AEMO Draft 2024 ISP Submission Barrie Hill Feb 2024

Submission Summary

The AEMO Draft 2024 Integrated System Plan (ISP) presents only one option to replace the National Electricity Market (NEM) ageing electricity generation assets. The evidence supporting the recommendation to continue ongoing expansion of the existing renewables energy option has not been provided. Any supporting evidence, if actually available, should be fully documented. A range of further options requires investigation given other detailed studies indicating more appropriate alternatives together with evidence of mounting community opposition to the unprecedented and costly high risk option proposed.

No evidence is provided in any supporting documents that might verify many statements within the draft ISP indicating that the option proposed is the optimal development plan, or the lowest cost, or the most resilient and pragmatic plan for the NEM. Other studies indicate that the opposite is true. The draft ISP provides some investment costs but no indication of the electricity prices that Australian consumers and businesses will be expected to bear, or how the risks listed may be resolved. The absence of any final electricity costs for consumers eliminates the credibility of all optimistic statements on cost.

This submission provides reference to the analysis of seven potential options as a more evidence based guide for development of the electricity sector ISP. Wholesale and retail pricing outcomes are provided for each option, together with emission reduction costing in Reference Section 1 NEM Options Study.

A planning framework using international best practice principles for the implementation of the option that will actually deliver the optimal lowest cost, low emission, development pathway for the future reliable and secure provision of electricity in Australia is provided in Reference Section 2 NEM Options Review and Planning.

The integrity of the final ISP wording and presentation requires careful review from beginning to end. The final version of the AEMO 2024 ISP report must reflect *"an evangelical pursuit of the truth,"* to quote one senior government minister on a subject of similar economic scale and long term planning importance for Australia. An honest presentation of all of the options possible for a cost effective low emissions electricity transition is vital if there is to be any chance of acceptance and support for the final ISP by the Australian community.

The AEMO Draft 2024 ISP Promise and Evidence

Statements from the draft ISP introductory sections provide an introduction to the analysis undertaken and its implementation promise. From the Integrated System Plan Overview;

"*A Roadmap for the NEM's Energy Future.*
At a high level, the ISP presents an 'optimal development path', or the lowest cost, most resilient and pragmatic plan setting out the optimal size, place and timing for the NEM's future assets to deliver a secure, reliable and affordable energy future that meets emission reductions targets.
Australia's coal-fired generators are closing. The lowest-cost pathway for secure and reliable electricity is from renewable energy, connected by transmission, supported by batteries and pumped hydro, and backed up by flexible gas-powered generation."

From the AEMO CEO Preface;

"*The plan is a roadmap for the energy transition in the National Electricity Market (NEM) over at least the next 20 years, in line with government policies to reach a net zero economy by 2050.*
The plan outlines the lowest-cost pathway of essential generation, storage and transmission infrastructure to meet consumers' energy needs for secure, reliable and affordable energy, and to achieve net zero emissions targets.
Release of this draft comes at a time of ongoing and significant change in the way Australia's electricity supply is generated, transferred and consumed. Australia's ageing coal-fired power stations are closing down. Renewable energy connected by transmission, firmed with storage and backed up by gas is the lowest cost way to supply electricity to homes and businesses through Australia's energy transition.
The optimal development path is the lowest cost, resilient, pragmatic path to the NEM's energy future. The potential development paths included different balances between generation, storage and transmission. AEMO has consulted extensively to prepare the inputs, assumptions and scenarios used to develop the optimal development path. Alternative paths result in higher consumer costs, and many substantially so, and demonstrate less robustness to the uncertainties anticipated in this transition."

Testing the substance and veracity of these statements exposes many problems. It is not possible to verify the majority of the above statements from the draft AEMO ISP documents available for review. The documents provide no evidence that all of the potential options to deliver a secure, reliable and affordable energy future that meets emission reduction targets, have been evaluated. There is no evidence that any retail electricity cost for consumers for any development option has actually been analysed to support the costing statements.

The draft document does appear to be '*in line with*' government policies although maybe 'subservient to' would seem to be a more appropriate choice of words. Only one option has been selected and presented; a combination of renewable energy with appropriate firming and storage, with an extensive analysis of a range of alternative transmission concepts. It appears that nothing else has been considered even though it is claimed over the signature of the AEMO CEO, that *"Alternative paths result in higher consumer costs and demonstrate less robustness"*. Evidence from other more thorough studies indicate that the opposite is true, as detailed in Reference Section 1 NEM Options Study

Publications by international energy agencies and Australian engineers indicate that there are more appropriate options which should be investigated and presented. Most published studies show that electricity pricing to consumers resulting from the Draft 2024 ISP recommended option, would be around three times that expected from the implementation of other proven options. AEMO publications list over 300 concerns related to the option selected confirming that the option is unproven at NEM scale with no precedent, is not robust, and still requires technical innovation and market redesign for any hope of secure and reliable operation.

Given the assumed knowledge and experience of the ISP authors, the statements referenced from the document are surprising and reminiscent of many historical propaganda examples. If misleading or false statements are repeated often enough, many will come to believe and act on them to their eventual detriment, as is now playing out for many rural communities and for Australian electricity consumers. False statements are very rarely excused by intentions of good motive or technical ineptitude. False statements

certainly have no place in Australian government documents. These factors seem to have become an all too common feature in the amateurish and overly politicised emissions reduction debate.

Response to the Draft 2024 ISP Questions

1 *Do you* (think) *that the proposed optimal development path for transmission, generation and storage will support a reliable, secure and affordable NEM? If yes, what gives you that confidence? If not, what should be considered further, and why?*

Answer: No.
The single ISP development pathway proposed may possibly be engineered to be reliable and secure in the distant future. However any current investment proposal that relies on undeveloped or overextended technology combinations still requiring ongoing research is not a robust strategy, and has a high chance of failure. Even if ultimately technically possible, the ISP pathway proposed will only come at great overall expense to the Australian community, resulting in electricity prices up to three times that of other fully proven solutions. The electricity consumer eventually pays all final costs regardless of who makes the initial investments. AEMO should use the analytical process provided in Reference Section 1 as a high level guide to evaluate other potential options, as defined in that study.

2 Do you think that the proposed timing and treatment of actionable projects in the Draft 2024 ISP will support a reliable, secure and affordable NEM? If yes, what gives you that confidence? If not, what should be considered further, and why?

Answer: No.
The majority of the actionable projects proposed are not required for the optimum low-cost development of the National Electricity Market, as shown in Reference Section 1. A majority of the Australian population now understands this, and outspoken opposition to the ISP single option renewables proposal is already under way. Even the very early stages of implementation of the recommended option is resulting in unaffordable costs for many electricity consumers. The reliability and security of the NEM are already under threat.

3 Does the Draft 2024 ISP accurately reflect consumers' risk preferences? If yes, how so? If not, how else could consumers' risk preferences be included and what risks do you think are important to consider?

Answer: No
Community polls overwhelmingly indicate that high and increasing electricity cost risk and concerns far outweigh emission reduction target considerations. The draft ISP does not reflect this community concern and should, as the highest priority, be revised to focus on the lowest possible cost of electricity to consumers. Electricity sector emission reduction is an important consideration to be progressively achieved over a longer time frame, but should not be proposed in the least cost effective manner to the Australian community. Reference Section 1 provides costing for a range of emission reduction options.

4 Do you have advice about how social licence can be further considered in the ISP, or advice on how to quantify the potential impact of social licence through social licence sensitivity analysis?

Answer: Yes.
After many years spent developing and operating mining projects across Australia, I have found that the only route to social license is honesty. Honesty that is unequivocal, detailed, and face to face if possible. The current and potentially impacted Australian rural community is generally supportive of development projects which provide overall benefit to Australia. However, that community operates at a more thoughtful level than city communities. This fact was very clearly shown in the recent Voice referendum process and outcome. Reflection on that process and outcome provides every lesson needed to give guidance on social license issues for development of the NEM.

For any chance of community support the development of the final 2024 ISP document and recommendations must ensure an evangelical pursuit of the truth. The ISP must present all potential options and justify a final decision with unequivocal, detailed honesty. I fully understand how difficult this can be in Australia, but please do think about honesty of investigation and final plan selection and presentation, if the final final ISP is to have any chance of support.

5 Do you have any feedback on the Addendum to the 2023 Inputs Assumptions and Scenarios Report, which is published alongside this report?

Answer : Yes.
It is a fundamental principle of financial analysis and planning to not assume significant future cost reductions for assets requiring ongoing capital investment, in any option analysis, unless these can be easily verified with quality data. Decision makers should only be provided with option analysis using current costs. They can be provided with sensitivity analysis ranges and reasons, and be allowed to make their own verification decisions

The ISP 2023 Inputs Assumptions and Scenarios report lists very high future cost reductions for some capital items taken from the CSIRO GenCost report. That report currently provides little reliable evidence supporting such optimistic future cost reductions. The assumptions from that report may be noted as a possibility but should not be used for any option analysis until they are supported by stronger evidence.

Conclusion

A complete revision of thought and intent is required by AEMO management, taking into account the information, proposals and evidence provided in this submission, if there is to be general acceptance of the ISP. Many statements repeated in the current draft ISP document seem not to provide an honest representation of the work carried out to date, or the lack thereof, that might justify the single, unprecedented high cost high risk option proposed. The current work fails to evaluate the full range of proven options and lower costs for consumers for the development of the Australian electricity generation and distribution sector.

An extensive disclaimer appropriate for a draft document in development is no substitute for presentation integrity in any final document. Either AEMO is sufficiently competent to stand by the final ISP recommended outcome it will present, or it is not. If not, all planning work for the National Electricity Market should be allocated to others.

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