Murraylink Transmission Company Pty Ltd

Response to AER issues paper

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Contents

Glossary

Term	Definition
AARR	Aggregate Annual Revenue Requirement
AC	Alternating Current
ACCC	Australian Competition and Consumer Commission
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
CGS	Commonwealth Government Securities
DC	Direct Current
DNSP	Distribution Network Provider
DRP	Debt Risk Premium
EBSS	Efficiency Benefit Sharing Scheme
EII	Energy Infrastructure Investments
HVDC	High Voltage Direct Current
MAR	Maximum Allowed Revenue
NEM	National Electricity Market
NEO	National Electricity Objective
NER	National Electricity Rules
Proposal	Murraylink Revenue Proposal
RIT	Regulatory Investment Test
Rules	National Electricity Rules
TNSP	Transmission Network Service Provider
WACC	Weighted Average Cost of Capital

1 Introduction

EII welcomes the AER's issues paper as a positive contribution to the ongoing attempts by the AER to improve the transparency of their consideration of the proposals put forward by networks.

It is this type of engagement that provides networks like Murraylink with the opportunity to engage with the issues that the AER are considering. Given the significance that the AER's determination has on the future of Murraylink this is a welcome development since the last revenue determination.

EII has focused its comments in this response on the capital expenditure and operating expenditure sections in the AER's issues paper.

EII notes that the AER's issues paper also covers rate of return, value of imputation credits and customer engagement. EII has addressed these issues, in particular the rate of return and imputation credits, in its revenue proposal. Further comment on these matters is dependent upon the content of the AER's draft determination and the ruling of the Federal Court in the legal action the AER has taken against the Australian Competition Tribunal.

2 Capital expenditure

The Murraylink response to those issues raised by the AER in chapter four of the issues paper is set out below.

2.1 Control systems replacement

The most significant forecast capital expenditure project for Murraylink in the next regulatory control period is the replacement of the control system. As noted in the Murraylink revenue determination proposal this project is required as a result of the current control system being made obsolete by the decision of the supplier, ABB, to withdraw support for it starting in 2021.

With respect to this project the AER notes

> *"This raises the issue of whether Murraylink's replacement would accommodate the option under consideration or it would be prudent to defer or otherwise reconsider the extent of the replacement."*[1]

Murraylink recognised that in some cases there is some flexibility in the delivery schedule of some projects and the benefit of delay to allow market uncertainties to resolve themselves would be an outcome in the long term interests of consumers.

Unfortunately the withdrawal of support, including the withdrawal of the provision of replacement parts, means that the Murraylink control system cannot be delayed without a massive increase in the risk of total transmission line failure for an extended period of time. If a critical part of the control system fails in the absence of a replacement part then the solution is to replace the entire control system. If this replacement is to take place on an accelerated timeframe, as would be necessary to return Murraylink to service, it can be expected to come at a significant premium.

The failure rate of components of the control system is increasing. This is to be expected as any asset ages, particularly as it approaches its end of technical life. For example Table 2.1 sets out the Mach2 card failure rate

Table 2.1: Failure rate of Mach 2 cards

Year	Total
2007	**2**
2008	**1**
2009	**1**

[1] AER, Murraylink electricity transmission revenue proposal 2018–23: Issues Paper, March 2017, p19

2010	**3**
2011	**3**
2012	**6**
2013	**4**
2014	**4**
2015	**16**
2016	**17**

A failure of the Mach 2 cards with no replacement or redundancy would result in a failure of the control and protection system. There are obligations that are derived through National Electricity Rule Schedule 5.1.2 that means that Murraylink is required to only operate where redundant elements of the protection system are available. In these circumstances loss of the backup system can be a basis for the transmission line being withdrawn from service.

The AER indicates it is worth exploring whether there may be benefit in delaying the replacement of the control system in light of ElectraNet South Australian Energy Transformation RIT-T's consideration of augmentations to the capacity of Murraylink. The nature of the control system is such that it would only need minor, if any, modifications in order to be able to support any addition to Murraylink capacity that may arise out of a Murraylink or ElectraNet Regulatory Investment Test process.

So the risks of delay are significant and unavoidable and the benefits of delay are minimal. This strongly supports the replacement of the control system prior to 2021.

2.2 Contingent projects

The AER states

> *"However, no information has been provided to support the need for this contingent project and no specific trigger events for this project have been provided"*[2]

2.2.1 Supporting information for the contingent projects

Significant changes have occurred in the South Australian market since the submission of Murraylink's revenue proposal, including the announcement of additional gas generation and battery storage that are not required to meet normal investment criteria. This has required additional analysis be undertaken on the project put forward by EII.

EII will be providing the AER and stakeholders with more information in relation to the contingent project as it becomes available. Prior to any

[2] Ibid, p18

commencement, the project would be subject to the RIT-T process which involves substantial consultation with stakeholders.

2.2.2 Trigger Events

EII reiterates its view that having its contingent project subject to the outcome of a RIT-T assessment and having the EII Board approval are sufficiently specific triggers to be considered appropriate for a contingent project.

In a broader context the needs that the contingent projects are seeking to address are those that have been broadly reported on in South Australia - the reduction in network security and increasing prices in the South Australian wholesale and forward markets. This is not a single faceted problem that would lend itself neatly to being defined as the trigger event. An augmentation that has a single and obvious trigger is a product of a much more static electricity market than now exists in the NEM.[3]

What is currently being analysed by EII is whether the project proposed needs to be refined in order to best address those problems.

In this context the successful application of the RIT-T test as the trigger event would put Murraylink and the AER in a position that they are applying the law in relation to contingent projects and behaving in a manner consistent with the broader regulatory framework.

Under rule 6A.8.1 (c) in determining whether a trigger event is appropriate the AER must have regard to whether they find the trigger event:

(1) to be reasonably specific and capable of objective verification;

It is a binary decision on whether a proposed project has satisfied the RIT-T rule requirements. Murraylink's proposed trigger event meets this criterion.

(2) to be a condition or event, which, if it occurs, makes the undertaking of the proposed contingent project reasonably necessary in order to achieve any of the capital expenditure objectives;

Murraylink's contingent project if it satisfies the RIT-T process would by definition satisfy the criteria of s6A.6.7(a)(1) - meet or manage the expected demand for prescribed transmission services over that period and/or 6A.6.7(a)(3)(iv) – maintain the reliability and security of the transmission system through the supply of prescribed transmission services. As a result Murraylink's proposed trigger event satisfies this criterion.

[3] Or a much narrower focused problem ie a network constraint in a specific geographic area.

(3) to be a condition or event that generates increased costs or categories of costs that relate to a specific location rather than a condition or event that affects the transmission network as a whole;

The location of the costs to be incurred relate to the specific improvements that underpin the RIT-T project. Murraylink's proposed trigger event satisfies this criterion.

(4) to be described in such terms that the occurrence of that event or condition is all that is required for the revenue determination to be amended under clause 6A.8.2; and

Clause 6A.8.2 sets out the conditions on which a contingent project will be rolled into the capital base. The successful completion of a RIT-T project would in no way be in conflict with the requirements outlined in this clause. Murraylink's proposed trigger event satisfies this criterion.

(5) to be an event or condition, the occurrence of which is probable during the regulatory control period, but the inclusion of capital expenditure in relation to it under clause 6A.6.7 is not appropriate because:

(i) it is not sufficiently certain that the event or condition will occur during the regulatory control period or if it may occur after that regulatory control period or not at all; or

(ii) subject to the requirement to satisfy clause 6A.8.1(b)(2)(iii), the costs associated with the event or condition are not sufficiently certain.

EII has not proposed the capital expenditure under clause 6A.6.7. It does not form part of the forecast capital expenditure. Murraylink's proposed trigger event satisfies this criterion.

3 Operating Expenditure

The AER has identified the Murraylink step change as the key forecast operating cost issue in the EII proposal.

The term "step change" does not exist in the rules – it is industry short hand for a forecast ongoing operating expenditure item that was not present in the base year operating expenditure. Both the AER and EII have used the term reflecting this meaning.

The AER state that their starting position is

> *"only exceptional events are likely to require explicit compensation as step changes, as stated in our guideline. Two typical examples of 'events' that may require explicit compensation are:*
>
> - *a material change in the business' regulatory obligations*
> - *an efficient and prudent capex/opex substitution opportunity.*
>
> *In the absence of a change to regulatory obligations or legitimate capex/opex trade-off opportunity, our guideline approach is to only accept a step change under limited circumstances."*[4]

The test for whether operating expenditure should be included in the forecast operating expenditure is set out in the National Electricity Rule 6A.6.6.

In relation to the proposed step changes Murraylink has extracted the relevant elements below

> *"(a) A Revenue Proposal must include the total forecast operating expenditure for the relevant regulatory control period which the Transmission Network Service Provider considers is required in order to achieve each of the following (the operating expenditure objectives):"*

…

> *"(3) to the extent that there is no applicable regulatory obligation or requirement in relation to:"*

…

> *"to the relevant extent:*
>
> *(iii) maintain the quality, reliability and security of supply of prescribed transmission services; and*

[4] IBID, p23

(iv) maintain the reliability and security of the transmission system through the supply of prescribed transmission services; and"

Notably, in these provisions there is no reference to a material change in the business's regulatory obligations or capex substitutions. These are creations of the AER's guideline and as can be seen above are narrower than the criteria set out in the National Electricity Rules.

So the test for the step change is not the one outlined by the AER but rather that which is required by the rules.

The test for the inclusion of this expenditure as set out in the National Electricity Rules is clear – is that expenditure required in order

- maintain the quality, reliability and security of supply of prescribed transmission services;
- maintain the reliability and security of the transmission system through the supply of prescribed transmission services

In respect to the step change, Murraylink buys engineering services from ABB (the builder of the Murraylink transmission line). Much of the critical equipment of the converter stations is the intellectual property of the manufacturer. This makes the possibility of procuring engineering services, such as advice or design solutions, from a third party prohibitively expensive.[5]

In practice there is no efficient alternative to procuring these services from ABB. Knowing they are in effect the exclusive provider of these services does not incentivise ABB to provide these services in a sufficiently timely manner from EII's point of view. As Murraylink gets older it will experience more and more issues that require ABB's involvement. If service levels from ABB remain what they are then it is likely that the reliability of the Murraylink transmission line will deteriorate.

EII's proposal is that the step change would underpin an agreement between EII and ABB[6]. This agreement would include terms that address the timing and quality of the services to be provided by ABB. There will be penalties on ABB for failure to meet the timeliness and quality included in the

[5] As EII's experience with Directlink demonstrates 3rd parties are not interested in tendering for this work.

[6] Due to the public statements of the AER on top of those from EII there is no longer any point in treating as confidential either the potential contracting partner or the amount included in the forecast. This has the unfortunate practical effect of only leaving the scope, not price, of the agreement available for negotiation with ABB.

contract. In the absence of this agreement it is EII's view that there is a significant risk of Murraylink providing a less reliable service going forward.

Murraylink's proposal is the service level agreement is necessary in order to maintain the reliability of the Murraylink transmission line. As the operating expenditure seeks to maintain the reliability of the Murraylink transmission line it is consistent with 6A.6.6(a)(3)(iii) and (iv).

There are alternatives, none of them are as cost effective as a service level agreement. For example, Murraylink could engage engineering and IT expertise directly.[7] Murraylink's estimate of the cost of provision of this service is $250,000 per annum per engineer including employment costs such as training. It is expected that two senior engineers would be needed to be able to be self-reliant for engineering expertise on the operation of the transmission line and converter stations. This amounts to $500,000 per annum.

This approach does have an advantage over the service level agreement as it reduces Murraylink's reliance on engineering expertise from ABB. This may result in cost savings in terms of replacement of equipment and ongoing maintenance. Unfortunately, it is difficult to get an understanding of the quantum of those savings until the recruited engineers have been able reverse engineer Murraylink and understand the extent that individual elements of the network can be engineered for independent solutions.

[7] Another option would be to replace the ABB equipment on site with those of another manufacturer, this would costs $100s of millions of dollars and EII would still have the problem of dealing with the alternate providers intellectual property.