

NATIONAL ELECTRICITY TRIBUNAL

APPLICATION No. 1 OF 2001

**Application for Review of a NEMMCO Determination
on the
SNI Interconnector dated 6 December 2001**

Murraylink Transmission Company P/L

Applicant

National Electricity Market Management Co.

Respondent

Yallourn Energy P/L

NRG Flinders Operating Services P/L

TransGrid

NSW Minister for Energy

SA Minister for Energy

Additional Parties

REASONS FOR DECISION

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REASONS FOR DECISION

Preamble

I am the non-legal member of the three member panel of the Tribunal appointed by the Chairman to determine this Application. My expertise is in engineering, economics and sociology. More specifically here, it is in the economics, organization and regulation of infrastructure industries, including electricity, and in the cost benefit analysis and financial appraisal of infrastructure investment projects.

The Tribunal is called upon to decide an Application by Murraylink to review a reviewable decision by NEMMCO. The NEMMCO decision on review, dated 6 December, is that the SNI Option is justified. That decision was made pursuant to a purported application of the ACCC's Regulatory Test¹ incorporated in the National Electricity Code.

The arrangements of the Tribunal are set out in the cooperative legislation of the National Electricity Law, as initiated in the lead legislation, the National Electricity (South Australia) Act 1996, Part 5. As to procedure, Part 5 Section 32 (1) reads:

'In a proceeding before the Tribunal-

- (a) the procedure of the Tribunal is, subject to this Law, within the discretion of the Tribunal; and
- (b) the proceeding is to be conducted with as little formality and technicality, and with as much expedition, as the requirements of the

¹ Application Book (AB)1/2

national electricity legislation and a proper consideration of the matters before the Tribunal permit; and

- (c) the Tribunal is not bound by the rules of evidence and may inform itself on any matter in any way that it considers appropriate; and
- (d) the Tribunal must observe the rules of natural justice.'

The Tribunal's Task

In the present case it is common ground among the parties and the Tribunal that the Tribunal's task requires it to place itself in the shoes of NEMMCO with the law as it was at the time of NEMMCO's decision and the facts as they are at the time of the Tribunal's Determination of the Application.

The Tribunal's present task may thus be resolved into the following parts:

- a. decide the interpretation of the Regulatory Test, taking into account the arguments and evidence provided to the Tribunal, and, in light of this, whether the SNI Option was justified at the time of NEMMCO's Determination in accordance with its interpretation;
- b. decide if the Test, properly applied to the SNI Option in the present circumstances, and bearing in mind the probative value to be placed on the NEMMCO materials presented, would result in a decision that that Option is justified at the time of the Tribunal's Determination.

a. Decision on Interpretation of the Regulatory Test

Various matters involving questions about the interpretation of the Regulatory Test had been raised in the original Application and in later evidence. It is important to the case that the Regulatory Test is prescribed by the ACCC as a test of public benefits (see Appendix 1 paras 40-44). Such a test is not a mere contrivance. It must be provided with grounds for justification as an assessment of public benefit. As I show in Appendix 1 (see Section C therein particular paras 37-46) the ACCC did this by squarely relating the test to the logic and public benefit arguments underlying cost benefit analysis as an applied field of standard economics, including its branch, welfare economics. As its methodological authority on cost benefit analysis it cited a famous work by Professor EG Mishan. So, in my opinion, deciding the appropriate interpretation of the Test was the first question to be resolved by NEMMCO, since a misapplication through misinterpretation of a public benefits test by an industry regulator would go to the heart of the tasks, and the confidence, entrusted to it by the ACCC, the industry and the public. It seems clear to me, therefore, that, in order for the Tribunal to stand in the shoes of NEMMCO and apply the Test, it is also necessary for the Tribunal to seek to understand and decide upon the meaning of all the terms of that Test, including terms used as terms of art. This is so whether or not NEMMCO had achieved such an understanding, and whether or not the issue of the broad interpretation of the Test had been raised as a complaint by the other parties. In pursuing this question I have had in mind, in particular, the second clause of section (c) of Part 5 Section 32 (1) quoted above: "... the Tribunal is not bound by the rules of evidence and may inform itself on any matter in any way that it considers appropriate."

From early in the consideration of the Application, I identified and noted for the Tribunal matters brought by the Applicant, beginning

with its Application, as they related to the interpretation of the Test involving terms of the economic art. To determine precisely how the Test had been applied, it was necessary to know specific aspects of the way in which the assessments in question had been conducted by NEMMCO and the IRPC. In accordance with the adopted procedures of the Tribunal, it was agreed with my colleagues that the question of NEMMCO's interpretation and application of the Regulatory Test in the broad would be raised only if it was not brought as a complaint by the parties, at which time the issue would be reconsidered by the Tribunal. So, after the addresses at the concluding session of the hearings, when the issue as a whole had not been raised by the parties, and before the Tribunal finally adjourned to consider the whole matter of the Application, a short adjournment was taken. After I had confirmed to my Tribunal colleagues that I wished to put the question I had indicated some time previously, the Chairperson reconvened the Tribunal and I asked the Respondent the question shown at Appendix 2. The Respondent's response together with those of the Applicant and the contradictor, TransGrid, are provided at, respectively, Appendices 3, 4 and 5.

In Appendix 1 I discuss the principles and methods of cost benefit analysis (Section B, subsection a-g.), the meaning of the Regulatory Test as promulgated by ACCC (Section C), consider evidence adduced by, in particular, the Respondent as to that meaning (Section D), and some of the implications of that interpretation (Section E). I detail there the reasons for my finding that the Regulatory Test requires the application, as an investment decision criterion, of a cost benefit analysis as that term is understood as a term of economic art, an understanding which was common ground among the parties. I also detail there my reasons for finding that NEMMCO's interpretation of that Test is foundationally flawed and that it thus did not apply the Test. Of the various inadequacies of NEMMCO's which include reading

the Test out of context, the treatment of alternatives and of interdependencies among them, taxes and transfers, shadow prices, of costs, of incremental optimization, and of risk and uncertainty, two are especially damaging:

- the failure to make valid economic comparisons of the net present values of alternative investments of *different size*, (especially in this case where the differences are large); and
- the failure to consider the implications, for the calculation of net present values, of the relative magnitudes and probabilities of less uncertain *early occurring*, and the more uncertain *late occurring*, benefits (especially in this case where the late occurring benefits as a proportion of total benefits is large).

As I show in Appendix 1 (in particular at paras 16, 17, 22, 52, 53, 55) these deficiencies can be expected to lead to the 'gold plating' of regulated assets proposed for justification.

I think it is the case that the Regulatory Test, its underpinning by cost benefit analysis and its method could have been more explicitly framed by the ACCC. Before it commenced the appraisal, the first employing the new Test, NEMMCO had been uncertain of various aspects of the Test as promulgated and set out to establish relevant meanings. As I note in Appendix 1 (para 51) it was open to NEMMCO to have sought, from among other sources of expert advice, a corporate statement by the ACCC as to the construction of the Regulatory Test and the method and procedure to be adopted. On the evidence it did not do that. Its own construction of the Test is unconvincing. At base it posits that the Regulatory Test should be shorn of its relation to the context and foundation in cost benefit analysis (and more basically in welfare economics) specifically used for the Test itself and set out in detail in the accompanying explanatory memorandum and in the

foregoing ACCC Preliminary View² and the Ernst and Young report³. Instead, it adopted an interpretation which does not provide a rational investment decision criterion and which therefore fails to examine the merits of alternatives, however they might be defined or otherwise analysed, as regulated economic investments.

I have a further reinforcing consideration. The NEMMCO formula is that construed by a regulator whose task is the management and operation of the National Electricity Market. NEMMCO's special expertise lies not in economics but in, apart from financial, market and other administration, the esoteric and difficult fields of electrical engineering and the applied mathematics and statistics of very complex, computer based models. On the other hand, the ACCC is the regulator of the national laws on economic competition, has frequently demonstrated familiarity with economic doctrine, principles and methods, and with providing justified public benefits tests, and has regularly stated and enacted its objectives of promoting competitive markets. In my opinion NEMMCO could be reasonably expected to take great care to ensure the economic soundness of its approach to an ACCC public benefits test.

The National Electricity Market (NEM), as an institutional artifact, has at its core an economic representation, that of competitive markets and the various associated formulations of standard and welfare economics. Other representations-financial, mathematical, engineering, physical, marketing-are all necessary to NEMMCO's task. But, emphatically, it is the economic model which distinguishes the NEM from its centrally directed predecessor arrangements, which gave the NEM its legitimation, and which requires a sufficient understanding for the NEM's satisfactory

² AB7/54

management. NEMMCO's response to my concluding question and its attempt to apply the Test show that its reach exceeds its grasp. Moreover, as indicated above, and explained in Appendix 1, the formula of interpretation which NEMMCO adopted can be reliably expected to result in 'gold plating'. This is a practice which the ACCC has been especially concerned to discourage, and was a major issue in its considerations of and consultations on the Regulatory Test. Though there might be infelicities of drafting in the ACCC's text, I do not accept that it can be interpreted to include that the objective of the Regulatory Test was to encourage so perverse a result. This would be a necessary consequence of the NEMMCO formula.

It is my opinion that the Regulatory Test involves an application of cost benefit analysis as an investment decision criterion as understood in the economic art and as specifically delimited by ACCC, that it was not applied by NEMMCO and that the SNI Option was not justified by NEMMCO's decision.

b. Decision on Justification of SNI Option

The question of its justification, however, has to be brought up to date, as I indicated above. Even though the form in which the comparison of alternatives was made by NEMMCO does not satisfy the Regulatory Test, it is nevertheless the case that some sort of comparison, of some sorts of benefits and some sorts of costs, has been made. The parties have had lengthy and open opportunity to provide original and new evidence to the Tribunal on the assessment of the SNI Option made by IRPC and NEMMCO. Is it possible that, if all that evidence were now considered, adjusted for the changes of facts during the intervening period, and for the inadequacies of NEMMCO' interpretation, SNI

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could be shown to be justified? Such a new examination would have to be made by inspection of the evidence before the Tribunal.

I have a number of considerations in resolving this question. The first point is that specification of the new Base Case would have to include SNOVIC if, as purported, it has been justified. But, from the evidence available, I conclude that the same formula was used by NEMMCO for SNOVIC as for SNI, and hence the SNOVIC Determination would have contained inadequacies similar to those of the SNI assessment. I could not therefore be sure that SNOVIC is justified. With that uncertain, it would not be possible for me to make a reliable appraisal *de novo*. Further, even if SNOVIC were, say, to be included in the Base Case as a committed project, it would not be technically or physically feasible for me, by inspection of the evidence, to assess whether SNI is justified. There are specific difficulties in interpreting and recollating the evidence, such as the form of the ROAM algorithm, and questions of project interdependence and uncertainties relating to costs, which are noted in Appendix 1. More generally, the material available is absent information concerning costs, benefits, probabilities and risks necessary for carrying out the appropriate cost benefit analysis. Further, in the light of NEMMCO's performance in dealing with the interpretation of the Regulatory Test and its application to the SNI Option, I conclude that, for the purpose of conducting a new evaluation, there must be doubt as to the probative trust that could be placed in the work it has presented.

In my opinion the SNI Option is not justified.

I have had the advantage of reading the Reasons for Decision of my Tribunal colleagues and have noted their comments on the procedures adopted by the Tribunal; on my views of the matter as a whole; on their acceptance of NEMMCO's submission that 'the regulatory test as followed by IRPC provides a clear and objective

basis for the calculation of maximum present value' and ' that 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 ACCC rather than by reference to cost benefit principles at large'; and their finding that the SNI Option is justified. I have explained above and in Appendix 1 the considerations and circumstances which led me to put the question and the time at which I did it, and my reasons based upon the artful meaning of terms of economic art for finding that the NEMMCO formula is not in accord with the ACCC prescription, is economically irrational and that the SNI Option is not justified.