

Draft 2025 Inputs, Assumptions and Scenarios Report (Stage 1)

11 February 2024

Justice and Equity Centre
ABN 77 002 773 524
www.jec.org.au

Gadigal Country
Level 5, 175 Liverpool St
Sydney NSW 2000
Phone + 61 2 8898 6500
Email contact@jec.org.au



About the Justice and Equity Centre

The Justice and Equity Centre is a leading, independent law and policy centre. Established in 1982 as the Public Interest Advocacy Centre (PIAC), we work with people and communities who are marginalised and facing disadvantage.

The Centre tackles injustice and inequality through:

- legal advice and representation, specialising in test cases and strategic casework;
- research, analysis and policy development; and
- advocacy for systems change to deliver social justice.

Energy and Water Justice

Our Energy and Water Justice work improves regulation and policy so all people can access the sustainable, dependable and affordable energy and water they need. We ensure consumer protections improve equity and limit disadvantage and support communities to play a meaningful role in decision-making. We help to accelerate a transition away from fossil fuels that also improves outcomes for people. We work collaboratively with community and consumer groups across the country, and our work receives input from a community-based reference group whose members include:

- Affiliated Residential Park Residents Association NSW;
- Anglicare;
- Combined Pensioners and Superannuants Association of NSW;
- Energy and Water Ombudsman NSW;
- Ethnic Communities Council NSW;
- Financial Counsellors Association of NSW;
- NSW Council of Social Service;
- Physical Disability Council of NSW;
- St Vincent de Paul Society of NSW;
- Salvation Army;
- Tenants Union NSW; and
- The Sydney Alliance.

Contact

Michael Lynch, PhD
The Justice and Equity Centre
Level 5, 175 Liverpool St
Sydney NSW 2000

T: +61 2 8898 6500
E: mlynch@jec.org.au

Website: www.jec.org.au

The Justice and Equity Centre office is located on the land of the Gadigal of the Eora Nation.

Contents

- 2. Scenarios and sensitivities.....2**
 - A high storage up-take scenario 2
 - The Green Energy scenarios..... 3
 - Narration of the scenarios..... 3
- 3. Situating the 2026 ISP in the energy transition4**
 - The ISP is not fit for purpose 4
 - The role of the 2026 ISP in the transition 5
 - The ISP must evolve..... 6

1. Introduction

The Justice and Equity Centre (JEC) welcomes the opportunity to respond to the Australian Energy Market Operator's (AEMO) Draft 2025 Inputs and Assumptions Report Stage 1 (the draft report).

This submission is divided into two parts. In the first, we provide feedback on the construction and narration of the three scenarios in the issues paper and propose a fourth scenario is added to capture the possibility of continuing falls in the price of battery storage.

In the second part, we prosecute the case that the ISP is not fit for purpose, and that it cannot be made fit for purpose in time for the 2026 iteration. We contend that we must instead set an objective to develop an entirely new framework for the 2028 ISP in order to allow it to be the central coordinating device the NEM needs to effect an efficient transition. This involves taking every opportunity to 'coopt' the consultation processes associated with the 2026 ISP to commence this foundational work. Waiting until after the 2026 ISP is published to begin this will result in failure in 2028 and see us no closer to the necessary progress.

2. Scenarios and sensitivities

AEMO has advised that it does not intend to add further scenarios to the core three, and that decision has been made in order to maintain continuity with previous ISPs. As the ISP is a planning exercise, decisions should be forward-facing, rather than unnecessarily preferencing continuity in the scenarios from ISP to ISP. There should be no prejudged position that adding a fourth scenario or replacing a current scenario is without merit.

We also note that all three scenarios relate to each other in relatively similar ways across all the parameters. That is, for each parameter of the energy transition, in the Progressive Change scenario there is a slow change, in the Step Change scenario there is change at a moderate pace, and in the Green Energy scenarios there is rapid change. This is neat, but runs the risk of obscuring valuable scenarios that align with the other scenarios in a heterodox manner, but are nonetheless both plausible and important for planning purposes. A scenario based on the assumption that there is a high and rapid uptake of storage across the energy system is likely to fall into this category.

A high storage up-take scenario

The JEC proposes that a fourth scenario is added. This scenario should be one defined by a continuation in the fall of the price of battery storage along with sharply increased storage uptake, at all levels – household, industrial, and network. Such a scenario is plausible. The costs per KWh for storage at the bottom end of the Chinese market currently sit well below average prices in Australia, suggesting that there is further room for falls in the Australian market. Further, we have experienced a long period of storage price falls which:

- were not widely anticipated, and
- occurred in a context of high inflation in raw materials.

The assumption that a price fall in the Australian market will continue at least into the short to medium term is certainly plausible.

The implications of these dynamics – price falls and high take-up of battery storage – are substantial. Key potential effects include:

- Enabling the aluminium industry to electrify much earlier than anticipated.
- Some interconnectors or transmission projects losing their actionable status as the cost of non-network alternatives fall sharply – particularly relative to sustained blow-outs in transmission infrastructure build costs.
- A reduction in the amount of new generation needed to achieve reliability targets.

Perhaps most importantly, despite being highly plausible, this scenario is not captured within the existing three scenarios, and cuts across them in awkward ways.

While ‘higher’ and ‘high’ uptake of batteries as CER investments appears in the Green Energy and Step Change scenarios respectively, the broader uptake at other levels of the network does not appear in any of the scenarios and the collective impact is not considered anywhere.

A fall in battery storage costs is compatible with many different assumptions in the other parameters. This does not mean that the scenario is not well-defined or clearly narratable.

Finally, a battery storage scenario is worth considering as it is a state of the world that policymakers can plausibly and effectively impact. If there are very substantial benefits to this scenario, then this information would be of great value to policymakers. It would enable them to direct resources into battery research and to devote additional resources to alleviating supply chain issues or onshoring production through measures such as those already proposed by the Commonwealth Government.

As we have noted above, we are aware that AEMO has announced a decision not to add any scenarios to the 2026 ISP. While we disagree with this determination, we recommend that in lieu of a new scenario, a sensitivity is added to the 2026 ISP exploring the dynamics outlined here.

We further recommend that for the 2028 ISP, scenarios must be defined and selected according to their utility and plausibility first and foremost, with continuity weighted substantially less.

The Green Energy scenarios

The JEC considers the Green Energy Industries scenario to be the more appropriate of the two Green Energy scenarios. The assumptions regarding hydrogen as an energy carrier in the Green Energy Exports scenario variant are not credible.

Narration of the scenarios

The JEC considers the narratives of the scenarios to be clear, both individually and collectively.

One glaring omission, however, is a clear visual and narrative depiction of how total energy demand changes over time in each scenario. We consider this to be the core determining parameter in each scenario. Accordingly, it should be clearly at the centre. We recommend the

addition of a description of total demand in each scenario, including a visual depiction of the changes in total electricity demand over time in each scenario.

We propose that the depiction of the Progressive Change scenario is expanded to include the implications for the Australian economy and people. Currently, the description on page 18 focuses on the implications for certain industrial sectors and for the demand of consumer goods such as energy efficiency savings and CER. This underplays the very substantial human cost that is implied by this scenario.

We understand that the purpose of a scenario is to describe an exogenous future state of the world, not to make any normative claims. However, in order to fully inform readers of the ISP of the implications of the findings of the document, it is incumbent upon AEMO to provide adequate context to decisions. In particular, there is a need to allay the default assumption that the risks of overinvestment are broadly equivalent to the risks of underinvestment, which is very much not the case. The cost of an overinvestment in a Progressive Change scenario is limited to the actual amount of any overspend, and occurs in a scenario where an overspend of this magnitude is far from the most pressing concern of Australia. The cost of an underinvestment in a Green Energy scenario, however, is likely to be at least an order of magnitude greater than the quantum of the underspend, and will have compounding impacts in terms of opportunity cost over time.

3. Situating the 2026 ISP in the energy transition

The ISP does not currently fulfill the need for a plan to efficiently transition the National Energy Market (NEM) to a renewable generation basis. It cannot live up to its billing as a whole of system plan due the highly circumscribed set of outputs AEMO is empowered to produce. This failure is critical and very likely results in consumers carrying higher than necessary costs.

However, due to the size of the task of constructing an ISP, making fundamental changes to it – rather than making small adjustments at the margins – is prohibitively difficult within the scheduled process timeframes.

As adjusting the foundation of the development process for the 2026 ISP is not possible and a new foundation is needed to make the ISP fit for purpose, work must begin now to ensure the next iteration of the ISP in 2028 is fit for purpose.

The ISP is not fit for purpose

If the ISP's function is to guide Australia's energy transition, it is fundamentally not fit for purpose. The key reason that it is not sufficient is that there is a disjuncture between the claim that the ISP is a whole of system plan and the narrowness of the outputs it produces, namely transmission network investments.

At the start of the energy transition and the formation of the ISP-centric planning process, transmission may have been seen as the keystone to the project of transition. However, it is no longer the low hanging fruit and experience and developments in technology further calls into question the legitimacy of a near exclusive focus on transmission. The ISP is no longer able to credibly defend the claim that it defines the consumer interest-maximising development path for

the energy system given a the exogenously produced set of government-determined policy targets. This is because the range of pathways considered is so circumscribed.

The ISP does not:

- Provide policymakers or their constituents with an understanding or framework for credibly evaluating the costs and benefits of their policies. That is, while the core defining dynamic of the energy transition is the set of trade-offs that policymakers make regarding the different elements of the National Electricity Objective (NEO), the ISP provides no framework for policymakers to understand these trade-offs, how they change from year to year. Nor does it provide any meaningful foundation to inform the adjustment of these trade-offs in accordance with the preferences of stakeholders.
- Provide information for policymakers to use when setting targets or producing incentives outside of core metrics such as the proportion of overall generation that is renewable or when Australia can be called Net Zero. That is, a policymaker is no wiser when armed with the ISP when it comes to determining the optimal amount of public investment in improving the energy efficiency of different types of buildings, or setting subsidies for purchasers of home batteries or electric bicycles., or whether increasing investments in these areas and reducing them in other areas would be in consumers' interests.
- Provide investors in renewable energy or storage with improved investment conditions beyond what is produced in accompanying planning devices such as the Electricity Statement of Opportunities (ESOO), Gas Statement of Opportunities (GSOO) or the CSIRO's GenCost report.
- Provide leadership on the transition, having partially vacated this to politicians, who in turn defer to AEMO as the independent planner.

The role of the 2026 ISP in the transition

The production of each ISP is a massive undertaking. The possibility for substantial redesign of its intent or structure after the process has begun is negligible or non-existent. At this stage of the development of the 2026 ISP, there is almost no scope to address the above concerns, and little likelihood they will be. AEMO has been very clear on the decision not to expand the ambition of the plan in the directions of orchestrating demand side developments or co-optimising the developments of the demand and supply sides of the energy market.

The 2026 ISP is very unlikely to produce results that are surprising. It will find that the most efficient way to achieve targets set by various Australian governments is to develop interconnectors, moving some marginal projects in the 2030s a step towards actionable statuses; and to encourage investment in renewable generation firmed with storage and gas peakers.

Arguably, the heavy lifting of setting the NEM on the path it is currently on has been done, and the planning needs of the energy system are not (and should not be) to reinforce the results of previous ISPs.

This is not to say that the 2026 ISP is unimportant or without value. The 2026 ISP is a crucial reaffirmation of our path on the energy transition. As such, it is an important tool helping to

ensure regulatory bodies are adequately empowered to resist calls from a future government to deviate substantially from the transition path we are on, which would impose a substantial and unnecessary cost on consumers and Australia as a whole.

This may be the 2026 ISP's only substantive task: prosecuting the case that, despite what we have learnt in the last two years, the path we are on is still the correct one. It must prosecute this case well. The assumptions it draws on must be reasonable, and the scenarios it builds to make this case must be plausible.

The ISP must evolve

Persisting with a planning framework that is not fit for purpose beyond the 2026 ISP is not viable. To do so runs the risk of AEMO losing technical credibility, social license and political trust. It also invites a serious risk of facilitating bad faith criticism, using the kernel of truth that the planning framework is not fit for purpose as a foundation on which to build arguments that stoke fear, uncertainty and doubt.

There are two alternatives to continuing to develop ISPs beyond the 2026 one using the current framework, and we contend they are both preferable to the status quo.

First, the ISP could evolve 'downwards'. AEMO could reframe the exercise as planning a small, but significant segment of the energy system: transmission augmentation, and specifically interconnector augmentation, given that transmission not crossing state boundaries is managed by state planning authorities. The AEMO staff resources devoted to the task could be reduced enormously, as could the number of hours spent on it by respondents. The ISP could become an annual or biennial publication that carries the same significance and weight as the ESOO, GSOO and GenCost report.

Taking this path, the ISP could be rebranded from a plan for the augmentation of the energy sector, to an answer to the question of how best to maximise the benefits of interconnector augmentation while appropriately managing the risk of overinvestment. These would be worthy, if narrow, purposes in promotion of the consumer interest.

Second, the ISP could evolve 'upwards'. The ISP could be reformulated as an independent, authoritative transition plan for the energy sector as a whole.

Taking this path AEMO would be tasked with providing the political decision-makers with the resources needed to lead the energy transition substantively. Currently, there is a circularity of responsibility that results in a lacuna of leadership between the independent planner and political decision-makers. While the political decision-makers define the policy targets, they (inconsistently) defer to the planner on the grounds of expertise on how to arrive at these targets. The planner completes this task sub-optimally, due to only being empowered to consider part of the problem as outlined above,. It defers back to political decision-makers on all questions of 'policy'. All aspects of the transition are considered 'policy' by default, unless the aspect has been specifically designated to the planner by direction or legislation. Even in these areas, however, the planner has no power beyond suggestion to various actors (policymakers in different jurisdictions and investors of different sorts). They cannot provide any of these actors any meaningful commitment or certainty about the future, despite holding the title of planner.

This circularity needs to be resolved. A clear delineation of responsibilities is needed, and powers must be given to each party in accordance with the needs of their responsibilities.

The resources AEMO provides political decision-makers should relate to the trade-offs that different development pathways imply. This would very likely require removing the assumption that all policy targets were accomplished. This would both be more in line with a layperson's reading of the rules, which require AEMO to 'consider' relevant policy commitments and would enable the political stream to make an informed and so more politically legitimate assessment of whether the benefits of a given commitment outweigh the benefits.

In this scenario, the 2028 ISP would need to be produced under a different framework that would remove the strictures on AEMO discussed above. It would necessarily co-optimize investment in the demand and supply sides of the energy system, providing a meaningful basis on which jurisdictional and federal policymakers could make decisions concerning questions of 'policy'.

It would also necessarily allow for and enable the orchestration of demand, which we and others have argued for elsewhere.

Of the two alternatives, the latter is preferable.

The significance of this for the 2026 ISP

We have outlined here changes that need to be made to the ISP and conceded that it is not possible to enact them for the current iteration. This implies that these changes must be prepared and enacted for the 2028 ISP.

A 2028 ISP which re-purposes the planning regime along the lines outlined here has a much more substantive task than the 2026 ISP.

Consideration should be made to adjusting the 2026 ISP consultation processes with a view to making the 2028 ISP as valuable a planning exercise as possible.

This could include adding sections to the 2026 ISP development process that identify National Energy Rule changes that would need to occur in order to allow the 2028 ISP to be fit for purpose.

4. Continued engagement

We welcome the opportunity to meet with the AER and other stakeholders to discuss these issues in more depth. Please contact Michael Lynch at mlynch@jec.org.au regarding any further follow up.