Dr Kerry Schott AO
Independent Chair
Energy Security Board

Submitted via e-mail to: info@esb.org.au

21 June 2019

Dear Dr Schott,

Converting the Integrated System Plan into Action

Delta Electricity welcomes the opportunity to contribute to the AEMC's deliberations on creating an actionable Integrated System Plan (ISP). Delta owns and operates the 1320MW Vales Point power station in NSW and has a retail licence to sell electricity to large customers. Delta has operated coal and gas fired generating plant in the National Electricity Market (NEM) since its start in 1998 and is an active participant in both the electricity and gas trading markets.

Delta appreciates the need for effective system planning and a streamlined transmission planning process. However, implementing new processes should not compromise the integrity of the existing RIT-T that has served the market well in ensuring only rigorously assessed projects with clear economic benefit were approved. The cost benefit application guidelines should largely mirror those in the RIT-T to ensure consistency between the ISP and the network owner's transmission planning processes, otherwise the value of the ISP is diminished. Large transmission projects are costly and long lived, and the processes that underpin their planning should ensure that for all credible scenarios a project should deliver economic net benefits over the life of the asset.

To assist Delta in its review of the proposed changes to the regulatory instruments, Marsden Jacob Associates (MJA) was engaged to provide a detailed independent assessment of the cost benefit guidelines and forecasting best practice. The MJA report is attached for the consideration of the ESB.

Cost Benefit Analysis

Delta sees a need for only minor modifications to the existing RIT-T guidelines to make them applicable as a cost benefit analysis (CBA) for a system wide assessment. These modifications should be limited and target the purpose of the ISP compared to an individual transmission project. For example, it may be appropriate to modify threshold criteria to cater for the scope of the ISP assessments. The ISP CBA should specify that net benefits need to be of sufficient scale, and sufficiently robust across a broad range of scenarios, to justify the expenditure. The CBA may also address unequitable cost distribution impacts of upgraded interconnection where consumers in one region pay for benefits in the adjacent region. Given that network revenues are linked an asset base, that asset base should service consumers in the respective region.

Delta is concerned by the proposal to broaden the definition of 'NEM obligations' in the draft guidelines to give greater flexibility to AEMO to include a transmission project in the ISP. The RIT-T guidelines already allow for improved power system resilience, and to include public policy exposes transmission planning to accommodate strategic projects that are not necessarily in the best interest of consumers. The ISP CBA guidelines should put very clear constraints around the ISP approach to

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scenario development, technical requirements and not include public policy considerations or broader interactions with other systems which may or may exist in the future.

The MJA report recommends the guidelines provide additional clarification of principles associated with:

1. the definition of the base case;
2. precise definitions of what is being measured and costed; and
3. quantification of service level and risk of any benefits that AEMO propose are outside the RIT-T guidelines.

Forecasting Best Practice Guidelines

It is proposed that AEMO consult closely with stakeholders to determine the range of scenarios, sensitivities and technical requirements that need to be considered in its modelling. The current RIT-T guidelines provide sufficient scope for consultation and should be used as the basis for the ISP so that differing guidelines do not lead to conflicting inputs and outcomes between the ISP CBA and subsequent RIT-T assessments.

The MJA report contains additional suggestions to support the reliability and confidence in the modelling results.

Governance

Delta supports the recommendation that the AER prepares Cost Benefit Application Guidelines and Forecasting Best Practice Guidelines, as this will aid in achieving consistency between the ISP and RIT-T processes. The draft guidelines presented in the consultation paper should not necessarily be used as a starting point if the AER takes the view that the ISP cost benefit application should mirror that of the RIT-T. The AER should ideally have close oversight of the ISP process and be responsible for engaging a peer reviewer where appropriate.

There is no need to specify a project timeline in the Rules as it may reduce flexibility in process improvement as systems evolve. Delta supports the Rules specifying the maximum time between ISPs. It is appropriate that the AER periodically review the guidelines and include broad stakeholder consultation.

Additional suggestions on governance and the contingent project mechanism are contained in the MJA report.

Sincerely

Anthony Callan
Executive Manager Marketing
Attach

MARSDEN JACOB ASSOCIATES

20 June 2019

MJA Submission on the Consultation Paper "Converting the Integrated System Plan into Action"

Marsden Jacob Associates (Marsden Jacob) is pleased to provide this report to Delta Electricity (DE) in relation to the Energy Security Board's (ESB) consultation paper titled "Converting the Integrated System Plan into Action" (referred to here as the Consultation Paper).

This report provides opinion on the following proposed matters:

- The cost benefit analysis (CBA) guidelines;
- Forecasts that are input to the CBA;
- The governance framework that applies to the ISP;
- Whether the contingent project mechanism should be amended to provide more time for the AER to undertake its assessment.

These matters are addressed in turn below.

Key Findings

The review presented in this report has focussed on the CBA guidelines and governance.

The review found that the proposed guidelines (draft) and governance arrangements were incomplete and not commensurate with the central role an actioned ISP would have to the direction of the NEM in the future.

Matters that are considered key to obtaining the desired outcomes in relation to future transmission development include the following:

- The AER to be the body that develops the guidelines and ensures compliance;
- Complete guidelines that provide for and require all parties to operate within;
- Review the need for "contingent projects" in the process;
- A hurdle rate for transmission developments that recognises the level of risk;
- Consultation that requires decisions and their basis to be fully communicated;
- A level of transparency that would enable parties to independently verify modelling outcomes (noting the issue of confidential data);
- Best practice and fully described input forecasts;
- A requirement for ISP modelling to undergo in-depth review by an independent party.

1 Cost Benefits Analysis Guidelines

Marsden Jacob recognises that:

- The "transition" of the NEM is requiring new transmission; and
- The project specific basis of the current RIT-T is less suited to a wider and more aggregated basis that is now being required.

Important to an increased planning scope (and possibly discretion) is that any CBA must be matched with commensurate rigor, transparency and review. The challenge of developing

system wide development plans, associated costs and benefits, and ensuring system requirements are met, is manyfold more involved and complex than single project assessments.

With the above noted, we make comments on the key elements of the section in the Consultation Paper - Cost Benefit Analysis Guidelines - Draft.

> ***Purpose of the Cost Benefits Analysis*** - as ***contained in the Consultation Paper***
>
> To set out an approach to identify the optimal network development pathway in the ISP. This pathway is the series of network investments over the next 20 years to maximise the expected net economic benefit on a system-wide basis across the NEM under a range of scenarios, whilst meeting NEM obligations (such as system security and reliability requirements) and public policy objectives.

Principles

The key elements of the guidelines provide a statement of principles that would be expected. This is a range of scenarios to be used, all technically and economically feasible investments to be considered, inputs forecasts to be based on best practice, and a consulted methodology.

Additional clarification is however required in the following matters.

Base case

By definition, a CBA compares different scenarios. For the ISP the basis is likely to be net present value (NPV). This comparison can be undertaken as follows:

- A comparison of a case with the asset to a "base case" without the asset (such as in the RIT-T); or
- A comparison of different scenarios where the "base case" would reflect the current plan against which alternatives would be assessed, and if the alternatives are better they become the new base case against which new initiatives are compared (which is often the case in utility outlooks).

The ISP is not likely to have a base case without transmission developments[1], but does not have a current transmission plan.

The base case definition is critical, and clarity is required on the basis on which it would be developed and who would be responsible for this. This is a critical matter common to all CBAs, as all scenario cases need to be assessed incrementally to the base case.

The process for scenario development is significantly more involved than single project scenarios, and an approach to this would need to be carefully developed.

Meaning of "NEM Obligations"

The Consultation Paper states:

> *"the NEM obligations are broader than at present in contrast to the existing RIT-T guidelines".*

The above (important) statement requires clarification.

[1] This would necessarily have the existing transmission being used with new power stations (replacing closing power stations) at similar locations and most likely using similar technologies to the existing power stations.

Is by "broader obligations" meant broader responsibilities to ensure the NEM can respond to potential policy not yet in place or other factors that are not stated? NEM obligations are not changed by changes in technology or uncertainty, the manner these addressed are.

We note that matters such as option value, flexibility to respond, and high risk / low probability events are currently provided for in the RIT-T.

It is essential that any change in obligations be clearly stated / listed. A CBA requires precise definitions in relation to what is the objective, what is being measured and costed.

It is imperative that the guidelines clearly address this issue.

AEMO Flexibility to Manage Uncertainty

The Consultation Paper states:

> *"Take a broader definition of 'NEM obligations' than the current RIT-T Application Guidelines and give AEMO greater flexibility to manage uncertainty, have sufficient regard to power system resilience, public policies, broader interactions with other systems, and report on a range of benefits."*

The issues of "power system resilience, public policies, broader interactions with other systems, and report on a range of benefits" and "uncertainty" are matters which have been present in past considerations of NEM developments.

The difference now is that there will be a higher level of change and the scenarios are likely to be more complex, and that they will be used to identify the benefits of planned and coordinated development of the NEM that is transitioning to a model that is potentially very different than today.

This increased complexity strengthens the need for the CBA guidelines to provide precise definitions in relation to what is being measured and costed. This recognises that the costs and benefits must be and are definable. These are ultimately the cash flows associated with the NEM satisfying its obligation as per the National Electricity Objective.

The corollary to this is that "AEMO require greater flexibility to manage uncertainty" must relate to the guideline development, and not that AEMO would have discretion to act outside of the guidelines.'

Benefits

How benefits are assessed needs to be clearly defined. There may be a range of benefits not traditionally assessed (that vary between scenarios) such as flexibility in the system, option value, capacity of the system to support future enhancements. It would be important that there is clear guidance regarding all categories of benefits.

System/market requirements and levels are key issues to the outcomes. There is no such thing as a service level that is without risk. The modelling of this would require a probabilistic approach and this should be fully explained.

Project / Development Hurdle Rate

The Consultation Paper is silent on any required hurdle rate for a development path to be selected. (I.e. WACC, IRR etc.)

For example, would an expenditure outlay of $10B be warranted for an assessed present value of benefit of $10.5B corresponding to an NPV of $0.5B?

In the private sector this is a critical issue and the principle of how this is developed must be clearly articulated.

2 CBA Quantitative Assessment - Modelling

The NEM is a complex physical and economic system and the greatest challenge in CBA work may not be the base case and scenario descriptions, but the quantification of the risks and benefits presented by the different scenario considered.

Fundamental to the CBA process is the reliability and confidence in the modelling results obtained. This recognises that it is the tables of numbers produced from the modelling that are used to prioritise development options and that are ultimately used to select a preferred development path.

The Consultation Paper appears to recognise this in the following statement:

> *Focus on the technical requirements of performing a cost benefit analysis, rather than also setting out the administrative processes required under the RIT-T.*

Reliability and confidence in the modelling results requires the following be undertaken (and addressed from previous practice)

Consultation on the Methodology

The guidelines must require that CBA modelling provides a full description of how the analysis was undertaken and how it addressed the objectives of the modelling.

The meaning of consultation needs to be defined and strengthened. It should include a process where the basis and reasons for the approaches selected are sufficiently explained for this to be understood.

An example of inadequate description was the 2018 Integrated System Plan (ISP) where it was not clear to Marsden Jacob (who are highly experienced modellers of the NEM and energy system) where least cost modelling was used, where simulation modelling was used, and how they were used. Brief and unclear descriptions in reports which limits proper review is usually by choice.

When modelling methodology and what and how things were done is not fully explained, confidence in the modelling outcomes is substantially reduced. In the case of the 2018 ISP for example, no evidence was provided that the requirement of system reliability was met.

Economic and financial costs

The methodology must ensure that economic (not financial) costs and benefits are used.

Transparency

As a matter of principle, there would need to be a level of transparency and information release that would enable verification of the modelling by independent parties. The level of transparency required should be stated in the guidelines. This would be a significant and welcome change from past practice.

This proposed requirement is a reflection of the importance of any strategic development recommendation and the level of robustness that would flow from this requirement. It is also essential to obtain the support and confidence of stakeholders in any strategic development recommended.

It is recognised that this would place a more significant burden on AEMO. It is this additional burden that is required in order to achieve the level of robustness that is required in the modelling.

Updated Information

The CBA would need to be revisited as the definition of a development and supporting assumptions becomes more clearly defined. A key risk is that the CBA is undertaken based on initial costings but is not revisited at some later point when the more detailed assessment of costs is completed;

3 Forecasts that are inputs to the CBA

The forecasts that are used in the CBA are fundamental to the base case, scenarios and modelling results.

The Consultation Paper lists key elements that include consultation, information, methodology (and stakeholder engagement), scenarios, and confidential data. The Consultation Paper proposes consultation and engagement but fails to articulate the level of transparency on the final and used assumptions.

This is evident in the statement from the Consultation Paper which states:

> *To set out the expected process AEMO should follow to develop a robust set of forecasts and provide for stakeholders to have the best opportunity to engage in forecast development.*

Demand projections as always are a critical input. Such inputs should be accompanied by a full description and narrative of their basis and modelling. For demand forecasts this includes matters such as:

- Population forecasts and underlying assumptions;
- Basis for per capita demands, including both:
  - existing customer base vs future (new) customers
  - location of future demand and system ability to deliver/distribute;
- Assumptions regarding major customer demands;
- Technology and climate change impact on demand estimates;
- Key sensitivities that may have a significant impact on demand forecasts and how these have been treated.

4 Governance Framework

Guidelines Development

The Consultation Paper states:

> *"The ESB therefore proposes that the AER prepares Cost Benefit Analysis Application Guidelines that enable consistent interaction between the ISP and RIT-T (see section 3.2.3)."*
>
> *"In addition, the AER Forecasting Best Practice Guidelines would outline the process to be followed by AEMO in developing the ISP."*

The AER is the logical and proper body to prepares the CBA application guidelines given its role in the development of the RIT-T guidelines.

The development of the appropriate and best practice guidelines is the essential to the outcomes of the CBA process and the strategic development of the NEM.

It is essential that this does include the requirements such as transparency described above.

Best Practice

The governance framework is incomplete in that is does not include many of the components of better practice principles for governance. These components can be categorised as

- Accountability;
- Transparency/Openness;
- Integrity;
- Stewardship;
- Leadership;
- Efficiency.

Appendix 1 of this report presents a description of these components (and source).

Application of the Guidelines - Modelling

A key issue is the body that undertakes the CBA and what review is required.

As a matter of principle, AEMO should not be the body that undertakes the modelling. If AEMO is required to do this because of matters such as expertise or confidential data, then there must be detailed review of the modelling including a signed letter of reliance.

Transparency that provides for independent verification addresses this matter.

5 Contingent Project Mechanism

The Consultation Paper:

- Identifies that the ESB is considering that conditions precedent for a contingent project would be met if a TNSP's preferred option is consistent with the ISP (irrespective of whether the project was identified in the TNSP's current revenue determination); and if so
- Whether the deadlines associated with the current contingent project framework remain appropriate in the context of the large, complicated projects contemplated by the ISP.

National Electricity Rules 6A.8.1 (b)

(b) The AER must determine that a proposed contingent project is a contingent project if the AER is satisfied that:

(1) the proposed contingent project is reasonably required to be undertaken in order to achieve any of the capital expenditure objectives;

.....

The observation is made that on the basis that the ISP and TNSP RIT-T are done with consistency of assumptions (which is understood to be a requirement), it would be expected that the preferred project would be the same in both, and that any review would arrive at the same preferred project.

The issues here are:

- Should a project every be considered a contingent project on the basis that a TNSP's preferred option is consistent with the ISP; and
- If this is accepted, what time should be provided for the assessment.

Example: ISP and RIT-T Operation

Let's assume that the ISP preferred scenario has three transmission lines developed: TL1, TL2 and TL3. While these are separate projects, these lines support each another, and the benefits obtained require all to be developed.

The required application of the RIT-T requires each transmission line be assessed individually (and not as a total development package).

This means that for TL1, RIT-T base case has no transmission developed, and the project case has just TL1 developed and this is compared against other competing projects. This would appear to have the RIT-T say TL1 is not economic.

The matching of the ISP to the RIT-T has not been specified in the guidelines.

This leaves many questions not addressed, such as:

- Should the RIT-T project case assume TL2 and TL3 are developed?
- Do TL2 and TL3 become contingent projects?

This process means that large projects associated with the ISP would have passed two sets of modelling (ISP and RIT-T).

However, for the RIT-T modelling to be of value, it is important that any TNSP RIT-T following on from ISP modelling does not simply replicate the potentially broader and less detailed cost and benefit modelling that may be associated with the ISP modelling.

To treat a RIT-T application as a contingent project because it was consistent with the ISP would undermine the basis for doing the RIT-T. This suggests that classifying a project as a "contingent project" on the basis that a TNSP's preferred option is consistent with the ISP is not warranted.

However, if the decision is that a project can be classified as a "contingent project" on the basis that a TNSP's preferred option is consistent with the ISP, then to reduce the RIT-T review time because of this would undermine the value of undertaking the RIT-T.

It would appear reasonable to provide the AER with additional time, but this should be consistent with the timeframes being required and the very purpose of improved process efficiency.

Appendix 1 Better Practice Principles for Governance

Table A1 presents Better Practice Principles for Governance for undertaking CBA.

Table A1 Better Practice Principles for Governance

Principles
Accountability is the process whereby public sector organisations, and the individuals within them, are responsible for their decisions and actions ... and submit themselves to appropriate external scrutiny. It is achieved by all parties having a clear understanding of those responsibilities, and having clearly defined roles through a robust structure. In effect, accountability is the obligation to answer for a responsibility conferred. This responsibility extends across a range of concerns, including probity and ethics as well as the effective and efficient implementation of programs and encompasses a range of processes.
Transparency/Openness is required to ensure that stakeholders can have confidence in the decision-making processes and actions of public sector organisations, in the management of their activities, and in the individuals within them. Being open, through meaningful consultation with stakeholders and communication of full, accurate and clear information, leads to effective and timely action and stands up to necessary scrutiny
Integrity comprises both straightforward dealing and completeness. It is based upon honesty and objectivity, and high standards of propriety and probity in the stewardship of public funds and resources, and management of an entity's affairs. It is dependent on the effectiveness of the control framework, influenced by relevant legislation (such as the APS Values and Code of Conduct) and ultimately determined by the personal standards and professionalism of the individuals within the entity. It is reflected both in the entity's decision-making procedures and in the quality of its financial and performance reporting.
Stewardship. Public officials exercise their powers on behalf of the nation. The resources they use are held in trust and are not privately owned. Officials are therefore stewards of those powers and resources. It is important to govern public sector organisations so that their capacity to serve Government and the public interest is maintained or improved over time. This includes financial sustainability and the efficient and effective management of resources, as well as less tangible factors, such as maintaining the trust placed in the organisation and/or the Government as a whole.
Leadership sets the 'tone at the top', and is absolutely critical to achieving an organisation-wide commitment to good governance.
To these are frequently added **efficiency**, that is the best use of resources to further the aims of the market with a commitment to evidence-based strategies for improvement. Efficiency thus requires objectivity and the application of the merit principle. For example, in carrying out public business, including making public appointments, awarding contracts, or recommending individuals for rewards and benefits, holders of public office should make choices on merit

Source: ANAO Better Practice Guide: Public Sector Governance (2014). https://apo.org.au/sites/default/files/resource-files/2014/06/apo-nid40252-1172041.pdf, The ASX Principles of Good Corporate Governance (2003), The OECD Principles of Corporate Governance (2004)