sic) should reflect a range of market outcomes, ranging from short run marginal cost bidding behaviour to simulations that approximate actual market bidding and prices, with power flows to be those most likely to occur under actual systems and market outcomes.

7. In determining the *market benefit* the *proposed augmentations* should not pre-empt nor distort potential unregulated developments including network, generation and demand side developments. To this end:
  - (a) a *proposed augmentation* must not be determined to satisfy this test more than 12 months before the *start of construction* date;
  - (b) a *proposed augmentation* will cease to satisfy this test if it has not commenced operation by 12 months after the *commissioning* date unless there has been a delay clearly due to unforeseen circumstances;
  - (c) unless there are exceptional circumstances, *new interconnectors* must not be determined to satisfy this test if *start of construction* is within 18 months of the project's need first being identified in a network's annual planning review or NEMMCO's statement of opportunities (or in some similar published document in the period prior to 13 December 1998).
8. The consultation process for determining whether a *proposed augmentation* satisfies this test must be an open process, with interested parties having an opportunity to provide input and understand how the benefits have been

measured and how the decision has been made. Specific consultations required on:

- (a) identifying *committed projects* and *anticipated projects*;
- (b) Setting input assumptions such as fuel costs and load growth;
- (c) modelling market behaviour and considering whether market development scenarios are realistic;
- (d) the proponent's *construction timetable*
- (e) understanding how benefits will be allocated; and
- (f) understanding how a decision have been made.

9. Any information which may have a material impact on the determination of *market benefit* and which comes to light at any time before the final decision must be considered and made available to interested parties.

The full text of the ACCC's publication being the **Regulatory Test for New Interconnectors and Network Augmentations** is annexed to these reasons for decision and marked "A".

## **Code**

Chapter 5 of the Code deals with 'network connection'. Clause 5.6.6 provides as follows:

### **Applications to establish new interconnectors across regions:**

- 5.6.6(a) In addition to the processes and procedures to establish a *connection to a network* in clause 5.3, all *applications to*

*connect to establish a new interconnector to connect transmission networks across regions must conform to the access arrangements in this clause 5.6.6.*

(b) For the purpose of maintaining levels of service and *quality of supply* to existing *Code Participants* in accordance with this *Code* the *Inter-regional Planning Committee* must undertake a review of all applications to establish *new interconnectors* in order to assess the *application to connect* and determine:

- (1) the performance requirements for the equipment to be *connected*;
- (2) the extent and cost of *augmentations* and changes to all affected *networks*;
- (3) any consequential change in *network service* charges for other *Network Users* subject to clause 5.6.6(c), (d) and (e); and
- (4) the possible material effect of this new *connection* on the *network power transfer capability* including that of other *networks*.

(c) The *Connection Applicant* may request NEMMCO and the *Inter-regional Planning Committee* to review the economic and technical effects of the proposed *Interconnector* in accordance with clause 5.6.5 to determine whether the proposed *interconnector* satisfies the *regulatory test* based on a premise

that all *transmission systems* are to be planned and operated as if they form a single *transmission system*.

- (d) If NEMMCO determines the *proposed interconnector* is justified then the proposed *interconnector* may, with the consent of the *Connection Applicant*, be deemed to be a *regulated interconnector* that will be subject to *transmission network* regulation and pricing in accordance with chapter 6 of the *Code*. In this event, the cost of *augmentations* to other affected *networks* are to be included in revised *network service* charges for other *Network Users* determined in accordance with chapter 6 of the *Code*.

## **Annual Planning Review of the Power Systems Transmission Networks.**

### **(5.6.5 of the Code)**

The clause refers to the obligations of the IRPC and NEMMCO in circumstances, among others, where an application has been made to review the economic and technical effects of a proposed interconnector. In particular, the following provisions are of relevance to the function to be undertaken by the IRPC and NEMMCO, including reference to the IRPC's obligation in clause 5.6.5(e)(3) to consider 'any *transmission system augmentation* proposals submitted

voluntarily by a *Transmission Network Services Provider* to determine whether it satisfies the regulatory test in accordance with 5.6.6(c)'.

The functions of the IRPC are relevantly:

- (i) to consult in accordance with the Code's *consultation procedures* (5.6.5(f));
- (ii) to assess the economic and technical effects of the *augmentation* options, including applications of the *regulatory test* based on a premise that all *transmission systems* are to be planned and operated as if they form a single *transmission system* (5.6.5(g));
- (iii) report on the methodology used for its assessment and any alternatives to *augmentation* considered by it and make recommendations to NEMMCO on its assessment of the costs and benefits of *augmentation* options to remove or reduce *network constraints* or losses and any practicable alternatives to *augmentation* (5.6.5(h)).

When considering the IRPC's report and NEMMCO's recommendations, NEMMCO may require that further analysis be undertaken by the IRPC and may commission an independent analysis (5.6.5(i)).



After considering a report of the IRPC and any analysis required or commissioned by it under clause 5.6.5(i) NEMMCO must make a determination as to whether, in NEMMCO's opinion, an *augmentation* is justified or not justified (5.6.5(j)).

In arriving at its determination under clause 5.6.5(i) NEMMCO must:

- (1) consider the practicable alternatives to *augmentation* including, but not limited to, *generation*, demand side options and market network service provider options; and
- (2) *consider* the *augmentation* from the perspective of whether it satisfies the regulatory test (5.6.5(k)).

The foregoing obligations imposed on NEMMCO under clause 5.6.5(k) are of particular relevance to the issues for determination.

The obligation on NEMMCO to consider practicable alternatives is also reflected in the regulatory test itself.

### **Nemmco's Determination**

NEMMCO's determination of 6 December 2001, and the report of the IRPC dated 26 October 2001 and referred to as 'SNI Stage 2 Report', are annexed to these reasons for decision and marked "B" and "C" respectively.

In the course of its determination NEMMCO had regard to what it considered were possible 'alternative projects'. These included what has been described as 'unbundled SNI' (**USNI**). USNI is SNI excluding the line from Buronga in NSW to Robertstown in SA. It also considered an augmentation referred to as SNOVIC 400 being a proposal to increase the capacity of the Snowy to Victoria interconnector by an additional 400MW and SNOVIC 800 which was a proposal to increase the capacity of the Snowy to Victoria interconnector by an additional 400MW over and above SNOVIC 400.

NEMMCO established and adopted criteria for the selection of alternative projects and these included the notion of substitutability and practicability. Practicability was in turn defined by reference to technical feasibility and commercial feasibility.

As late as 20 September 2001 the IRPC believed that SNI did not satisfy the regulatory test. After TransGrid made modifications to SNI the IRPC concluded that the optimised project would increase the transferable capability into Victoria and South Australia by 600MW (previously 430MW) and having regard to this it recommended to NEMMCO that SNI should, in its opinion, be held to be justified.

A number of criticisms were made by Murraylink of the assessment and recommendations of the IRPC and the determination of NEMMCO.

The function of this Tribunal on review is to make the correct or preferable decision in the light of circumstances as they exist at the time of the hearing of the application for review and not as they were in December 2001.

Since NEMMCO's determination in December 2001 SNOVIC 400 has been completed and is a committed project with the consequence that on any view of the matter it can no longer be regarded as an alternative project – and it has not been suggested it should.

Murraylink's principal attack is directed to the rejection by NEMMCO of USNI as an alternative project. It maintains that had NEMMCO properly fulfilled its function it would have had regard to USNI as an alternative project with the consequence that SNI could not be regarded as maximising the net present value of market benefit (as those words must be relevantly understood). The modelling undertaken by TransGrid supports the view that if USNI were considered an alternative project, SNI would not be found to maximise net present value of market benefit. TransGrid maintains, however,

that the Tribunal should come to the same conclusion as NEMMCO, viz, that USNI was not practicable.

Murraylink is also critical of the conduct of members of the IRPC, NEMMCO and the NSW Minister for Energy and Utilities with respect to the assessment and recommendations made by the IRPC and the determination made by NEMMCO.

It has also submitted that certain nominated aspects of the assessment including modelling undertaken by ROAM (for NEMMCO) were deficient with the result that NEMMCO could not have had any confidence in the opinions concerning net present value. It has been submitted also that, notwithstanding additional work having been undertaken by TransGrid (Mr Campbell's modelling), the Tribunal should express its lack of confidence in opinions expressed concerning net present value, although, it would seem, that if USNI is to be regarded as an acceptable alternative project, Murraylink would ask the Tribunal to conclude that the work undertaken by NEMMCO and TransGrid itself would lead to the conclusion that SNI does not maximise the net present value of the market.

NEMMCO acknowledges that the function of the Tribunal is to determine the matter for itself but submits that its approach to alternative projects and the modelling it caused to be undertaken

should be accepted by the Tribunal and that the Tribunal should come to the conclusion it reached, i.e. that it is of the opinion that SNI is justified.

Murraylink has also raised issues concerning the interpretation of the Code and whether what is proposed is relevantly an 'interconnector' within the meaning of the Code.

It has also submitted that the lack of procedural fairness and misconduct by those associated with the process had the effect of tainting the evaluation and recommendation of the IRPC and the determination of NEMMCO, having the consequence that the Tribunal should set NEMMCO's determination aside on grounds akin to judicial review. Additionally, or alternatively, it was submitted that because of the alleged procedural improprieties and misconduct the Tribunal could have no confidence in the reliability of the material put before it by NEMMCO. These matters will be dealt with in greater detail later.

### **The National Electricity Tribunal**

The Tribunal is established by Part 3 (section 9) of the National Electricity (South Australian) Act 1996 and Part 5 Division 1 (sections 16 to 64) of the Law. Its functions include reviewing certain nominated decisions of the National Electricity Code Administrator (**NECA**) and

NEMMCO. The Tribunal has the function to review certain nominated 'reviewable' decisions on the merits. In this regard it has the same function that is given generally to administrative appeal tribunals, namely that of making the correct or preferable decision on the material before it. It is not bound by the rules of evidence but must observe the rules of natural justice. In the present matter the Tribunal consists of the chairperson and 2 other members and makes its determination in accordance with the majority view. However questions of law are to be determined by the chairperson. As was accepted, there were questions of law raised in the proceedings as well as questions of fact and questions of mixed fact and law. The expression 'we' in these reasons is to be read ,where relevant, as a reference to the chairperson with respect to determinations of questions of law.

Because the Tribunal 'stands in the shoes' of the body appealed from (in this case NEMMCO) and is authorised to make the decision which NEMMCO could and should have made it is, generally speaking, unnecessary for the it to be concerned with the legal correctness of the reasoning of the body appealed from or with procedural defects that may have occurred in the course of the making of the determination appealed from. It is common ground that when

discharging its function of merit review the Tribunal is to determine for itself whether TransGrid's proposal satisfies the regulatory test at the time when the Tribunal makes its decision and in accordance with the material placed before it.

However, it has been submitted on behalf of Murraylink that the function of the Tribunal (unlike other administrative tribunals) extends to declarations of invalidity and to the making of formal orders based on what might be generally described as procedural irregularities and improprieties by the IRPC (which is not a party to these proceedings but which made recommendations to NEMMCO) and NEMMCO as well as the NSW Minister for Energy and Utilities.

The allegations said to give rise to improper conduct will be dealt with in due course when considering the reliability the Tribunal can repose in the material put before it. However, at the outset it is appropriate to give reasons why, in the opinion of the Tribunal, it does not have the jurisdiction to entertain applications for what are generally described as applications for judicial review.

Although the Tribunal does, in certain circumstances, have the function to 'hear and determine' applications by NECA (but by no-one else) alleging that a Code participant has breached a provision of the Code (see section 17(b) of the Law) it is to be noted that NECA has

not bought proceedings alleging any breach of the Code (even assuming that some of the allegations presently made could be relevantly described as 'breaches' of provisions of the Code as that word must be relevantly understood in the context of legislation).

Ordinarily administrative tribunals do not have judicial review functions. Legal questions may arise in proceedings before them, as they may arise in applications before the original decision-maker. But the role of an administrative appeals tribunal is to make the correct or preferable decision, and it is not ordinarily concerned with processes undertaken by the decision-maker although, of course, misconduct by a decision maker (if established) may lead a tribunal to have no confidence in the material it puts forward in support of its view.

Nonetheless, Ms Crennan QC on behalf of Murraylink has referred the Tribunal to clause 8.9(c) of the Code. It relevantly provides:

'When NEMMCO or NECA as the consultant party fails to substantially comply with clause 8.9 when required to do so, any decision or determination permanently made is a reviewable decision and is of no force and effect.' (Emphasis Ms Crennan's).



In the opinion of the Tribunal those words 'and are of no force or effect', where appearing in clause 8.9(c) do not give the Tribunal the power or function to review judicially decisions of NEMMCO or NECA. Those words are directed to decisions made in breach of the consultative procedures, and have the consequence that if those procedures have not been complied with, then a decision made (otherwise not reviewable on the merits) becomes a decision reviewable on the merits.

The decision of NEMMCO made on 6 December 2001 is by operation of clause 5.6.5(p) reviewable on the merits and accordingly clause 8.9(c) of the Code adds nothing to the jurisdiction of the Tribunal in its determination of this matter.

### **Murraylink's Application to the Tribunal**

In December 2001 Murraylink made application to the Tribunal seeking orders that the decision of NEMMCO be set aside and in lieu thereof a decision of the Tribunal that the SNI Option does not satisfy the regulatory test and is not justified under clause 5.6.6(c) of the Code. In the alternative it sought an order that TransGrid's proposal be remitted to NEMMCO for further consideration, but later withdrew the request maintaining that if its case is made out the proper order of the

Tribunal would be to set NEMMCO's decision aside and leave it to TransGrid, if it wished, to make another application.

Murraylink's grounds of review included an allegation that as a matter of law SNI is not relevantly an 'interconnector' within the meaning of clause 5.6.6(c) of the Code and hence is not amendable to a determination of justification.

The most significant issue in the proceedings was whether the Tribunal should have regard to USNI as an alternative project. It is common ground that USNI contributes a greater part of the net present value of SNI and if undertaken by itself would result in a higher rate of return than SNI. It is also common ground that acceptance of USNI as an alternative project would mean that SNI does not maximise net present value of market benefit.

It was also submitted that the Tribunal should have regard to SNOVIC 800 and NEWVIC 2500 (both augmentations) as alternative projects. Later a suggestion was made that the list should be extended to include an augmentation referred to as SNOVIC 600.

In Murraylink's final address it was submitted the Tribunal should have regard to Murraylink's unregulated interconnector from Victoria to South Australia even though that project has been completed and is

presently undergoing test transmissions of power into South Australia. It is part of what the modellers refer to as the base case and, as with SNOVIC 400 it cannot, in the opinion of the Tribunal be regarded as an alternative project.

It was submitted, as already mentioned, that certain aspects of the modelling carried out by ROAM (undertaken by Dr Rose) on behalf of NEMMCO and later by IES (undertaken by Mr Campbell) on behalf of TransGrid were deficient in four nominated areas (in the application as originally filed). These were:

- (a) reliability generation capacity deferral benefits;
- (b) the Riverland augmentation deferral benefit;
- (c) generation capacity in NSW; and
- (d) network constraints.

Later the claimed deficiencies referred to above were identified with greater precision and will be dealt with by us in due course.

### **Parties to the Proceedings**

Murraylink is the applicant for review. It has completed the construction of an unregulated underground transmission line between Redcliffe, Victoria and Berry, South Australia. It was not disputed Murraylink is an interested person within the meaning of the Law and

hence entitled pursuant to section 29 to make an application for review of NEMMCO's decision.

Shortly after Murraylink's application was lodged, TransGrid was made a party pursuant to section 29 without objection as were two companies associated with Murraylink - Yallourn Energy Pty Ltd and NRG Flinders Operating Services Pty Ltd.

The relevant Ministers from NSW and SA made application to become parties. The applications were opposed but for reasons given previously by the Tribunal they were granted. Earlier in the proceedings submissions were made concerning the role NEMMCO should play at the hearing of this matter bearing in mind, it was said, that TransGrid was a contradictor having the interest and the capacity to present material to the Tribunal relevant to the Tribunal's function. At the time NEMMCO announced that it proposed to put before the Tribunal material that it considered necessary, and to make submissions on matters that it considered appropriate. The question of the nature of NEMMCO's participation was not the subject of a concluded direction. The Tribunal was of the opinion that there would be no objection to NEMMCO proceeding in the way it proposed, however the Tribunal made it clear that it was open to Murraylink to make an application to it concerning NEMMCO's participation in the

course of the proceedings if it considered that further participation was inappropriate. The Tribunal had no little difficulty in understanding the justification for the attempted restriction originally sought to be placed on NEMMCO's participation. There must always be a possibility that matters such as the one before the Tribunal might be remitted to NEMMCO for further consideration, but that, of itself, would not require NEMMCO to be excluded from the review process. However that may be no further application was made by Murraylink concerning NEMMCO's participation and it has not been suggested by Murraylink in the course of these proceedings or in address that NEMMCO's participation in any way offended against principles said to be derived from certain Federal Court decisions, even assuming those decisions have application to the functions of NEMMCO when decisions made by it under Chapter 5 of the Code are challenged in the Tribunal.

### **The Hearing**

The hearing extended over a period of two and a half weeks.

Approximately 25 volumes of material containing information relevant to the dispute were tendered and a number of witnesses gave evidence in support of or in opposition to TransGrid's proposed SNI Option. A number of witnesses were cross-examined. A list of the witnesses and their areas of expertise is annexed to these reasons for

decision and marked "D". Those cross-examined are marked with an asterisk. All evidence was taken in public except for confidential information furnished by Murraylink concerning the cost of its now completed unregulated interconnector.

At the outset the Tribunal expressed an expectation that parties would avoid unnecessary cross-examination, and that it would exercise its discretion to prevent cross-examination if the Tribunal thought it was not being helped in the resolution of the issues before it. The Tribunal records that all parties complied with the spirit of the request and there was no occasion for it to prevent or limit parties from cross-examining. The statements of witnesses together with their cross-examination ran into thousands of pages. The legislation obliges the Tribunal to give written reasons for its decision on review. The Tribunal is not obliged to set out in detail all the written and oral evidence received by it. It is of the opinion that it discharges its function under the Law if it provides written reasons identifying facts, and materials upon which those facts are based, in circumstances where the parties to the proceedings can understand why the Tribunal has taken a view one way or another with respect to their submissions. For self-evident reasons it is not practical for the Tribunal to set out in its reasons all the materials put before it. Moreover, the Tribunal has

had regard to the circumstance that the parties to the proceedings have themselves identified the issues for determination and, generally speaking, it is therefore unnecessary to make findings of fact or to identify material unconnected with the submissions that have been made to the Tribunal by the parties.

### **Is SNI an Interconnector?**

To determine whether SNI is relevantly an 'interconnector' within the meaning of clause 5.6.6(c) of the Code it is necessary to understand the components of SNI, the functions they perform and the connection between those functions and the project as a whole.

If we understand Murraylink's submission correctly, it is that what was presented to the IRPC for assessment and recommendation and to NEMMCO for determination was not relevantly an interconnector within the meaning of the Code, because only so much of it as would physically connect Buronga to Robertstown is capable of being assessed under clause 5.6.6(c). It is submitted that USNI is really a separate and distinct project to which is attached a physical interconnector (the Buronga to Robertstown line) giving the line what Murraylink describes as a 'free ride'.

Some support for Murraylink's argument could be perhaps found in an opinion expressed by Professor Littlechild. He thought there was an argument that USNI was not an alternative to SNI because, as he put it, the two could well be different types of projects. That view was expressed in the context of maintaining a possible view that the notion of substitutability is not apt to define what is or is not an alternative project. The parties have accepted that substitutability is a necessary requirement for an alternative project and that USNI was relevantly a substitute and that is the way the Tribunal will approach the matter.

Dr Parker gave extensive evidence concerning the function of SNI including, of course, that portion of it encompassed by USNI. The effect of Dr Parker's evidence is that if the new transmission line is to function reliably according to its capacity (275Kv/220MW) SNI should be constructed. The circumstance that SNI (or at least the USNI component) can serve other purposes as, for example, making 600MW of capacity available for Victoria does not operate to deny it its function to enhance direct flow of power from New South Wales into South Australia.

It is true, as Murraylink submits, that the Code defines the interconnector in terms of a transmission line. However, as has been pointed out the Code also envisages that the establishment of a new



interconnector may involve augmentations and if that happens those augmentations are to be included within the regulatory asset base of the regulated interconnector. TransGrid's network is proposed to be 'augmented' to enlarge or increase the capability of what is proposed. A proper understanding of clauses 5.6 and 5.5 makes it clear, in our opinion, that a proposal to establish an interconnector may (and in this case does) involve a 'transmission system augmentation proposal'. It is to be noted that under clause 5.6.5(h) the IRPC's recommendations to NEMMCO include its assessment of the costs and benefits of augmentation options to remove or reduce network constraints or losses.

Accordingly, the Tribunal has come to the view that what is proposed is relevantly an interconnector capable of assessment and, if assessed to meet the regulatory test, found to be justified.

### **The Evaluation and Assessment by the IRPC and NEMMCO**

The evaluation and assessment by the IRPC proceeded over many months. NEMMCO's determination was the consequence of it accepting the recommendations of the IRPC. The work undertaken by the IRPC, and NEMMCO's reasons for its determination, have been placed before the Tribunal.

We have referred to the submissions on behalf of Murraylink that the assessment process was defective in certain nominated respects and that NEMMCO did not consider (or if it did, it did not consider properly) a number of alternative projects nominated by Murraylink.

As the Tribunal has pointed out earlier the issues before us are not necessarily resolved by pointing to what are said to be deficiencies in the assessment process by the IRPC and NEMMCO. It is, of course, open to Murraylink to point to aspects of the conduct of the IRPC and/or NEMMCO to demonstrate what it submits is the unreliability of the information placed before the Tribunal. It was also open to Murraylink to put before the Tribunal material it claims should have been before NEMMCO and to demonstrate, if it wished, that its modelling would have led to a different net present value of market value of SNI.

But this is merely another way of emphasising that the hearing before the Tribunal is a new and fresh hearing on material placed before the Tribunal, and that the Tribunal is to make its decision in accordance with facts and circumstances existing in September 2002 and not, as in the case of NEMMCO, December 2001.

One illustration of the difference between what NEMMCO did in December 2001 and what the Tribunal is required to do in

September 2002 can be seen with respect to SNOVIC 400. In December 2001 NEMMCO, correctly in our view, treated SNOVIC 400 as an alternative project. SNOVIC 400 is committed and is no longer an alternative. Murraylink claims that NEMMCO inappropriately dealt with SNOVIC 400 when assessing SNI and making its determination in favour of TransGrid. As we have said SNOVIC 400 is no longer an alternative project and hence NEMMCO's approach to it (even if it was erroneous) is irrelevant to the matter we have to determine unless, of course, the manner of dealing with SNOVIC 400 reflects adversely upon the confidence we can repose in NEMMCO's views put forward in the present case. The criticisms will, accordingly, be dealt with in due course.

Criticism has been made of the IRPC and NEMMCO directed to their alleged failure to consult at all or to consult fully in accordance with the requirements of the Code. For example, it was said that NEMMCO improperly failed to have regard to representations by TransEnergie (a company associated with Murraylink) which were said to be ignored. No request was made to the Tribunal that it should direct further consultation by NEMMCO. Almost all the allegations of failure to consult were claims made by Murraylink. If it wished Murraylink could have put such additional material as it considered

necessary before the Tribunal. In particular it is to be noted that the representations of TransEnergie have been placed before the Tribunal.

### **Conflict Of Interest**

Murraylink has submitted that the process before the IRPC miscarried because members of it had a conflict of interest. Clause 5.6.3(b)(iii) provides that a member of the IRPC having a "material financial interest" in the matter to be determined must not take part in the decision or determination of the IRPC. The IRPC is composed of a representative of NEMMCO (who acts as convenor) and representatives of the entities nominated by the relevant Ministers of the participating jurisdictions which have transmission system planning responsibility in that jurisdiction.

Originally the claim appeared to be that TransGrid participated in meetings of the IRPC when it should not because those meetings were concerned with its application. As we would understand the submission, it is not suggested that TransGrid participated in the decision as to whether or not its proposals should be recommended for justification. Rather, it is that it made technical information available for the purpose of the assessment as to whether what was proposed was technically feasible. It would seem to the Tribunal that

TransGrid was bound to furnish this information if its proposal was to be assessed according to law.

When TransGrid was unable to attend meetings of the IRPC the New South Wales Minister for Energy and Utilities nominated an alternative. It was submitted by Murraylink that the alternative had a conflict of interest which arose, it was said, because TransGrid is a State-owned corporation. Later it appeared to be submitted that the South Australian nominee, viz ESIPC, had a conflict of interest when participating in the deliberations because it had an interest in SNI providing deferral benefits for the Riverland area.

The above submissions were directed to the reliability of the IRPC's recommendations. It has not been suggested that the decision by NEMMCO was tainted by the presence of a person having a conflict of interest. But that to one side, it would seem to us that there was nothing improper in the Minister's representative being present at the IRPC's deliberations, bearing in mind the legal entitlement of the Minister to have a representative present. It appeared to be suggested that even if the presence of Mr Wills (the New South Wales Minister for Energy and Utilities alternative nominee) did not contravene clause 5.6.3(b)(iii) of the Code, his presence violated the IRPC's guidelines which say that a member must not take part in a

decision or determination of the IRPC if the entity which the member represents has a material financial interest in the decision or determination of the IRPC. Leaving to one side the non-legally binding effect of the IRPC guidelines it is to be noted that Mr Wills was nominated as a representative of the New South Wales Department of Energy and Utilities.

Murraylink sought to overcome this difficulty by submitting, in effect, that there was an identity between the Department of Energy and TransGrid by reason of TransGrid being a State-owned corporation. We feel it is unnecessary for us to do more than state that TransGrid is a separate legal entity and the fact that the Minister may, in certain circumstances, give directions to TransGrid (which has not been done) does not lead to the conclusion that the Minister (or Mr Wills) had relevantly a conflict of interest when participating in deliberations concerning TransGrid's application. By no stretch of the imagination could the Minister be referred to as a proponent of SNI.

We should also mention that although the 'conflict of interest' was raised as tainting the deliberations of the IRPC no attempt was made to demonstrate how this led the IRPC to make an erroneous recommendation. Moreover, it is to be steadily borne in mind that it has not been suggested that NEMMCO's deliberations were similarly

tainted, and in any event nobody has suggested that the Tribunal or any member of it has a conflict of interest disqualifying them from determining the application.

Allied to Murraylink's submission concerning the conflict of interest is the further submission that the Ministerial representative, Mr Wills, attended the IRPC meeting with what Murraylink described as a 'concluded' view. It would seem also that the same allegation is made against the South Australian nominee. The Tribunal has great difficulty in understanding this submission. It would appear to derive from the circumstance that the New South Wales and South Australian Ministers supported TransGrid's application. But if it is also intended to convey an imputation that the representatives attended the meetings determined upon an outcome and determined not to consider anything that may have been inconvenient to that outcome the short answer is that factually there is simply no material before the Tribunal establishing that. Ministerial representatives were quite entitled to attend meetings with the IRPC and to take, if they considered it appropriate, a stance whether a particular proposal should or should not be recommended to be held to be justified. But that does not establish that they ignored anything inconvenient to that view and determined the matter irrespective of any material placed

before them. In the present case there is simply no fact or reasonable inference to support Murraylink's allegations of impropriety.

A considerable time was taken in the proceedings concerning a telephone call made by Mr Price to staff members of NEMMCO prior to NEMMCO's decision being made. It was alleged by Murraylink, in effect, that Mr Price in a telephone conversation with Mr George and Mr Bones of NEMMCO attempted to exert unlawful pressure on NEMMCO to adopt the IRPC recommendation that SNI should be held to be justified without further investigation or further consultation as required by the consultation procedures of the Code. Moreover it is asserted that the Tribunal should infer that NEMMCO succumbed to the pressure - the inference being that had that pressure not been applied, NEMMCO's decision would not have been the decision it made. Presumably the same allegations directed to the IRPC is that its recommendation would have been that SNI did not meet the regulatory test.

It is also alleged that, in the course of that conversation, Mr Price told Mr George or Mr Bones that if NEMMCO did not make a determination that in its opinion the proposal was justified, there was a possibility that NSW might withdraw from the NEM. There is some dispute about what was actually said in this conversation. The



Tribunal accepts that Mr Price made a telephone call and insisted that a decision by NEMMCO be made quickly and that the Minister wanted a decision which favoured TransGrid's application.

NEMMCO for its part has submitted there is no evidence of any nexus between Mr Price's phone call and NEMMCO's determination that SNI was, in its opinion, justified. It directs the Tribunal's attention to a Ministerial note dated 23 October 2001 where it was made quite clear by NEMMCO that the performance of its tasks would not be affected by telephone calls of the kind made by Mr Price.

Mr Price's telephone calls must be put in context. When the case for Murraylink was opened before the Tribunal it was broadly asserted that in September 2001 the IRPC would not recommend that SNI's proposal be held to be justified. It was said that after TransGrid made further modifications to its proposals (which it did and which became SNI as finally recommended) there was a resolution that there would be further consideration of the matter and that a final decision would not be made until January 2002. It was then asserted that the events referred to above took place – it being implied that the decision by NEMMCO in December 2001 in favour of TransGrid's application was improperly made because of pressure brought to bear by the NSW Minister.

It is now clear from the documents before the Tribunal that it was NEMMCO's own timetable that its decision would be published around the end of November 2001. All parties (with the possible exception of Murraylink) were anxious for that to happen. NEMMCO and the IRPC had been considering this matter over a number of months. The circumstances that the Minister was pushing for a decision of the type he broadly favoured within the time originally stated by NEMMCO does not, in our opinion, raise any implication that NEMMCO succumbed to pressure by the Minister concerning its determination. It may have influenced NEMMCO to make a decision in December 2001 instead of waiting another 3 weeks but, on the evidence before the Tribunal that did not affect the decision NEMMCO made. Accordingly the Tribunal is of the view that NEMMCO's decision was not relevantly adversely affected by Mr Price's telephone call.

We have dealt with this matter in some detail because serious allegations were made by Murraylink against the Minister and NEMMCO and no small amount of time was taken in the proceedings dealing with them. We would, however, draw attention once again to the circumstance that it is for this Tribunal to make its own determination concerning whether in its opinion SNI is justified or not and the Tribunal is unaffected by political considerations of the type

inherent in the allegations made by Murraylink. No submission has been made to the contrary. Having determined therefore that there is no credible evidence supporting the view that NEMMCO succumbed to political pressure of the type alleged, we will now turn to the issues raised by the parties for determination by us.

### **Alternative Projects**

As we have said Murraylink's essential criticism of the approach taken by NEMMCO, and the one viewed by it as the most significant in the proceedings, was that that NEMMCO failed to have regard to USNI as an alternative project and, had it done so, it would have concluded that SNI did not maximise the net present value of market benefit because the modelling (undertaken since December 2001 by Mr Campbell) makes it clear that the net present value of market benefit of USNI exceeds that of SNI.

Although the factual situation before the Tribunal is different from that which was before NEMMCO, the question of how to approach alternative projects is the same. As we have said, SNOVIC 400 is no longer an alternative. Hence it is unnecessary for the Tribunal to consider whether NEMMCO erred, as is submitted by Murraylink, in the way in which it assessed that nominated alternative project in the context of its assessment of TransGrid's application. It would seem to

us, however, that Murraylink's criticism is misplaced. For example, it is alleged by Murraylink that NEMMCO when considering whether SNI was justified did so in combination with SNOVIC 400, which was contrary to clause 5.6.6(c) of the Code. In fact, NEMMCO did not determine that SNI plus SNOVIC 400 was justified. It decided that SNI itself satisfied the regulatory test, whether or not SNOVIC 400 proceeded. As will be seen, NEMMCO rejected USNI as an alternative project because to its understanding an alternative project needed to be substitutable and practicable, and USNI was not practicable.

Murraylink has also claimed that SNOVIC 800 and NEWVIC 2500 should also be identified as alternatives to SNI.

The Tribunal does not know whether if USNI were rejected as an alternative project, but either SNOVIC 800 or NEWVIC 2500 were treated as an alternative project, SNI would pass or fail the regulatory test. SNI has not been assessed against SNOVIC 800 or NEWVIC 2500. If SNOVIC 800 and/or NEWVIC 2500 ought to be considered as alternatives, then the Tribunal would be left with no choice other than to send the matter back to NEMMCO for reassessment.

It should be noted that, contrary to assumptions made by Murraylink, the issue is not whether USNI is, in the opinion of the Tribunal, justified. (Or, for that matter, SNOVIC 800 or NEWVIC 2500). The issue is whether SNI is justified. The circumstance that USNI may provide greater net present value of market benefit, with the consequence that it is not established that SNI relevantly maximises net present value of market benefit, would not thereby authorise USNI as a project under the Code. If SNI's were held not to be justified, USNI could not proceed unless an application were made and that project, in turn, would, at the relevant time, be measured against any other practicable alternative.

We are of the opinion that an alternative project is not necessarily rejected because there is no present proponent. However, the absence of a present proponent or the absence of likelihood of a future proponent is highly relevant to the question whether the project is a practicable alternative. USNI was the subject of a submission by TransEnergie in May 2001. Since that time and until this hearing commenced in August 2002 TransGrid had refused to be a proponent, for the project and nobody had made application to be a proponent or even to suggest it would like to be a proponent.

As we have said, it was submitted by Murraylink that its unregulated interconnector ought to be considered as an alternative project. The project is committed and is presently carrying power from Victoria to South Australia. At one point it appeared to be asserted in submissions by Murraylink that if SNI were to proceed, Murraylink would be a commercial failure. We infer that SNI would adversely affect Murraylink's commercial operations, but the extent of the impact has not been explored in evidence in the proceedings before us, because nobody thought that was a relevant circumstance until a final submission by Murraylink. We are required to have regard to alternative projects. Murraylink is not an alternative project anymore than SNOVIC 400 is. Accordingly we reject the submission that Murraylink's unregulated interconnector should be taken into account as an alternative project.

### **Selection Criteria for Alternative Projects**

All parties before the Tribunal have approached the matter upon the basis that the relevant criterion is substitutability and practicability. Earlier there was some dispute concerning whether practicability was limited to technical feasibility. Murraylink had submitted that technical feasibility alone met the Test for practicability. Later it was conceded that commercial feasibility was relevant, and Murraylink argued that

USNI was commercially feasible. Most of the economists who gave evidence adopted that view. They took the view that commercial feasibility requires a consideration as to whether there would be a realistic prospect that the alternative project would proceed. Mr Thomas took the view that a project ought to be assumed to be commercially feasible if no more is known about it than that it would yield the greatest economic benefit. His assumption being, apparently, that because a market participant stands to gain that participant will have the incentive to cause the project to occur and that NEMMCO has the obligation to bring about the necessary co-operation. We have not approached the matter on the view advanced by Mr Thomas.

As we have said the proceedings have been conducted by all parties on the assumption that substitutability is a requirement for an alternative project, and that USNI is relevantly a substitute project. It seemed to be assumed that because both SNI and USNI would operate to transfer power from New South Wales to be available to South Australia USNI is a substitute for SNI, notwithstanding that SNI would provide direct power delivery from New South Wales to South Australia whereas USNI would make power available to Victoria for later despatch to South Australia. It was not submitted, for example,

that because USNI would make power available to South Australia only when Murraylink and Heywood were unconstrained, and not when they were constrained, it was not a substitute for SNI which would cause power to be directly transmitted from New South Wales to South Australia. The parties have assumed USNI was relevantly a substitute for SNI and the Tribunal has approached the matter on that basis.

### **Is USNI Practicable?**

USNI has been assessed by IES on behalf of TransGrid. Mr Campbell's modelling makes it clear that if USNI were to be treated as a practicable alternative, SNI would not relevantly maximise net present value of market benefit. That is because the greater part of the net present value of SNI is referable to USNI which, if undertaken alone, would cost a little over half of the whole of SNI and would yield a good rate of return. It is not disputed that it is a matter for TransGrid to select its project for evaluation, but it is open to the evaluator (in the first instance the IRPC and NEMMCO and later the Tribunal) to view some part of it as an alternative project to the whole provided it is relevantly a substitute and is technically and commercially feasible. There does not seem to be any suggestion other than that USNI is technically feasible. The most significant issue in the proceedings



before us was directed to the claim by TransGrid that USNI was not commercially feasible.

Conformably with the views of the economists (Mr Houston and Professor Kahn) we accept the view that the existence of a proponent for an alternative project is not a necessary pre-requisite for that project to be considered. Existence of a proponent is, as TransGrid submits, fairly good evidence of commercial feasibility and conversely the non-existence of a proponent is some evidence of lack of commercial feasibility. NEMMCO does not dispute this proposition and asserts that insofar as its determination was read as the need for an alternative to have a proponent the fault lay in the interpretation placed upon its words.

As we have said, in its final submission Murraylink accepted that commercial feasibility is a criterion, but contended that TransGrid's refusal to be a proponent for USNI is unjustified and should be ignored.

TransGrid's reason for not undertaking USNI is that it would lead to a risk of "asset stranding". It has declined to be a proponent. Its stated fear is that Murraylink, as an unregulated interconnector undertaking its activities by way of arbitrage, might so conduct itself that TransGrid's investment in USNI could become stranded. It

contends that USNI would be dependent on the flow of power over Murraylink, and that Murraylink would have the capacity and the financial incentive to withhold flow, which would have as a consequence the possible stranding of USNI.

TransGrid has advanced an additional reason for not wishing to undertake USNI, viz that it does not wish to be dependent upon one customer, i.e. Murraylink.

In short, TransGrid argues that it is the only entity legally entitled to build USNI and that it does not intend to do so because it does not wish to expose itself to an unacceptable risk of “asset stranding”. A number of economists expressed their views concerning “asset stranding”. We did not understand any of them to support Murraylink’s ultimate submission that TransGrid’s fear was a ‘sham’ or ‘construct’ raised for no purpose other than ‘manipulating the assessment process’. Professor Kahn, Mr Houston and Professor Bishop thought it reasonable for TransGrid to regard its risk as substantial. Professor King, Professor Littlechild and Mr Ergas considered it has not been demonstrated that the degree of risk would be other than trivial.

Relevant to the degree of risk is whether USNI is dependent on Murraylink, and the extent to which Murraylink has sufficient market

power and/or the incentive to manipulate the flow of current to the detriment of TransGrid.

In the event that it is determined that TransGrid's risk of stranding is relevantly non-trivial, a further question arises whether TransGrid can be compelled to build USNI or be compelled to permit some other proponent to enter its network to carry out the work. It is to be noted that until these proceedings were under way no potential proponent had come forward. Murraylink has since written two letters of offer to TransGrid, which will be considered shortly.

The differences of opinion between economists turn, in effect, on their assessment of the degree of risk of stranding, and thus, upon the extent to which they think it realistic that Murraylink, as an unregulated interconnector and in competition with generators, would have the ability and the commercial incentive to reduce the amount of power flowing from Victoria in order to achieve higher prices in SA. Relevant to this question, of course, is the degree of Murraylink's market power. All economists seem to agree that Murraylink has some degree of market power. The question is whether it should be characterised as trivial or substantial. It is TransGrid's contention that the marginal costs of generating power in SA will, in the foreseeable future, always

be more expensive than in New South Wales and Victoria and that during certain periods the Heywood interconnector is constrained.

Murraylink would have the ability to reduce the amount of power it would allow to flow from Victoria to South Australia and it would, in our opinion, have the commercial incentive to do that at least in peak periods. The marginal cost of generating power in South Australia is significantly greater than Murraylink's marginal costs, which are the cost of electricity in Victoria and the cost of transmitting it to South Australia. And this state of affairs is likely to continue for some time in the future, on the information before us.

We accept Mr Campbell's analysis. It is true that Murraylink has asserted it would have no interest in restricting flow because it hopes to supply 75% of electricity to South Australia pursuant to contracts. We note that at the present time there are no contracts. That is, of itself, perhaps not so significant because Murraylink has only recently commenced operations. However, it is not without significance to note that the unregulated interconnector between New South Wales and Queensland has been operating for approximately two years with no contracts.

Taking into account the differing views of the economists and others concerning the degree of risk we have come to the conclusion

on the evidence that the implementation of USNI would lead to a real risk of stranding or, at the very least, TransGrid's apprehension of the risk of stranding is real and not unreasonable. We reject the submission by Murraylink that TransGrid's stated risk of stranding is a sham or a construct put forward for the purpose of manipulating the regulatory test. Once the risk is recognised as one that is reasonably open for TransGrid to hold, it is, in our view, a matter for TransGrid to determine whether it is prepared to expose itself to that risk.

TransGrid has also claimed that, quite apart from the risk of stranding arising from Murraylink's operations, it is reluctant to invest in works that are dependent on one customer. The reasons for that have been stated by Mr Hutt, the Managing Director of TransGrid, and whether or not the concerns are as significant as he would maintain, we do not accept the view that TransGrid has simply made up that ground as an excuse for not undertaking USNI.

It has been submitted on behalf of Murraylink that economic considerations would dictate that if SNI were refused, then TransGrid would proceed with USNI, despite its denials, because USNI has the capacity to furnish a good rate of return. It was submitted that Dr Parker on behalf of TransGrid agreed that TransGrid would proceed with USNI if SNI was found not to be justified. That is not a correct

assessment of the answer given by Dr Parker. He said, in effect, that he thought TransGrid would be interested, having regard to its objectives, in being a proponent for USNI, but as he made clear he could not speak for TransGrid itself. Interestingly enough Mr Hutt, the general manager of TransGrid, was simply not asked the question, presumably because he was of the opinion that stranding to one side he was less than enthusiastic about a project that met the needs of only one customer.

The Tribunal is in no position to direct TransGrid as to how it should invest its money or what projects it should undertake. We do not know how TransGrid proposes to invest in the future. All we do know is that it refuses at the present time to be a proponent for USNI and for the reasons discussed that refusal is not unreasonable.

But if TransGrid is not willing to be a proponent for the project can it be compelled to be one and/or can it be compelled to permit another entity to become a proponent to undertake the work?

We are of the opinion that NEMMCO itself has no power to compel TransGrid to build USNI. The most NEMMCO can do if it thought augmentation was justified, but that TransGrid would not arrange for it, is to mediate and liaise to resolve the dispute. There is

nothing in the Code that authorises NEMMCO to compel TransGrid to invest money.

We reject TransGrid's contention that the Tribunal should not consider Murraylink's belated offers made in the course of these proceedings. We have already referred to the fact that although USNI was advanced months ago (by Murraylink) no proponent came forward. Murraylink, however, relies on two letters it sent to TransGrid in the course of these proceedings in support of its view that USNI should be treated as an alternative project.

The first letter dated 6 August 2002 offered to purchase from TransGrid the USNI assets at a value which would be determined by the ACCC as part of its revenue capped determination. In our view that proposal does not even address the issue of stranding. Moreover it has an additional complication (unexplored to date) as to how such a sale could be effected bearing in mind that it would be part of TransGrid's network.

However, by letter dated 14 August 2002 Murraylink proposed that it be allowed to be "a proponent of unbundled SNI" and to construct it if TransGrid agreed to access to its transmission facilities. On our understanding of the legislation, TransGrid cannot be legally compelled to allow construction of USNI within its own network. Other

than submitting that TransGrid could be compelled to allow work within its network to be undertaken by another, the matter was really taken no further. It was left as an abstract proposition. But even if in some circumstances TransGrid could be compelled to allow some work to be carried out in its network, the question remains whether it could be compelled to permit Murraylink to build USNI, and we are not satisfied that it could.

Accordingly, for all the reasons discussed, we have come to the conclusion that USNI is not relevantly an alternative project for the purpose of the regulatory test.

### **Snovic 800**

We have already referred to the circumstance that to be relevantly an alternative project it must be shown to be technically feasible. SNOVIC 800 is an augmentation proposal intended to achieve 800mw increase above the current power transfer capability between NSW and Victoria. It has not been the subject of technical evaluation. Snowylink 1 Pty Limited (a company associated with Murraylink) has indicated it would be a proponent for SNOVIC 800 as a regulated upgrade and has made a connection inquiry of TransGrid. Dr Parker, whose evidence we accept, has referred to significant practical problems with the proposal. These include a requirement



that the transmission line between Marulan and Yass be outrated, an unrealistic requirement for the construction of a 330kV transmission line from Yass to Wagga Wagga, and the questionable generation capacity of the Snowy scheme.

The IRPC and NEMMCO concluded that SNOVIC 800 was not practicable. That is also the view of TransGrid. Murraylink disagrees with Dr Parker's views on technical feasibility. But at the present time, TransGrid is not a proponent and does not intend to be one. It has, however, accepted an inquiry from Snowylink concerning a component of SNOVIC 800. In our opinion the project has not been demonstrated to be technically feasible, even if sufficiently developed to be a "project" for the purpose of the regulatory test.

### **Newvic 2500**

NEWVIC 2500 is an augmentation intended to achieve a 400mw increase in power transfer capability between NSW and Victoria, assuming SNOVIC 400 and SNI are in operation. SNOVIC 400 is now a committed project. SNI is the subject of the present application. NEWVIC 2500 was submitted to the IRPC by TransGrid for technical evaluation in May 2002. We accept Dr Parker's evidence to the effect that "a lot more technical analysis need be done before it could be called a mature scheme capable of being built". As he put it "I think we

have many months of work left yet to work through that and just check out its feasibility". We are of the opinion that SNOVIC 2500 is not relevantly an alternative project.

### **Snovic 600**

In a witness statement in reply, Dr Cook floated the prospect of SNOVIC 600. That was the first time it was mentioned. It was not a project particularised by Murraylink in the application. It was not even mentioned in opening submissions. On our understanding it is no more than an unexplored suggestion made by Dr Cook. We would doubt whether it could be characterised as an alternative project at all. But even if it could be in some way regarded as a substitute for SNI there has been no attempt to assess its practicability.

### **Other Issues**

The regulatory test involves modelling the nett present value of market benefit and the modelling consists of mathematical equations intended to mimic what occurs in the market (that at least being Mr Campbell's and Dr Rose's understanding). As we have said the model by Mr Campbell demonstrates the nett present value of benefits of USNI exceed that of SNI. He has also concluded that SNI exceeds that of the base case and that it exceeds that of its only feasible

alternative project namely Heywood upgrade. Generally Mr Campbell's conclusions are consistent with the updated ROAM analysis by Dr Rose.

As mentioned earlier, Murraylink has raised issues concerning the reliability of aspects of the modelling. Murraylink has nominated four criticisms that were directed to:

- (a) reliability generation capacity deferral benefits;
- (b) Riverland augmentation deferral benefit;
- (c) generation capacity in New South Wales; and
- (d) network constraints.

The criticisms directed to (c) above does not seem to have been pursued.

### **Reliability generation capacity deferral benefits**

Murraylink alleges NEMMCO fell into error by considering benefits not available to unregulated connectors when attributing reliability generation capacity deferral benefits to SNI because, it submits, on the true meaning of the regulatory test, there should be consideration only of benefits that could also be achieved by unregulated interconnectors. It is also impliedly submitted that if the Tribunal considered benefits not available to unregulated interconnectors it would also fall into error.

We are of the opinion that the regulatory test not only permits but requires generation capacity benefits to be taken into account. It provides “in determining the *market benefit* the following information should be considered.... the capital costs of *committed, anticipated* and *modelled project* including demand side and generation projects and whether the capital costs are completely or partially avoided or deferred” (Note (1)(b)(iv)). Moreover, to fail to have regard to them would be inconsistent with the economic rationale underlying regulatory test as appears to be accepted by most economists.

Murraylink relies, in effect, on comments attributed to the ACCC, and the IRPC’s supposed endorsement of them. However, as we have said, the proposition is contrary to the ACCC’s commentary on the regulatory test. Moreover it is not supported, in the manner contended for, by the comments made in Ernst & Young’s “Review of the Assessment Criterion for New Interconnectors and Network Augmentation”.

In the course of proceedings Murraylink nominated the following reliability generation deferral benefits which it said were not justified.

They are:

- (a) failing to take account of the fact that NEMMCO has a reserved trader function that is due to expire on 30 June 2003;
- (b) adopting an incorrect VoLL;
- (c) wrongly including benefits under a ten year time horizon;
- (d) wrongly assuming a type of generation assumed to be contracted for reliability purposes being an open cycle gas turbine (**OCGT**) plant and failing to take account of the fact that reliability benefits are only available to the extent that surplus generating capacity exists in the exporting region and the calculations make no allowance for the incidence of peaks at identical times between NSW and SA.

In his final address Mr Archibald QC characterised the submissions and assertions with respect to modelling as “marginal” to the decision the Tribunal was required to make, and we agree with that assessment. Ms Crennan QC referred to them as secondary.

We deal with them as follows:

It is submitted that the IRPC’s assessment and NEMMCO’s adoption of it was based on unsustainable assumptions.

We accept the criticisms by Mr Thomas, Mr Campbell and Dr Houston directed to the assumption in Dr Rose's modelling that the benefit would continue into perpetuity rather than the life of the assets. However, that flaw did not significantly affect his modelling. Moreover any mistake on the part of Dr Rose was corrected by Mr Campbell.

It was not, in our opinion, unreasonable for NEMMCO to assume that the reserved trader function (which has already been extended from 30 June 2003) will not be further extended.

The modelling was conducted on an assumption as to the current level of VoLL i.e. \$10,000/MWh. Dr Rose also assumed \$10,000/MWh. Mr Campbell also as a sensitivity examined the effect of an increase in the level of VoLL to \$50,000/MWh. In our opinion it has not been demonstrated that the assumptions made with respect to VoLL were unjustified.

OCGT has a high operating cost. It is, on the evidence before us, the cheapest to construct. We do not understand there to have been any attack on the amount of new generation forecast in ROAM's modelling. ROAM determined that SNI deferred the need for 200 MW of peaking plant. We accept NEMMCO's submission that it is irrelevant whether the peaking plant arises from market entry or reliability entry because it would have the same cost. As NEMMCO

points out, even if SNI should have considered the deferral of closed cycle gas turbine (**CCGT**) which is even more expensive to install, then SNI should be attributed with a greater capacity to defer benefit than in the case of OCGT thus yielding a higher net present value.

### **Riverland augmentation deferral benefit**

It is alleged that NEMMCO fell into error in attributing \$25 million augmentation deferral benefit to SNI. It is submitted accordingly that the Tribunal would fall into error if it did the same. The essence of the criticism is that augmentation is not required in the Riverland region of SA and deferral benefit should not, accordingly, be accorded to SNI.

The information concerning this matter comes largely from ESIPC which is an independent statutory planning body with transmission planning responsibility under the South Australian legislation and the Code for the Riverland region. ESIPC has considered (after public consultation) the options available for augmentation of the Riverland region. The sum of \$25 million was confirmed by ESIPC to NEMMCO and later confirmed in ESIPC's final report.

One criticism seems to assume that SNI would not allow a Riverland deferral benefit at all because the line would not run through Monash. That is simply incorrect.

It was also submitted that ESIPC's analysis was based on SNI being built by 2003-04 and Murraylink would provide network support. It would seem to us, that however that may be, there was no deferral benefit to the Riverland region arising from SNI assumed prior to 2007/08.

It was submitted that we should conclude that the forecasts were higher than justified, because after NEMMCO's determination the forecasts relied on by NEMMCO have been lowered and hence, it is submitted, deferral costs will rise, if at all, after 2007. The change in these forecasts did not seem to affect the views of ESIPC, as the evidence of Mr McPharlin makes clear.

There were sundry other criticisms of the level of benefit assumed. Most simply misunderstood TransGrid's proposal. Murraylink has made an additional complaint that ESIPC should not have relied on cost figures provided by ElectraNet South Australia because it is going to build part of SNI. It appears to be suggested that for that reason alone NEMMCO should have undertaken an independent assessment of ESIPC's assessment of the Riverland deferral benefit. The



supposed conflict of interest should persuade the Tribunal, it is submitted, to regard ElectraNet's cost figures as unreliable and, on that account, to have no regard to them. We reject this submission.

It appeared to be assumed that SNI did not take into account the diversion to Monash. The short answer is that SNI's proposal included "the construction of the new Baronga Robertstown 275kv line via Monash with switched shunt reactors at each end of the line".

In the alternative it appeared to be suggested that SNI did not include the cost of diverting to Monash. It is sufficient merely to observe that, as Dr Parker explained, the \$10 million allowed by ESIPC would have more than accommodated that cost.

The \$25 million benefit calculated by ESIPC was on the basis that the cost of augmentation that would need to be done if SNI did not proceed was \$35 million. From that was deducted \$10 million cost of work required to connect SNI at Monash. Hence the criticism is misplaced.

### **Network Constraints**

In the IRPC's assessment it was assumed that the combined capacity of SNOVIC 400 and SNI would be 600MW and that was included in the modelling undertaken by Dr Rose (and later by Mr Campbell). The modelling has been the subject of criticism and it was suggested that

the assumption of 600MW should be replaced by 430MW. As TransGrid has pointed out, the IOWG Report expressed satisfaction that the combined capacity of SNOVIC 400 and SNI was 600MW. Moreover, as it points out, TransEnergie supported this conclusion when reporting to the IOWG. We are of the opinion that the stated capacity of 600MW was properly used in the modelling.

### **Conclusions re modelling**

It is not irrelevant to note that the evaluation of the IRPC was the subject of extensive audit and review. This included ROAM's modelling, advice from Pricewaterhouse Coopers, assessment by Drayton Analytics, a probity audit by Sinclair Knight Mertz and a legal audit undertaken by Mallesons Stephen Jaques. NEMMCO engaged Hydroelectric Corporation to compare ROAM results with those of TransGrid's consultant Intelligent Energy Systems (IES). The process took over 3 years and interested parties, including Murraylink and its associated companies, have had ample opportunity to put submissions to the IRPC, NEMMCO and this Tribunal.

Accordingly, we reject the nominated grounds of attack on the assessment undertaken by IRPC and NEMMCO.

In our opinion these reasons have addressed the issues raised by the parties for determination by the Tribunal.

## **Issues Raised By Professor McDonell**

We have had the advantage of reading the reasons of Professor McDonell for the conclusion he has reached that SNI is not justified. We have come to the conclusion that SNI is justified. We think it necessary to deal with the approach taken by Professor McDonell and to give reasons why we have come to a different ultimate conclusion.

At the conclusion of the addresses and just prior to the Tribunal adjourning to consider the matter Professor McDonell asked the question referred to in his reasons. His request elicited further written submissions from NEMMCO, Murraylink and TransGrid.

Included in Professor McDonell's question was a reference to the impact of taxes and transfers. During the proceedings and in response to a question from the chairperson all parties, including Murraylink, said that that was not an issue in the proceedings. Accordingly, we reject Murraylink's submissions made in response to Professor McDonell's question that this issue was not disclaimed during the hearing.

NEMMCO submitted that the process of evaluation and assessment undertaken by the IRPC was in accordance with the regulatory test. Murraylink broadly criticised the response of

NEMMCO but raised in addition further criticisms which had not been raised previously.

It should be noted, however, that although Murraylink alleged the model failed to take certain additional matters into account it did not, except in one instance, attempt to establish what the effect would have been on the net present value of SNI had the modellers adopted its submissions.

We deal shortly with the matters raised specifically by Murraylink. We do not accept that the IRPC failed to use appropriate opportunity costs of capital by using market interest rates and not, as Murraylink submits, a real option value. The IRPC followed the guidelines of the ACCC. Moreover if Murraylink were correct and real option values should have been applied it has not been shown that the ultimate outcome would have been different.

We also reject Murraylink's complaint that payment of transmission use of systems charges (**TUOS**) should have been, but was not, considered. This was a matter referred to in Dr Cook's first statement but not referred to again. TransGrid has submitted that the IRPC was correct in disregarding TUOS because the regulatory test requires the taking into account of costs and not revenues and we accept this submission.

It was also submitted by Murraylink that the IRPC failed to reduce the value of deferral benefits of generation by reason of environmental factors. The short answer is, as submitted by TransGrid, that the costs that according to Murraylink should have been taken into account but were not cannot be measured at the present time because there is no carbon tax or credit system yet developed in this country.

Murraylink also submitted that the modellers should have had regard to a further alternative project, namely 'delayed SNI'. There are a number of reasons why we reject Murraylink's submission. In fact scale and timing were addressed by the modellers. The IRPC evaluation did take account of risks and uncertainty. Reliance is placed upon an observation by Mr Ravelli that delayed SNI may result in a potential saving in excess of \$50 million. However this was simply not explored in the case before the Tribunal. In our opinion the IRPC and NEMMCO correctly took the view that SNI as a project was at the discretion of TransGrid and it was not their role to seek to optimise the project under evaluation or to demand changes to the project. That was a view supported in discussions with the ACCC and was accepted throughout the course of assessment. TransGrid itself on a number of occasions changed the scope of SNI in an attempt to optimise the

project. ROAM was specifically engaged to conduct studies to address optimal timing of SNI.

Professor McDonell has expressed the opinion that the regulatory test as applied by NEMMCO was, as he puts it, 'foundationally flawed'.

In response to this aspect of Professor McDonell's question Murraylink has endeavoured to persuade us that the issue as formulated by Professor McDonell, viz that the process was 'foundationally flawed', was raised by it under the generalised complaint about cost benefit analysis. The submission, in our opinion, wholly ignores the particulars Murraylink gave concerning the details of its application and the way it presented its case.

This was not an issue that was raised in the proceedings by any party. It follows from Professor McDonell's conclusion that had the assumptions been made that Murraylink now suggests should have been made, but were not, there still could have been no reliable finding concerning whether or not SNI maximises the net present value of market benefit – or, for that matter, the modelling could not have led to a reliable conclusion concerning the net present value of USNI.

If the proposition advanced by Professor McDonell is correct the whole process of assessment and evaluation was so fundamentally flawed that it was incapable as a model of leading to a rational assessment of net present value of market benefit, with the consequence that in these proceedings an enormous amount of time and effort has been wasted concerning such issues as the meaning of the words in the Code, whether USNI was a practicable alternative, whether aspects of the modelling including erroneous assumptions as claimed by Murraylink were correct, and so on. On Professor McDonell's understanding, as we would read it, no reliance could be placed on conclusions reached by the IRPC and NEMMCO even if the allegedly erroneous assumptions in the model were replaced by those advocated by Murraylink, because the whole process was an irrational application of the regulatory test.

The proposition that the regulatory test was 'foundationally flawed' was not, as we said, raised in the proceedings or articulated by any of the expert witnesses who gave evidence for any of the parties.

As we have stated before the Tribunal stands in the shoes of NEMMCO. However its function is to give all parties the opportunity to present to it material and to make submissions on that material. This has been done. It is accepted that the law provides the Tribunal

proceedings shall be informal, not bound by rules of evidence, and subject to natural justice. Nevertheless it is necessary that there be some form of structure to the proceedings. In this matter a procedure was adopted by the Tribunal and applied and relied on by the parties. This was the first case before the Tribunal. Murraylink presented its case in the form of what might be described by lawyers as a statement of claim; the parties exchanged statements of witnesses; witnesses were cross-examined.

Prior to the matter coming on for hearing Murraylink gave particulars of its claim and later and in response to requests by other parties amplified those particulars. The purpose of this procedure was to identify for the parties and the Tribunal the matters which were to be alleged to be defective in the decision finally made by NEMMCO. The result was that the matters in issue between the parties were clearly defined and the subsequent steps and processes in the hearing addressed those issues. The matters raised by Professor McDonell were not in issue between the parties. The issue was not that the whole process was 'foundationally flawed': it was that identified aspects of the modelling were subject to criticism. We do not view the generalised statement by Murraylink in its reply to Professor McDonell's questions as addressing that issue. In our view it is



inappropriate that at this stage the Tribunal should turn its attention to the question whether the whole process was 'foundationally flawed'. TransGrid has submitted the Tribunal should not have regard to any of the additional matters raised by Murraylink which were not raised in the proceedings. Whilst there is considerable force in that submission, we have nonetheless taken into account Murraylink's submissions on the specific issues raised by it.

We make it clear we have considered the reasons advanced by Professor McDonnell and the responses of the parties in reaching our conclusion. We are not satisfied that the application of the Test was 'foundationally flawed'. We accept the submission of NEMMCO that the regulatory test as followed by the IRPC provides a clear and objective basis for the calculation of maximum net present value, and the paramount task of the IRPC and NEMMCO (and this Tribunal on review) is to apply the cost benefit analysis conformably with the particular criteria specified in the regulatory test by the ACCC rather than by reference to cost benefit principles at large. NEMMCO has maintained, and we accept its submission, that the cost benefit analysis undertaken was to rank SNI against other alternative projects across a range of market development scenarios, in order to identify whether SNI would maximise the net present value of market benefits

across most scenarios. It pointed out that while general principles may assist in understanding the context in which the regulatory test has been established, the primary consideration is the content of the test itself together with ACCC's commentary.

## **Conclusion**

We have come to the conclusion that for reasons set out herein the application of Murraylink should be dismissed. We are of the opinion on the material before the Tribunal that SNI is justified.

## **Costs**

Parties made submissions on the question of costs but it was generally agreed that submissions should be deferred until the decision of the Tribunal is published. Accordingly, liberty is granted to any party to approach the Tribunal for the purpose of making an application for costs.