



17 January 2020
Ms Kerry Shott
Energy Security Board

Submitted by email to info@esb.org.au

RE: Response to consultation on Draft ISP Rules – Actionable ISP

Dear Ms Shott,

ENGIE appreciates the opportunity to comment on the draft rules Integrated System Plan rule changes. In principle, ENGIE supports the ESBs initiated rule changes to make the ISP actionable. However to secure the claimed benefits of the ISP process, ENGIE has a number of concerns with the specific wording of the rules in meeting their stated objectives. Our submission is structured around these concerns as follows:

1. Principles for actionable ISP projects
2. Cost benefit analysis guidelines
3. Development and selection of scenarios and sensitivities
4. Dispute resolution in the ISP process
5. Draft wording changes

1 Principles for actionable ISP projects (page 444, 5.15A.3)

ENGIE considers these principles as extremely important in driving the RIT-T analysis. Whilst predictability, transparency and consistency [5.15A.3(b)(3)] are important, these must not constrain the scope of modelling when quantifying “market benefits”.

Modelling of scenarios and sensitivities to quantify the economic benefits of specific projects is time consuming and expensive. Whilst it is desirable to minimise complexity and reduce project assessment costs, it is paramount that modelling methodology is not simplified to the point where it becomes ineffective and/or delivers misleading results (ie “It should be made as simple as possible but not simpler”).



The process employed in the ISP and RIT-T utilises time series modelling using cost-based bidding or some form of least cost modelling. These modelling techniques are used as they are simpler and non-controversial since cost assumptions are generally agreed across the industry.

This type of modelling would be suited to a “central planner” or a “common owner” approach, not a competitive electricity market such as the NEM.

Cost based modelling results in dispatch and congestion patterns that are substantially different to real market outcomes.

The outcome is that incorrect levels of congestion can be identified while other congestion issues in the NEM are missed, either in part or entirely.

Historically, this has led to some network augmentation benefits being overstated, and some costs of augmentation understated, as some elements contributing to the congestion in the NEM were missed. Specifically, inter-regional congestion crippled by intra-regional constraint was missed due to different dispatch patterns.

[Outcome sought: ENGIE urges the ESB to establish a set of principles in the rules to ensure that guidelines developed by the AER place an obligation on AEMO and the RIT-T proponents to conduct market modelling that is more representative of the NEM outcomes and behaviours in the cost-based analysis.](#)

3 Cost benefit analysis guidelines

The cost benefit analysis (CBA) will be influenced by numerous parameters and modelling methodologies. The application of representative modelling is covered in the preceding section and the development of appropriate scenarios and sensitivities is covered in the following section.

Assuming that representative modelling of relevant scenarios is made, there will be a range of outcomes in terms of costs and benefits over varying timeframes. For options that are robust in all scenarios, the decision becomes easy. However, it is more likely that an option will be valuable in some scenarios and maybe be loss making in others. Waiting until a particular scenario/future is obvious prior to investing is unlikely to be practical as there maybe costly consequences of doing nothing.

A higher discount rate (or higher WACC) for riskier options would be appropriate to compare the NPVs of available options. This is considered pragmatic as some risky options may never realise the full benefits claimed in the RIT-T yet consumers continue to fund them.

Under a high degree of uncertainty, it is generally better to make smaller investments early when uncertainty about the future and larger investments once a given future is known. Specifically, in the face of high uncertainty, large investments early need to be discouraged.

[Outcome sought: The rule change should include principles dealing with risk and discouraging commitment of large amounts of capital in the face of high uncertainty. Under the rules, the AER should be obliged to incorporate details of such a treatment in the CBA guidelines.](#)

3 Development and selection of scenarios and sensitivities

The scenarios/futures used in the ISP and RIT-T are fundamental in assessing risks and economic performance and need to be uniform across the processes. A methodology for developing scenarios/futures needs to be prescribed, rather than left to AEMO and RIT-T applicants. The scenarios/futures used in the ISP/RIT-T need to be:

- Relevant to the electricity sector
- Stretching yet believable (explore the full range of uncertainty)
- Cover the range of uncertainties (driving forces)
- Common to all ISP/RIT-T assessments

Specifically, scenarios should not be developed by the individual TNSPs on an ad-hoc basis to suit specific augmentations.

The AEMO process of developing scenarios has changed several times over the last decade. Whilst it has recently improved, it tends to be somewhat “blinkered”, quite limited in scope and mainly reflects current policies and government ambitions. It is not particularly effective in capturing the key uncertainties and driving forces affecting the electricity sector and doesn’t capture more “stretching” scenarios.

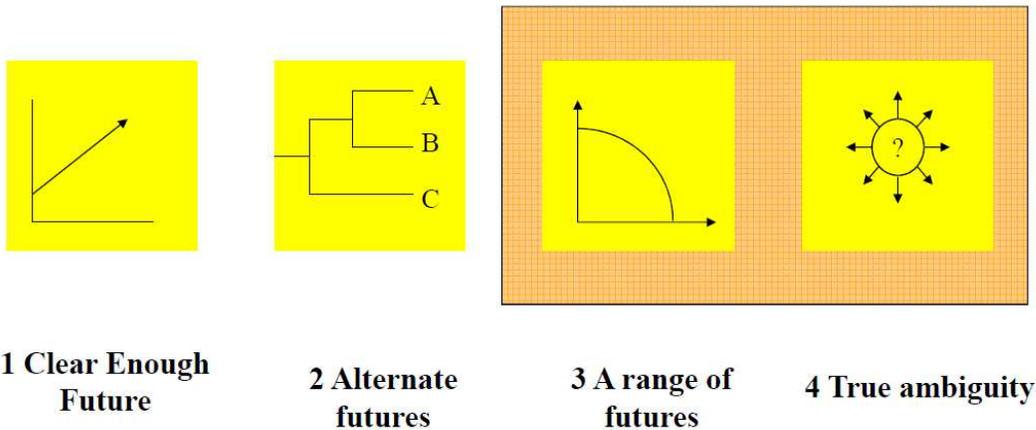
The resultant scenarios/futures can be best described as a single scenario/future, with a cluster of sensitivities as distinct from a range of truly stretching scenarios.

An additional problem is that the assumptions are not necessarily internally consistent within a sensitivity/scenario as different sources of detailed data are used in the process.

To deal with higher levels of uncertainty, a different approach is needed. Scenario planning, as pioneered by Shell, is considered more appropriate. The scenario planning process is a planning technique that produces a set of scenarios with a special set of properties. Whilst the technique provides a holistic approach to assessing strategic options, its scenario development attribute is advocated here.

The technique uses a rigorous process to identify key uncertainties and provides a framework for building them into an internally consistent scenario “cut-set”.

The following diagram shows shaded areas where scenario planning is useful and appropriate when there is a large uncertainty, such as a range of scenarios/futures or true ambiguity (ie uncertainty levels 3 and 4). Uncertainty in the electricity sector maybe best described as level 3 or 4.



(Ref 20/20 Foresight, Hugh Courtney, McKinsey & Co)

There is a need to explore at least four “stretching” scenarios/futures to capture the full range of uncertainties. Each of these describes what a particular scenario/future would look like at the end of the planning horizon (typically 20-50 years). As part of a specific scenario/future, there needs to be a “story line” to explain how the scenario/future develops over time to get to the end state. Such scenarios can then be used to “wind tunnel” test projects and strategies.

In addition to the “stretching” scenarios/futures, there needs to be a view of a “most likely / betting future” which forms the base case.

The ISP/RIT-T assessment can then be conducted using the base case and tested for robustness in the stretching scenarios/futures.

In addition, a range of sensitivities, including weather impacts and natural disasters, needs to be conducted to ensure that network development is also enhancing the reliability of the system. For example, the recent bushfires demonstrated the need to diversify away from the Snowy region where generation (peaking and backup energy) and transmission is concentrated. This diversification needs to be captured and valued in the cost benefit analysis.

[Outcomes sought: The rule change should place an obligation on the AER to include such “works best practice” process in the guidelines which would then task AEMO with facilitating such a scenario planning process as part of the ISP. Participants must also be engaged in this process.](#)

[In addition, the application of these scenarios to the ISP and RIT-T must be mandated to ensure consistency and robustness of any resultant analysis.](#)

4 Dispute resolution

Given the importance of the ISP to the RIT-T, it is important that disputes can be raised during all stages of the process and taken to the AER. There should be avenues to keep the process relevant and efficient and the steps

that AEMO follows as part of the ISP development must be open to the dispute resolution process. This places additional checks and balances on AEMO during the development of the ISP.

The governance arrangements need to be flexible and to strike the right balance to ensure material issues of merit are effectively addressed.

The current approach of providing generous flexibility to AEMO in the guidelines and restricting the dispute resolution to following procedures to clause “(5.23.1 (b) (2) that AEMO has not observed a prescribed ISP process” is considered insufficient and ineffective. It would be extremely difficult to raise a dispute under the drafted code changes.

Outcome sought: These rule changes need to be strengthened to include principles for the CBA analysis and obligation on the AER to limit flexibility provided to AEMO in the guidelines.

5 Other drafting text changes

On page 478, 5.22.8 (a) (5) (iii) the term “fuel security” is incorrect, as fuel is an input to a chemical oxidation process which releases energy. This reference must include all possible forms of energy such as kinetic (wind), potential (hydro), thermal, light (photovoltaics) chemical (batteries, fuel cells etc) and others.

Outcome sought: Therefore, the correct term to use is “energy security” instead of “fuel security”.

ENGIE trusts that the comments provided in that the response are of assistance to the ESB consultation on the draft Integrated System Plan Rule changes. Should you wish to discuss any aspects of this submission, please do not hesitate to contact me on, telephone, 0417343537.

Yours sincerely,

David Hoch
Regulatory Strategy and Planning Manager