

AEMC Review of the Integrated System Plan – Discussion paper

9 September 2026

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 stands for a society that is fair and free from discrimination and disadvantage. Established in 1982 as the Public Interest Advocacy Centre (PIAC), we use the law and policy advocacy to challenge injustice and inequality. We do this 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

Jonathan Struggles
The Justice and Equity Centre
Gadigal Country
Level 5, 175 Liverpool St
Sydney NSW 2000

T: +61 2 8898 6500

E: jstruggles@jec.org.au

Website: www.jec.org.au

The Justice and Equity Centre acknowledges and pays respects to the Gadigal as the Traditional Owners of the land on which our office stands.

© Justice and Equity Centre, 2026. Permission is required to produce summaries or other derivative works, including through use of AI.

Contents

Recommendations	1
1. Introduction	3
2. Summary of required rule change or guidelines updates	4
3. The ISP must evolve	6
3.1 The ISP has an ongoing important role.....	6
3.2 A rapid and fair energy transition	6
3.3 Changes in the planning environment.....	7
3.4 Joint planning	8
3.5 The purpose of ISP planning.....	9
4. Expanded planning and actionability	10
4.1 Framing and straw people.....	10
4.2 Whole of system planning in the long-term consumer interest.....	10
4.3 Co-optimisation of all resources	11
4.4 Actionability of all resources.....	14
4.5 Joint planning electricity and gas	16
5. Material issues	17
5.1 The planning framework.....	17
5.2 The delivery framework	20
5.3 The governance framework.....	21
6. Other issues	23
6.1 Non-network options	23
6.2 Updated AER and AEMO guidelines.....	23
Annex A – Key ISP definitions	24
Annex B – JEC Rule Change Proposal.....	26

Recommendations

Recommendation 1 – planning in the long-term interest of consumers

That the ISP Review recommends changing the definition of the purpose of ISP planning from planning in the interests of the power system to planning in the long-term interest of consumers.

Recommendation 2 – co-optimisation of all resources

That the ISP Review recommends:

- *Expanding co-optimisation to all resources in the electricity system – generation, storage, transmission, distribution, CER and demand side resources.*
- *That modelling of demand side developments is added to the capacity outlook model, and recommendations on demand side developments are provided as ISP outputs.*

Recommendation 3 – more granular outputs on non-transmission assets

That the Review recommends ISPs outputs include more robust or granular recommendations on non-transmission assets. Specifically:

- *More granular outputs are provided for all resources in the electricity system – generation, storage, transmission, distribution, CER and demand side resources.*
- *Recommendations are made regarding the volume and timing of unregulated assets in each jurisdiction.*

Recommendation 4 – actionability mechanisms for all resources

That the Review recommends that the ISP include improved actionability mechanisms for all resources. This includes:

- *An actionability mechanism for distribution projects similar to that for transmission projects.*
- *A distinct actionability mechanism for unregulated/non-network resources – generation, storage, CER and demand side resources – with jurisdictional governments providing update reports to the ECMC on response to recommendations on the deployment of unregulated resources, to inform the next iteration of the ISP.*

Recommendation 5 – no joint planning of gas and electricity markets and systems

That the Review recommends against expanding the ISP to become a joint planning instrument for AEMO operated gas and electricity markets and systems.

Recommendation 6 – Planning framework

That irrespective of any recommended changes on co-optimisation or actionability, the ISP Review makes the following ISP modelling improvements:

- Adopts ‘normative’ planning using a central scenario which is emissions target aligned.*
- Provides greater transparency and rigor in the capacity outlook model.*
- Improves modelling of long-term storage and generation needs for renewable droughts and the scope of options considered, removing any unreasonable bias for gas generation solutions.*
- More carefully analyse the emissions implications of recommending gas generation.*
- Provide greater granularity in the modelling outputs recommending generation and storage.*

Recommendation 7 – Delivery framework

That irrespective of any recommended changes on co-optimisation or actionability the Review recommends the ISP process enables continued reassessment of ISP projects, including those previously declared actionable, and that this process occurs up to the point where final investment approval has been given.

Recommendation 8 – Governance framework

That irrespective of any recommended changes on co-optimisation or accountability the Review recommends allowing for flexibility in ISPs. This should include enabling consideration of updated input information that will materially impact ISP outputs as late as is practical, including after publication of the draft ISP.

Recommendation 9 – Updates to the AER and AEMO guidelines

That the Review recommends the AER and AEMO guidelines are updated to better align the ISP with the full intent of existing rules as well any changes resulting from the review itself.

1. Introduction

The Justice and Equity Centre (JEC) welcomes the opportunity to respond to the Australian Energy Market Commission (AEMC), Review of the Integrated System Plan (ISP Review),¹ and the Discussion paper (Discussion paper).²

The JEC supports the importance of the Integrated System Plan (ISP) but contends it must evolve. Partly as a result of the progress made to date on transmission, it is likely that from 2030 onwards the majority of investment in the electricity system will need to be in assets other than transmission.

Accordingly, we support the AEMC's initial position - as provided in straw person 3 - on evolving the ISP to plan in the long-term interest of consumers. In particular we support expanding planning to co-optimize all resources – generation, storage, transmission, distribution, consumer energy resources (CER) and demand side resources. Our submission details why the scope of planning inputs and analysis should be expanded - including on the demand side - and why the plan should produce outputs with recommendations for all resources.

We disagree with the AEMC's initial position not to expand mechanisms for actionability. Actionability mechanisms need to expand to include recommendations for all resources. As set out in our rule change proposal, we envisage an actionability mechanism for non-network assets, where jurisdictional governments provide regular update reports to the Energy and Climate Change Ministerial Council (ECCMC) on progress against deployment of recommended interventions.

Key additional improvements include –

- 'Normative' planning using a central scenario which is emissions target aligned.
- Improved modelling of long-term storage and generation needs for renewable droughts which are more source agnostic.

As summarised in the table in section 2, in many instances a rule change is not strictly required to deliver the required evolution of the ISP. Though they remain desirable in many cases, in order to provide certainty and consistency. Where a rule change is required or desirable we refer to our prior rule change proposal - Co-optimisation of all energy resources in the ISP - for detailed recommendations on form.³

Many improvements can be enabled by revising Australian Energy Regulator (AER) and Australian Energy Market Operator (AEMO) guidelines, and corresponding evolutions in AEMO practices. Importantly, this enables consideration of measures which could be implemented in time for the 2028 ISP.

¹ See <https://www.aemc.gov.au/market-reviews-advice/review-integrated-system-plan-framework>.

² See https://www.aemc.gov.au/sites/default/files/2026-07/isp_review_discussion_paper_epr0092.pdf

³ See <https://www.aemc.gov.au/rule-changes/co-optimisation-energy-resources-integrated-system-plan>, attached as Annex B.

2. Summary of required rule change or guidelines updates

Please see the JEC Rule Change Proposal for details on the rule changes we recommend.⁴

	Short Description	Rule change required / desirable	Guideline update required / describable
1	Planning explicitly in the long-term interest of consumers	Not required but desirable	Required
2	Expanding co-optimisation to include all resources	Not required but desirable	Required
2	Adding modelling of demand side developments to the capacity outlook	Not required	Required
3	Providing as outputs recommendations for all resources	Not required	Required
3	Providing recommendations for each jurisdiction regarding the volume and timing of non-network assets	Not required but desirable	Required
4	Enabling actionability for distribution projects similar to that for transmission.	Required	Required
4	Providing an actionability mechanism for 'non-network' resources – generation, storage, CER and demand side resources	Required	Required
5	Continuing to not jointly plan gas and electricity markets and systems	Not required	Not required
6	Improving ISP modelling in the planning framework: - Adopting normative planning using a central scenario. - Providing greater transparency and rigor in the capacity outlook model.	Not required but desirable the rules prescribe form of modeling and that AER/AEMO guidelines are updated to be consistent with this direction	Required AER/AEMO guidelines updated and consistent with AEMC directions (in review recommendations or rules updates)

⁴ See <https://www.aemc.gov.au/rule-changes/co-optimisation-energy-resources-integrated-system-plan>

	- Improving modelling of long-term storage and generation needs for renewable droughts. - More robust analyses of the emissions implications of recommending gas generation. - Greater granularity in the modelling outputs recommending generation and storage.		
7	Delivery framework – continual reassessment in the ISP iterations of the actionability of ISP projects	Not required	Not required
8	Governance framework – allowing for flexibility and consideration of updated key input information	Not required	Not required
9	Updating the AER and AEMO guidelines	Not required but desirable the rule prescribe the required updates	Required AER/AEMO guidelines updated to better align with the original intent of whole of system planning, and any recommendations of the ISP Review, and any consequential rule changes.

3. The ISP must evolve

This section answers Q1 and Q2

3.1 The ISP has an ongoing important role

The JEC agrees there is a continuing need for the ISP. We also agree the ISP must evolve in response to the changed planning environment.⁵

The ISP remains important as it:

- provides consistent inputs for energy planning both in the ISP and other processes through the Inputs, Assumption and Scenarios Report (IASR),
- provides a consistent platform for appropriately resourced, independent expert consideration of these inputs at a national level by AEMO, and
- provides independent expert recommendations and direction every two years for the developments and actions required for the transition of the electricity system. This allows for a broadly consistent transition narrative, while still providing a platform for identifying any changes of direction required, and gaps in the build out.

The key question is how the evolution of the ISP should be shaped by changes in the planning environment and progress made to date in the transition. Answering this requires consideration of the purpose of ISP planning, the scope of inputs needed, the way the transition has progressed to date - and will have progressed by 2030 - and what role optimised planning and recommendations, and actionability should play to best promote consumers interests.

3.2 A rapid and fair energy transition

The JEC's vision is of an energy system transition that is:

- rapid – because working quickly is required to avoid the worst climate impacts.
- fairly costed – because the transition comes with significant costs, and we must ensure they are shared fairly, and people experiencing disadvantage don't pay an unfair share.
- for everyone – because the significant change involved in the transition offers opportunity for everyone to benefit from clean, affordable energy regardless of their capacity to invest in technology.

Informed by this vision of the transition, we contend the evolution of the ISP should aim to ensure long term electricity system planning that enables a rapid transition, and considers use of all possible resources to ensure that transition is lowest cost, serving the long-term interests of all consumers including those who can and cannot adopt CER.

⁵ See boxes 2 and 3 of the Discussion Paper, pp. 8, 14.

3.3 Changes in the planning environment

We have reached the point where a planning regime and outputs focused on transmission has largely become redundant or will do by 2030. Transmission is already no longer the low hanging, no regrets resource investment which can move the transition forward.

It is critical to ensure the ISP can plan to ensure the electricity system can -

- supply consumers electricity to meet demand whether by generation and storage from the grid or behind the meter CER,
- ensure supply availability in a system more heavily based on variable renewable supply, and
- allow for dual directional network use as more and more CER is added.

Any significant reforms following this review are only likely to take effect in the 2030 ISP. By 2030 the most significant transmission projects will be completed, or well under way, with others committed. The number of further actionable transmission projects in the 2030 ISP and beyond is likely to be small. It is very likely that required developments will increasingly be non-transmission and non-network (unregulated) resources on the supply and demand side.

The 2026 ISP describes how the transition will require \$106 billion of investment, and of this \$100 billion investment is needed in unregulated assets, and \$6 billion⁶ in regulated transmission assets which are actionable or future projects in the 2026 ISP. Some of this \$6 billion transmission will be built by 2030.⁷

The ISP has consistently projected that in the future we will have a system with large amounts of new –

- rooftop and small scale solar,
- utility renewable generation including solar and wind,
- utility scale storage for firming, and
- utility scale gas generation as backup supply for extended renewable droughts
- new transmission lines and upgrades⁸

When, where and how this occurs has a material impact on the final shape and cost of the transition. Failing to make informed recommendations, and provide improved actionability for all resources, and continuing to focus only on transmission risks over-reliance on transmission and an inefficient transition more broadly.

Optimising recommendations for assets will allow for a material improvement in efficiency and promotion of consumers' interests.

⁶ This figure is already likely to obsolete with transmission cost escalations likely to mean the actual figure is much larger.

⁷ AEMO, 2026 Integrated System Plan, June 2026, <https://www.aemo.com.au/energy-systems/major-publications/integrated-system-plan-isp/2026-integrated-system-plan-isp>, (2026ISP), p.23.

⁸ See AEMO 2026ISP, Figures 1 and 2, and prior ISPs.

3.4 Joint planning

The ISP can and should continue to exist as a consistent national planning instrument complied by an expert national planner. It should be informed by comprehensive inputs, analyse efficient resource allocation, and provides expert recommendations to jurisdictional governments.

The ISP should exist alongside jurisdictional planning exercises, both drawing on the analysis of these plans, and informing them in an iterative manner. This enables improved consistency and linkages between all aspects of planning and improves scope to realise potential efficiencies.

The JEC position on joint planning is that:

- The ISP should sit alongside jurisdictional planning, as a consistent national platform developed by an expert planner looking at the National Electricity Market (NEM) and efficient development of the whole system.
- The ISP should take commitments in jurisdictional plans and policies as a starting point. This includes emissions targets, policy settings energy policy, and project commitments on renewables, CER, and transmission projects.
- AEMO's role should be that of an expert national planner providing analysis and advice, and concrete recommendations to jurisdictions on how to transition the electricity system in line with the jurisdictional emissions targets.
- AEMO should take other government commitments as starting points – this includes projected network interconnector or REZ commitments, or commitments to coal closure timelines, or renewables build out commitments. It should be assumed in the first instance that these will be met and are constraints.
- Nonetheless, during the IASR process - in line with the existing rules - to the extent that government commitments represent inputs which are implausible these should be questioned as risks to be addressed, as already occurs.
- AEMO should look forward as to what is required to address demand projections and where gaps are identified, they should make recommendations regarding the most efficient way to address them.
- AEMO has a focus on NEM wide efficiency of electricity system planning, while jurisdictional planners are focused on efficient allocation of state resources and addressing a wider range of state priorities. Consequently, it is not problematic that these processes reach differing conclusions - indeed it is to be expected – but it is important that any differences are transparent.

The role of AEMO is expert planner whose advice should be able to inform jurisdictions. The ISP cannot and should not seek to make decisions for jurisdictions. Advice from AEMO does not amount to policy when the recommendations or advice they give is - as it is now - based on taking detailed inputs, analysing these inputs using mathematical models and overlaying this with expert knowledge of the electricity system to provide a consistent basis of detailed expert

recommendations and advice on efficient resource allocations in the electricity system. Governments remain the decision makers on how to action or respond to this advice balancing other interests.

3.5 The purpose of ISP planning

The ISP's current stated purpose is to be a whole of system plan. As such it is intended to plan transition of the electricity system to net zero while meeting consumer demand, not merely to plan the location of new transmission projects.

To date the ISP has not fulfilled this role. This is in part due to the restrictions on planning and modelling found in AER and AEMO guidelines.

The ISP purpose should be to provide:

- an updated, independent long term national plan for development of the electricity system, created by AEMO as an expert independent planner.
- planning in the long-term interest of consumers in alignment with the national electricity objective, and
- whole of system planning for the national electricity system, that identifies efficient resource allocation that can best meet projected electricity demand.

Many interventions can contribute to meeting consumer demand. Transmission is only a small – if very costly - part of the story of the transformation of the electricity system. Continuing to narrowly focus on deployment of transmission assets is contrary to the intent of the ISP be a whole of system plan.

Accordingly, evolution of the ISP should enable:

- a genuine whole of system plan,
- better demand side inputs through the IASR process,
- a greater scope of planning and analysis that:
 - makes more transparently and thorough recommendations for utility scale generation and storage assets by jurisdiction, and
 - co-optimises all resources – considering supply, demand and network resources on equal footing – to determine the most efficient resource allocation to meet demand, and transition to a net zero system, and
- a more consistent platform for recommending and actioning all potential interventions.

See further the JEC rule change proposal on our detailed views on why and how the ISP should evolve.⁹

⁹ See <https://www.aemc.gov.au/rule-changes/co-optimisation-energy-resources-integrated-system-plan>

4. Expanded planning and actionability

This section answers Q3 to Q6

4.1 Framing and straw people

The JEC broadly agree with the AEMC framing of planning and actionability.

We support the AEMC's initial position - as provided in straw person 3 - of evolving planning to include planning for the long-term interest of consumers and co-optimisation of all resources. We agree with the AEMC's conception of the purpose of the plan as found in the first part of straw person 3. Namely,

The ISP is the independent, long term national plan for the efficient development of the whole electricity system in the NEM, including grid-scale generation, storage and transmission, distribution, CER and demand side resources in the long-term interest of consumers.

We provide more detailed perspectives on co-optimisation in section 4.3.

We do not support the AEMC's initial position - as provided in straw person 3 - of not addressing gaps in actionability. Mechanisms for more consistent recommendations and actionability across all resources should be progressed as an important part of an evolved ISP. We do not consider any straw-person sufficiently addresses issues we raise in detail in our rule change proposal.¹⁰

4.2 Whole of system planning in the long-term consumer interest

Requiring planning in the long-term interests of consumers - as provided in straw person 3 - is preferable to planning for the 'power system needs.'

The current rule 5.22.2 describes the purpose of the ISP and includes a requirement that the ISP 'contributes to achieving the national electricity objective' and by extension the long-term interests of consumers. While a rule change is not required to allow for consideration of long-term consumer needs, it is required to explicitly shift the focus away from planning for power system needs.

The long-term consumer interest in ISP planning of the electricity system goes beyond ensuring an efficient transition at low cost, but also extends to ensuring:

- There is a rapid transition
- Costs and risks are not unfairly borne by consumers
- The end point encompasses different consumer types

The power system focuses on the supply of grid electricity, but there is a need to look at both meeting electricity needs using the grid or CER, while also recognising many consumers will not have access to CER.

¹⁰ <https://www.aemc.gov.au/rule-changes/co-optimisation-energy-resources-integrated-system-plan>

Further, details can be found in our rule change proposal.¹¹

Recommendation 1 – planning in the long-term interest of consumers

That the ISP Review recommends changing the definition of the purpose of ISP planning from planning in the interests of the power system to planning in the long-term interest of consumers.

4.3 Co-optimisation of all resources

4.3.1 Overview

The AEMC states that the ISP already co-optimises generation, storage and transmission.¹² The JEC contend that evolution of the ISP must involve measures to ensure more effective co-optimisation of all resources. This is critical to enabling more efficient resource allocation and transition.

A more efficient transition means a lower cost transition. It means:

- consumers face lower bills as:
 - they avoid funding sub-optimal long-term transmission investments;
 - there is a shorter period in which consumers must pay for both the exiting fossil-based generation and renewable generation; and
 - they realise the benefits of a cheaper, less emission-intensive, flexible and modern renewable system sooner;
- private investors face less uncertainty and consequently reduced transaction costs;
- taxpayers face lower taxes as less tax revenue is required to underwrite the transition;
- governments are provided robust planning advice at the jurisdictional level, optimised with respect to all developments in the NEM. This advice will assist them to develop and evolve optimal jurisdictional policies – for example on distributed energy resources (DER) and electrification – and achieve their emission targets more quickly and efficiently, with lower consumer electricity bills and taxes in their jurisdiction; and
- a faster transition, with less emissions during the period to net zero by 2050 (or by 2045 in some states), both in the electricity sector and wider economy.

4.3.2 Considering each of the different resource types

Transmission

This has been the focus of the ISP to date. This may have made sense at the beginning of the transition when expanding transmission - including to connect renewables and connect NEM regions - was a relatively no regrets strategy. Over time transmission build times and costs have

¹¹ <https://www.aemc.gov.au/rule-changes/co-optimisation-energy-resources-integrated-system-plan>

¹² See Discussion Paper, p.24, referencing the 2026ISP, p.52.

risen, and there have been technological and cost developments in other areas, particularly in large scale battery storage. It no longer makes sense to only focus on transmission resources as being the only or even preferable way to meet identified needs. Moreover, as discussed above the transition build out will – hopefully - be nearing completion by 2030.

Distribution

At present Distribution Network Service Providers (DNSPs) are putting forward distribution network projects in the sub-transmission network space, alongside projects augmenting distributions to create local REZs, and distribution ownership of renewable storage assets.

There is a need for a consistent basis on which to compare the efficiency of these project proposals against investment in both transmission and other resources. This provides a strong argument in favour of co-optimisation which includes distribution level interventions.

Utility generation and storage

Planning for the efficient deployment of storage assets should arguably become one of the key roles of the national planner from 2030 onwards, if not sooner. These resources can offer an alternative to transmission investments with much more rapid and predictable build times, and a series of potential additional benefits. As transmission costs and project delays rise - with now no guarantee regulated transmission assets will be built on time or budget - recommending the most efficient deployment of these resources - as an alternative to transmission projects – is an important enabler of a more efficient transition.

While AEMO provides some modelling of utility scale generation and storage this modelling would benefit from increased transparency as a minimum. Recommendations on the deployment of these resources should also be more granular including the volume of each resource and timing for its deployment within each jurisdiction. In the case of storage, it may also include location. This consistent base of recommendations can then assist governments in their own planning processes and allocation of financial support to the transition.

Demand side

With transmission costs and project delays, and DNSPs proposing spending on distribution augmentations, there is significant value in modelling – and making appropriate recommendations on - the deployment of CER resources, including coordinated CER, as an alternative to network investments. This is an important contributor to the most efficient transition.

To ensure more effective co-optimisation of CER and demand side resources there needs to be more detailed modelling of CER and demand side resource - in particular in the capacity outlook model. Recommendations on CER and demand side resource deployment as an output on a jurisdictional level should also be incorporated into an evolved ISP.

4.3.3 Computational requirements

The review asks for views on the computational requirements of co-optimisation. The JEC view is that increased computational requirements should not be a bar to co-optimisation, but should merely be a consideration for how co-optimisation is implemented in practice.

The decision as to whether any increased costs are worth incurring must be made on the basis of consumers' interests and the potential savings for consumers. Given the potential benefit is billions in reduced network investment recovered over decades, it is very likely in consumers interest to incur an incremental increase in the computational cost of generating the ISP.

The additional tasks for AEMO in co-optimisation may also be able to replace existing elements of the ISP and other jurisdictional processes, offsetting any potential cost escalation.

4.3.4 The current rules and co-optimisation

The current rules provide AEMO with the discretion to include ISP Development Opportunities in the Optimal Development Path (ODP). ISP Development Opportunities include generation, storage, distribution and demand side developments. Accordingly, the rules already enable AEMO to co-optimize all resources.¹³ The AER and AEMO guidelines currently constrain the analysis unnecessarily. We provide further detail on this and recommended changes in our rule change proposal.¹⁴

Recommendation 2 – co-optimisation of all resources

That the ISP Review recommends:

- *Expanding co-optimisation to all resources in the electricity system – generation, storage, transmission, distribution, CER and demand side resources.*
- *That modelling of demand side developments is added to the capacity outlook model, and recommendations on demand side developments are provided as ISP outputs.*

4.3.5 More granular recommendations for non-transmission resources

The benefits of greater co-optimisation - and ultimately a more efficient transition - can be better realised if the ISPs outputs include more robust recommendations on non-transmission assets. Specifically, that robust outputs are provided for all resources in the electricity system – generation, storage, transmission, distribution, CER and demand side resources. This potentially includes recommendations for each jurisdiction on the volume and timing of non-network or unregulated assets.

At present NEM wide recommendations are provided in the ISP of:

- a total volumes of utility generation and storage, (including gas generation)
- general recommendations on distribution augmentations that can assist demand side augmentations, alongside consideration of sub-transmission distribution projects, and
- a total nominal value of the forecast volume of roof top and other small scale solar generation.

¹³ See Annex A which discusses the relevant definitions.

¹⁴ See <https://www.aemc.gov.au/rule-changes/co-optimisation-energy-resources-integrated-system-plan>

In the Electricity Statement of Opportunities (ESOO) and Gas Statement of Opportunities (GSOO) there is more granular presentation of the market opportunities to provide the required volumes of utility generation and storage by jurisdiction.

Once the ISP co-optimises for all resources - including CER and demand side resources - the ISP should make recommendations as to the volume and timing of resources required, with these recommendations either added to the ESOO analysis, or forming the basis of a separate Demand Statement of Opportunities (DSOO).

It is important that the ISP provides more granular recommendations in each ISP as these can inform jurisdictional planning, states investment plans. These detailed recommendations have an influence on the efficiency of the transition, even in the absence of any a direct actionability mechanism equivalent to that for transmission.

We refer to our rule change proposal for detailed views on how co-optimisation is possible under the current rules, but what changes are required to ensure the intent is delivered.¹⁵

Recommendation 3 – more granular outputs on non-transmission assets

That the Review recommends ISPs outputs include more robust or granular recommendations on non-transmission assets. Specifically:

- *More granular outputs are provided for all resources in the electricity system – generation, storage, transmission, distribution, CER and demand side resources.*
- *Recommendations are made regarding the volume and timing of unregulated assets in each jurisdiction.*

4.4 Actionability of all resources

Meaningful co-optimisation of the ISP is best supported by enhancing the scope for the ISP to progress action on solutions beyond transmission. This will help ensure a more efficient transition and lower overall costs for consumers.

Mechanisms for improved ‘actionability’ for all interventions need not necessarily be as extensive as those for transmission to be useful. Actionability for distribution projects could mirror that of the transmission actionability framework. But for other resources – the unregulated resources of utility generation and storage, and demand side developments – simpler mechanisms can make substantive improvements. In our recent rule change request we proposed a reporting mechanism, whereby jurisdictions simply report to the ECMC on progress using AEMO recommendations as a consistent central basis, while retaining full control to determine the form of action they take to respond to identified needs and opportunities in their jurisdiction.

¹⁵ See <https://www.aemc.gov.au/rule-changes/co-optimisation-energy-resources-integrated-system-plan>

4.4.1 Regulated distribution resources

The existing actionability mechanism for transmission projects can be extended to distribution projects.

Regulated distribution network projects are being proposed by DNSPs at the jurisdictional level. Co-optimisation enables a consistent basis on which to assess these proposals and test them against the efficiency of deploying other types of resources.

Like transmission actionable ISP projects, there is no guarantee of the form of a distribution project, or that it will be delivered on time or on budget. Nonetheless, the actionability mechanism provides some basis to assure the investment addresses the needs identified, progresses and is efficient.

4.4.2 Unregulated generation, storage, CER and demand side resources

With respect to other non-network or 'unregulated' interventions, an entirely different form of actionability can be used reflecting that what is required is a volume of generation, storage and demand side resources within each jurisdiction by a certain date.

In our rule change proposal, we proposed an actionability mechanism to help enable this role. Specifically, that jurisdictions report every two years to ECMC on their response to ISP recommendations, and progress made in their jurisdiction. This report could then be published and would provide an updated input to the next iteration of the ISP, allowing for more consistent, transparent and efficient iterative development of co-operative planning.

We disagree with the contention that only regulated assets can be made actionable, and it is not desirable or possible to ensure the delivery of unregulated assets. This argument is problematic because:

- It sets up an inaccurate binary between the existing mechanisms, and our proposed improvements. It presupposes that transmission actionability consistently and successfully results in the predictable, guaranteed and timely deployment of transmission assets. Transmission projects change over time, including being delivered over budget and time.
- It does not recognise that meaningfully co-optimising all resources benefits from some level of actionability for all solutions. For non-network recommendations the mechanism we have proposed provides this through a consistent platform for jurisdictions to consider, action and report back on progress. Reporting helps integrate planning and enable governments to monitor market developments in their jurisdiction, and whether policy support - including market interventions - is having the intended impact. AEMO's independent expert advice can help inform the choices states make.
- It does not recognise that ISPs have consistently reported that transformation of the electricity system will require large amounts of new utility renewable generation (including solar and onshore wind), large amounts of utility storage, transmission and distribution upgrades, large amounts of demand side generation – including rooftop solar and other

small scale solar, CER integration, and gas generation.¹⁶ Despite this the build out is not proceeding as required and unregulated assets in particular are falling behind. The market is failing to build these assets, and governments are intervening in the market to provide investment support. A consistent platform for shaping and assessing these interventions should be an important role for the ISP.

- It does not recognise the benefit to jurisdictional governments from the expert advice of AEMO in shaping the substantial support they are already providing enable to the transition, including to transmission projects. An actionability mechanism, albeit light touch in the form we recommend, will improve the practicality of this advice and provide a consistent basis to inform policy.

Recommendations on unregulated assets can be provided both in the ISP, and repeated with gaps in deployment identified in ESOOs, GSOOs and DSOOs (should a DSOO be adopted). However, experience has shown investment signals alone are not enough and improved actionability - which directs recommendations to jurisdictions and requires a regular response – would be of a material benefit, even at the level of ‘information’ we propose.

Further, details of our proposal on actionability, including why no law change is required can be found in our rule change proposal.¹⁷

Recommendation 4 – actionability mechanisms for all resources

That the Review recommends that the ISP include improved actionability mechanisms for all resources. This includes:

- *An actionability mechanism for distribution projects similar to that for transmission projects.*
- *A distinct actionability mechanism for unregulated/non-network resources – generation, storage, CER and demand side resources – with jurisdictional governments providing update reports to the ECMC on response to recommendations on the deployment of unregulated resources, to inform the next iteration of the ISP.*

4.5 Joint planning electricity and gas

We are not in favour of joint electricity and gas planning.

Integration of gas generation planning within the ISP is desirable, but this is a distinct and narrower issue which we address in relation to consideration of generation and long-duration storage issues.

¹⁶ See AEMO 2026ISP, Figures 1 and 2.

¹⁷ See <https://www.aemc.gov.au/rule-changes/co-optimisation-energy-resources-integrated-system-plan>

Recommendation 5 – no joint planning of gas and electricity markets and systems

That the Review recommends against expanding the ISP to become a joint planning instrument for AEMO operated gas and electricity markets and systems.

5. Material issues

5.1 The planning framework

This section answers Q7

5.1.1 Enhanced scenario modelling

The ISP represents the plan for the investments in the electricity system over the next 20 years.

The current ISP scenario selection and planning is not optimal as it attempts to plan to meet a likely future, as opposed to seeking to actively and unambiguously create conditions which allow for and drive a specific future.

As it stands, at various points in the ISP process the modelling uses the most likely scenario for planning. For example, it projects the required generation capacity augmentation to meet the most likely scenario.

The ISP should explicitly seek to be normative and drive efficient deployment of all forms of resources in the electricity system – generation, storage, transmission, distribution, CER and demand side resources – which can best align with the government policy of widespread electrification and corresponding driving down of emissions. Taking this approach and developing a normative scenario would be aligned with government policy – rather than represent the creation of policy. This approach would also align more closely with the widespread - if inaccurate - perception of the role of the ISP.

Such an approach does not negate the value of continued sensitivity testing against multiple possible future scenarios.

5.1.2 Modelling overly focused on transmission

The current ISP cost benefit analysis and its conclusions are both short sighted and skewed, overly focusing on detailed transmission project investment recommendations.

This cost benefit analysis is shaped by the AER Guidelines and the AEMO ISP Methodology. These focus only on analysis of deployment of different transmission projects at different times. This is likely driven in part by the historical development of the ISP from a transmission plan, the focus on meeting power system needs, the definition of the term development path, a belief that only network investments can be delivered, and the actionability mechanism only concerning transmission projects.

The cost benefit analysis centres on what transmission projects meet the power system needs while providing the greatest net benefit. Meeting consumer demand using a set of transmission

augmentation with the greatest net benefit, is a very different proposition to meeting consumer demand using a truly co-optimised analysis of supply side, demand side and network resources.¹⁸

At the start of the transition transmission investments could have been viewed as low hanging fruit no regrets investments – with it being reasonable for the focus to be on optimising the benefit from that investment. However, the planning environment has evolved and transmission is no longer automatically the low hanging fruit and hence the need for consideration of a greater set of resources.

The conclusions of the current cost benefit analysis set out the preferred development path for transmission projects from a selection of candidate paths. The difference between the net benefits of different transmission build out plans differs by tens of millions of dollars and yet a single transmission project may be over budget by many hundreds of millions of dollars – or billions - and delayed by many months. This undermines the materiality and credibility of the selection made and indicates a wider range of options need to be modelled.

5.1.3 Modelling resources that can compete with transmission services

Non-network options can currently be put forward. But this process takes place at the end of the ISP and is limited to new actionable projects. It does not put options - including network and other resources - on an equal footing at the beginning of the analysis, or properly consider that single assets can provide multiple services.

The current comparison only considers whether an individual network identified need can be met by a non-network option, not whether there is a more efficient transition if there is greater adoption of other resources. Arguably the ISP modelling fails to deal adequately with this issue, in large part as it continues to put transmission network build out at the centre of the transition.

Therefore, while the ISP and RIT-T processes provide the opportunities for non-network proponents to propose alternatives to traditional network solutions to meet identified needs, these processes are not fit for purpose. This is especially the case where the key role of assessing the non-network option is given to the Transmission Network Service Provider (TNSP), who has a vested interest in deploying traditional poles and wires solutions.

5.1.4 Improvements to the Demand Side Factors Statement

The Demand Side Factors Statement can be improved. This currently relies too heavily on information provided by distribution network service providers. Using a greater variety of sources would improve the inputs on the demand side to the IASR.¹⁹

¹⁸ This still fails to include the consumer interest in also considering the use of CER and demand side developments.

¹⁹ See <https://jec.org.au/publication/submission-to-aemos-demand-side-factors-information-guidelines-consultation-paper/> and <https://jec.org.au/publication/submission-to-aemc-rule-change-proposal-improving-consideration-of-demand-side-factors-in-the-isp/>

5.1.5 The Capacity Outlook Model

There should be greater transparency and rigor in the capacity outlook model.

The capacity outlook model is inadequately described in the ISP. This includes how it co-optimises the generation and storage mix, what precisely its outputs represent and whether these are constrained by or built upon by the scenarios, or represent a modelled efficient set of resources.

The capacity outlook model outputs will need to be updated to include CER as an output, including with sufficient granularity.

5.1.6 Long duration storage and gas generation

The ISP modelling should evolve with respect to generation and storage capacity required to meet long duration but infrequent generation droughts.

At present modeling fails to properly consider competing technologies to gas generation. In effect only one technology is proposed and considered. This is particularly problematic as that technology is emissions intensive, with implications for meeting the emissions reduction dimension of the NEO.

Successive ISPs have projected the continued - and indeed growing - capacity of gas generation in the NEM, albeit with a different use profile to today. Gas generation is said to be required for periods of prolonged renewable droughts.

Gas generation - generation costs, build time, supply availability, associated infrastructure costs, and emissions impacts - should remain key inputs to the ISP. However, any recommendation in the ISP for the use of gas generation should be carefully considered against the alternatives and fully justified as the most efficient alternative. It is also important that they truly have an emissions benefit given they are an emissions intensive form of generation.

Investing in gas infrastructure and assets risks embedding greater gas use. Once gas infrastructure is built - even if only as back up for long duration renewable droughts - there is a danger it will be used when other emissions free generation technology could have been dispatched. Further, the life of a gas generation asset once built is likely to be in excess of 20 years. This is significant as any gas generation built in 2030 or later, will be still possibly be in use beyond 2050. In 2050 either (1) the generation will need to offset 100% of its emissions, or it will need to be converted to run on renewable gas, or (2) the asset will need to be decommissioned and could be economically stranded.

The Review should, recommend the ISP identify a volume of capacity of long-term storage required, and present assessment of the most efficient, least-emissions-intensive technology to provide this capacity. This assessment should include the full range of potential solutions.

5.1.7 More granular outputs

The review should give greater consideration to the granularity of outputs from the ISP with respect to unregulated resources.

Recommendation 6 – Planning framework

That irrespective of any recommended changes on co-optimisation or actionability, the ISP Review makes the following ISP modelling improvements:

- *Adopts ‘normative’ planning using a central scenario which is emissions target aligned.*
- *Provides greater transparency and rigor in the capacity outlook model.*
- *Improves modelling of long-term storage and generation needs for renewable droughts and the scope of options considered, removing any unreasonable bias for gas generation solutions.*
- *More carefully analyse the emissions implications of recommending gas generation.*
- *Provide greater granularity in the modelling outputs recommending generation and storage.*

5.2 The delivery framework

This section answers Q8

5.2.1 Reassessment of actionability of transmission projects

The JEC is in favour of reassessing the actionability of actionable ISP projects in later ISPs. Reassessing actionability in future ISPs where a project has not been built, ensures potential system efficiencies are optimised. This is particularly critical where technology and costs are rapidly changing.

The key question is when a declared actionable project should be ‘locked in’ for subsequent ISPs.

The Glossary of the National Electricity Rules (NER) provide the following definition of an actionable ISP project –

A project:

- (a) that relates to a transmission asset or non-network option the purpose of which is to address an identified need specified in an Integrated System Plan and which forms part of an optimal development path; and
- (b) for which a project assessment draft report is required to be published in the Integrated System Plan that identifies that project.

The 2026ISP Glossary explains -

Actionable ISP projects optimise benefits for consumers if progressed before the next ISP. A transmission project (or non-network option) identified as part of the ODP and having a delivery date within an actionable window.

For newly actionable ISP projects, the actionable window is two years, meaning it is within the window if the project is needed within two years of its earliest in-service date. The window is longer for projects that have previously been actionable.

Project proponents are required to begin newly actionable ISP projects with the release of a final ISP, including commencing a RIT-T.

The fact that a TNSP has commenced a RIT-T should not be considered a block on consideration of actionability in future ISPs. The RIT-T is a multi-year, multi-stage process.²⁰ Even where the most credible option has been identified, and AER has approved this option it is still reasonable to halt further progress where the investment has been assessed as no longer being the most efficient. Reassessment by AEMO in an ISP, and during the feedback loop, should occur up to the point where final investment approval has been given and material investment commitments made.

Recommendation 7 – Delivery framework

That irrespective of any recommended changes on co-optimisation or actionability the Review recommends the ISP process enables continued reassessment of ISP projects, including those previously declared actionable, and that this process occurs up to the point where final investment approval has been given.

5.3 The governance framework

This section answers Q9

5.3.1 The value of flexibility

There is value in the ISP incorporating accurate and updated information up to the point of final publication. The value of certainty in outputs and recommendations diminishes rapidly where there has been a material change in inputs since the time of the publication of a draft or final IASR, or the draft ISP. These changes will be likely widely known and the credibility of related ISP conclusions questioned. This undermines the specific conclusions regarding individual inputs as well as the ISP conclusions more generally.

Therefore, flexibility is warranted. This includes potentially recalculating ISP conclusions when there are material changes in key inputs. The development of energy resources is dynamic, as shown by changes to battery technology in recent years. Flexibility and updating to incorporate new information to the greatest degree practicable is demonstrably in the consumer interest.

5.3.2 Accessibility of engagement

The ISP development process is increasingly transparent with multiple opportunities for engagement. This should be maintained and evolved wherever possible.

²⁰ See <https://www.aer.gov.au/industry/networks/system-planning/guidelines-system-planning/regulatory-investment-test#regulatory-investment-test-transmission>.

The latest 2026 ISP does well to explain its role, the analysis undertaken, the conclusions drawn, and clearly seeks to provide sufficient explanations to lay readers. This is a critical improvement to transparency which should continue to be built upon.

We note that the ISP Consumer Panel made recommendations on engagement improvements in its prior submission and highlight these for further consideration.²¹

5.3.3 The role of the ISP Consumer Panel

We note the ISP Consumer Panel recommendations it should respond to the draft IASR instead of the final IASR, along with other recommendations in its prior submission.²² We support these recommendations.

5.3.4 Joint planning

The JEC main concern with TNSPs current involvement in planning is that it often results in TNSPs identifying needs, assessing options and proposing solutions. TNSPs are not disinterested parties, and their incentives do not always align with consumers interests in the most efficient solutions. Caution must be exercised in relying on TNSPs to determine solutions.

Joint planning of the transition of the electricity system by both the ISP and jurisdictions is to be welcome as they can complement each other where the ISP provides a consistent basis of advice AEMOs planning advice, taking a national planning perspective, with jurisdictional planning taking into account economy wide considerations particular to the jurisdiction.

In line with the NEO, achievement of emissions targets provided by jurisdictions should be given full and detailed consideration in the ISP. These targets, unlike other more detailed inputs from jurisdictional planning provide a fixed input. They determine the pace and depth of the transition required, with key intermediate steps defined in interim targets. Failure to meet interim targets means meeting the next interim target is yet harder.

Recommendation 8 – Governance framework

That irrespective of any recommended changes on co-optimisation or accountability the Review recommends allowing for flexibility in ISPs. This should include enabling consideration of updated input information that will materially impact ISP outputs as late as is practical, including after publication of the draft ISP.

²¹ See ISP Consumer Panel Submission, 3 March 2026, <https://www.aemc.gov.au/sites/default/files/2026-03/ISP%20Consumer%20Panel%20-%20ERP0092%20AEMC%20Review%20of%20the%20Integrated%20System%20Plan%205%20March%202026%20%281%29.pdf>, p.7.

²² Ibid., p.7.

6. Other issues

This section answers Q10

6.1 Non-network options

We disagree with the AEMC's decision not to consider non-network options in the review.

6.2 Updated AER and AEMO guidelines

As we have detailed throughout – including in our summary table in the introduction - many identified issues with the ISP can be addressed without a rule change. Many of the recommendations we have made in relation to planning, delivery and governance can be achieved through updated AER and AEMO guidance. Notwithstanding this, we have indicated where we consider rule changes are preferable.

Irrespective of whether the ISP Review recommends prescribe co-optimisation or greater actionability, it is important that it does recommend updating the guidelines.

Further, given the way in which the guidelines have restricted the broader application of the rules to date - the ISP has not been a whole of system plan, or fully integrated optimisation of the demand side - regardless of what final recommendations the ISP Review makes prescribing changes to these guidelines is arguably required.

Recommendation 9 – Updates to the AER and AEMO guidelines

That the Review recommends the AER and AEMO guidelines are updated to better align the ISP with the full intent of existing rules as well any changes resulting from the review itself.

Annex A – Key ISP definitions

The relevant definitions in the NER allow for cooptimisation of all resources.

The ISP seeks to model the Optimal Development Path (ODP). The ODP has a specific meaning in the National Electricity Rules (NER). The NER Glossary definition is -

A development path identified by AEMO as the optimal development path in the most recent Integrated System Plan in accordance with rule 5.22.

Rule 5.22.6(a) describes the required contents of the ISP.

Contents of an Integrated System Plan

(a) An Integrated System Plan must:

- (1) identify a range of development paths;
- (2) for each development path, identify the group of projects that form part of the development path;
- (3) describe how each development path performs under any sensitivities AEMO considers reasonable;
- (4) identify the optimal development path which must be based on a quantitative assessment of the costs and benefits of various options across a range of scenarios, in accordance with Cost Benefit Analysis Guidelines;
- (5) for the optimal development path, identify the actionable ISP projects, future ISP projects and ISP development opportunities;**

[...]

The Glossary of the 2026 ISP describes the optimal development path as follow –

The development path identified in the ISP as optimal and robust to future states of the world. The ODP contains actionable projects, future ISP projects and ISP development opportunities, and optimises costs and benefits of various options across a range of future ISP scenarios.

ISP Development Opportunities are defined in the NER in Rule 5.10.2 as –

ISP development opportunity means a development identified in an Integrated System Plan that does not relate to a transmission asset or non-network option and may include distribution assets, generation, storage projects or demand side developments that are consistent with the efficient development of the power system.

Therefore, the ODP may including ISP Development Opportunities and by extension consideration of distribution assets, generation, storage projects or demand side developments.

In the latest ISP, the 2026 ISP at section 4 AEMO explains how it determined the ODP in the 2026ISP. Section 4 begins by defining this exercise as follows –

The ISP seeks the ‘optimal development path’ (ODP) for generation, storage and network investments across the NEM to meet power system needs and consumers’ long-term interests at least cost through to 2050, as coal plants retire and while meeting government policies.

Hence, while it is possible for demand side developments to form part of the recommended ODP, in the 2026ISP they were not included.

Annex B – JEC Rule Change Proposal