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To whom it may concern,

Climateworks Centre submission to the *Clarifying the treatment of jurisdictional policies and system costs in the ISP* consultation

Climateworks Centre welcomes the opportunity to provide a submission to the Australian Energy Market Commission (AEMC) in response to the *Clarifying the treatment of jurisdictional policies and system costs in the ISP* rule change consultation.

Climateworks bridges the gap between research and climate action, operating as an independent not-for-profit within Monash University. We are climate transition specialists, working with decision-makers who have the power to reduce emissions at scale. Climateworks accelerates ambitious, evidence-based action for net zero in Australia and Southeast Asia.

The rapid decarbonisation of the electricity and energy systems are essential for Australia to meet its obligations under the Paris Agreement. Electricity generation is the nation's largest source of greenhouse gas emissions. The adoption of renewables will reduce emissions by approximately one-third and enable decarbonisation of other sectors of the economy.

Since 2018, the Australian Energy Market Operator (AEMO) has engaged CSIRO, supported by Climateworks, to conduct multi-sector modelling to quantify the dynamic influences that would shape energy demand under different emissions reduction scenarios. That modelling continues to inform AEMO's planning and forecasting tools, including the 2026 Integrated System Plan (ISP).

In this submission, Climateworks recommends AEMC direct the Australian Energy Regulator (AER) to change the ISP Cost-Benefit Analysis Guidelines to require AEMO to shift its approach to developing the ISP optimal development path. Instead of basing the path on what is 'most likely' to happen, AEMO would base it on what is 'most consistent with government policy commitments'. Rather than infrastructure potentially lagging behind policy ambition, it would be designed from the outset to deliver an energy system most able to meet committed policies, while remaining reliable and affordable.

To manage the risks associated with this change, such as overbuilding energy infrastructure and increased costs for consumers, this submission puts forward several recommended safeguards. This includes contingency planning within the ISP, a framework for prioritising policies, enhanced transparency and accountability mechanisms, and measures for allocating risk.

With these changes, Climateworks seeks to address three key energy system challenges:

1. Alongside the effective operation of the energy market, AEMO's role is to plan the long-term future of the energy system. However, the nature of this future is largely determined by governments. At present, in many instances, governments use the ISP to guide specific

aspects of energy system policy, rather than allowing policy to guide the trajectory and ambition of the ISP and therefore the energy system.
2. AEMO currently considers jurisdictional emissions reduction targets, as detailed in the emissions targets statement (AEMC 2023), and other policies where they meet the committed policies threshold (section 5.22.3(b)) (AEMC 2025). Both exclude consideration of many policies that affect emissions and economic outcomes through electrification, low-carbon exports and renewable energy expansion.
3. The transition away from fossil fuels will significantly increase the economy's reliance on electricity, green hydrogen and bioenergy. For this shift to succeed, industry and investors need confidence that renewable energy will be sufficiently available, affordable and reliable. Currently, this confidence is lacking, which is hindering private sector investment in the transition.

Climateworks' recommendations are designed to offer several important benefits. They will ensure energy system planning better aligns with democratically determined policy rather than technocratic probability assessments. They will ensure the energy system enables government policy ambition rather than undermining it where there is uncertainty about the pace of changing electricity demand. Finally, they will clearly delineate accountability, assigning responsibility for setting the pace and scale of the energy system transition to governments, and infrastructure planning to AEMO.

Broadly, the recommendations in this submission are designed to enhance the energy system's operation and ensure it delivers the rapid transformation needed to achieve a net zero economy. Climateworks will be pleased to provide further analysis in writing or through meetings, where helpful, to the AEMC.

Submission summary

Climateworks recommends that AEMC:

- retains AEMO's obligation to account for emissions reduction targets in all ISP scenarios it models and publishes, consistent with the National Energy Objectives and Australia's decarbonisation commitments and obligations.

- implements a rule change and/or compels the AER to adjust the Cost-Benefit Analysis Guidelines to require AEMO to develop an ISP optimal development path with a positive net benefit in the scenario 'most consistent with government policy commitments'.

- maintains the ISP's primary focus on energy system planning, ensuring it supports broader industrial and economic policy objectives through infrastructure readiness rather than attempting to direct or replace those policies.

- requires AEMO to consider a broader set of policies that affect the energy system when determining needs, including firm and established government commitments such as Future Made in Australia.

- establishes a framework and review mechanism to enable AEMO to systematically and transparently assess which policies to include in the ISP optimal development path, and to reassess those policies proportionally and efficiently when fundamental settings change. More specifically, AEMC would:

    - establish a policy prioritisation framework with specific rules for resolving policy conflicts, enabling AEMO to determine which policies it must consider when deciding which scenario is 'most consistent with government policy commitments'.

    - enhance transparency by requiring AEMO to publicly disclose which policies are included in and excluded from ISP scenarios, document its rationale for policy prioritisation and conflict resolution, and publish sensitivity analyses for key policy uncertainties.

    - strengthen accountability by requiring review of AEMO's policy interpretation framework and establishing formal stakeholder consultation processes for ISP scenario development.

- implements a rule change and/or requires the AER to adjust the Cost-Benefit Analysis Guidelines so AEMO embeds contingency planning in the modelled scenarios where there is uncertainty in energy system needs and/or policy achievement.

- further addresses overbuild risk by recommending the Australian Government employ risk-allocation mechanisms, such as the NEM Review's proposed ESEM framework and/or direct government investment.

Recommendations

Recommendation 1: Retain AEMO's obligation to account for emissions reduction targets in all ISP scenarios it models and publishes, consistent with the National Energy Objectives and Australia's decarbonisation commitments and obligations.

Climateworks does not support the Centre for Independent Studies (CIS) proposal to require AEMO to model and publish a 'baseline scenario' unconstrained by emissions reduction targets. The stated intent is to create 'greater transparency, not just of whole-of-system costs, but of the costs of individual policies'. While transparency in energy system planning is valuable, this proposal is inconsistent with energy law and with Australia's national and international emissions reduction commitments and obligations.

Modelling and publishing scenarios that treat emissions reduction targets as optional constraints that could be 'missed, reduced or removed' is incompatible with the emissions reduction requirement under the National Electricity Laws (NEL) and Australia's broader climate obligations (AEMC 2025). The Paris Agreement is a binding international commitment, and Australia's national and jurisdictional climate targets are legislated objectives. Creating planning scenarios that disregard these legal requirements would conflict with the actual constraints under which the energy system must operate and would undermine the integrity of the ISP.

Furthermore, adoption of the CIS proposal would risk undermining the policy confidence essential for energy investment. Developing scenarios that signal emissions targets could be disregarded or deprioritised is likely to discourage renewable energy investment and create market instability at a time when investor confidence is critical and industry is calling for clarity. Furthermore, an ISP scenario without jurisdictional policy constraints could provide a basis for industry and interest groups to argue that climate targets and policies should be abandoned.

While there may be merit in analysing energy system costs, any such analysis would require examination of both the cost of reducing emissions and the far greater costs of failing to act. True transparency would require examining components such as climate change damage, stranded energy asset risk resulting from delayed action, extending the lifespan of ageing coal generators and the economic benefits of early action. A one-sided framing of energy transition costs would present an incomplete picture of the economic trade-offs involved.

Recommendation 2: Implement a rule change and/or compel the AER to adjust the

Cost-Benefit Analysis Guidelines to require AEMO to develop an ISP optimal development path with a positive net benefit in the scenario 'most consistent with government policy commitments'.

The current approach to selecting the ISP optimal development path creates a misalignment between Australia's energy infrastructure planning and its economic, climate and energy policies. Under the AER Cost-Benefit Analysis Guidelines, AEMO is required to develop an optimal development path that has a positive net benefit in the scenario determined 'most likely' to eventuate (AER 2024). This positions AEMO's technocratic probability assessments as the navigator of Australia's energy transition trajectory, rather than as the enabler of government policy commitments. The result is energy system planning and forecasting that lags behind policy commitments, creating the risk that infrastructure will be underbuilt.

The challenge is particularly acute for industry, where there is an interdependent relationship between the availability of renewable energy and the ability to decarbonise. Before industries can electrify their processes, investors need confidence that renewable energy will be sufficiently available, affordable and reliable. This confidence doesn't currently exist, and without it, scaled deployment of renewable energy projects isn't considered the 'most likely' scenario. This creates a self-fulfilling prophecy where the absence of infrastructure confidence prevents industrial commitments, which in turn justifies conservative infrastructure planning. Breaking this cycle requires shifting from probability-based planning and forecasting to policy-aligned planning and forecasting.

Climateworks recommends AEMC implement a rule change requiring the AER to adjust the ISP Cost-Benefit Analysis Guidelines. This in turn would require AEMO to develop an optimal development path with a positive net benefit in the scenario 'most consistent with government policy commitments'. These changes would align energy infrastructure planning directly with Australia's climate targets and energy and industry policy commitments, providing the certainty necessary to break the current investment deadlock. It will also allow AEMO and the energy system to fulfil its intended role as the enabler of government policy and the national economy.

Recommendation 3: Maintain the ISP's primary focus on energy system planning, ensuring it supports broader industrial, economic and adaptation policy objectives through infrastructure readiness rather than attempting to direct or replace those policies.

Aligning the ISP with government policy would not fundamentally change its intent or purpose. The energy system exists to enable Australia's economy and society to function across the transport, building, industry and agriculture sectors. Climateworks is not proposing that AEMO's planning and forecasting identify economic opportunities and plan infrastructure to maximise Australia's export potential or industrial development. Instead, we propose that governments continue to set economic, energy and climate adaptation policy direction, with AEMO's role being to enable delivery of those government policies rather than follow expected energy demand changes through probability assessments.

Basing the ISP's optimal development path on what is 'most consistent with government policy commitments' acknowledges the interdependent relationship between energy planning and achieving government economic and climate objectives. It does not position AEMO's system planning as a driver of economic growth.

AEMO's practice of responding to the 'most likely' scenario was appropriate when changes in the energy system were incremental. However, this approach is no longer suitable given the scale of transformation in the energy system and the degree to which this transformation is driven by government policy choices.It is now critically important to maintain appropriate boundaries and accountabilities between AEMO and state and federal governments.

Currently, when AEMO assigns probabilities to different policy scenarios, it in effect substitutes its own judgement for that of elected governments, creating confusion about who has responsibility for Australia's energy transition. By contrast, planning infrastructure to support stated government commitments ensures that democratically determined objectives and trajectories can be achieved. This delineation would allow AEMO to focus on its core competency of ensuring the energy system is reliable, secure and capable of meeting the needs placed upon it by the broader economy.

Recommendation 4: Require AEMO to consider a broader set of policies that affect the energy system when determining needs, including firm and established government commitments such as Future Made in Australia.

In recent years, Australia's federal, state and territory governments have made a range of climate and economic policy commitments designed to position Australia as a 'renewable energy superpower' and enable the nation to benefit from the global transition to net zero (Commonwealth of Australia 2024). Future Made in Australia, for example, represents $22.7 billion in support including for low-carbon industries, green hydrogen production and renewable exports (Treasury 2024). Similarly, the National Hydrogen Strategy (DCCEEW 2024) and Critical Minerals Strategy (DISR 2023) outline ambitions to drive industrial electrification, leading to increased electricity consumption in those sectors. However, under current rules, AEMO's consideration of these policies is limited by the committed policies threshold in section 5.22.3(b) of the National Electricity Rules (AEMC 2025). Despite representing firm government commitments with substantial funding allocations, many of these policies fall outside what AEMO must and does consider when developing the ISP.

The Emissions Targets Statement (AEMC 2023), while establishing jurisdictional emissions reduction obligations, does not capture the full scope of government policy affecting the energy system. In particular, it does not account for renewable export targets, a number of industrial decarbonisation policies or the broader suite of policies that will drive electricity demand growth. This further increases the gap between what governments are pursuing through policy and what AEMO is obligated to plan for in the energy system.

Climateworks recommends requiring AEMO to consider a broader set of firm and established government commitments as it determines system power needs. There are two mechanisms through which this could be achieved. First, by incorporating a broader range of policies into the Emissions Targets Statement, including renewable export policies (AEMC 2024). Secondly, by adjusting the committed policies threshold in section 5.22.3(b) of the National Electricity Rules to require AEMO to consider government policy commitments using a policy prioritisation framework and review mechanism as described in Recommendation 5 below (AEMC 2025).

Recommendation 5: Establish a framework and review mechanism to enable AEMO to systematically and transparently assess which policies to include in the ISP optimal development path, and to reassess those policies proportionally and efficiently when fundamental settings change.

- **5 (a) Establish a policy prioritisation framework with specific rules for resolving policy conflicts, enabling AEMO to determine which policies it must consider when deciding which scenario is 'most consistent with government policy commitments'.**
- **5 (b) Enhance transparency by requiring AEMO to publicly disclose which policies are included in and excluded from ISP scenarios, document its rationale for policy prioritisation and conflict resolution, and publish sensitivity analyses for key policy uncertainties.**
- **5 (c) Strengthen accountability by requiring review of AEMO's policy interpretation**

framework and establishing formal stakeholder consultation processes for ISP scenario development.

Shifting the ISP's optimal development path from a ‘most likely’ assessment to alignment with the scenario ‘most consistent with government policy commitments’ will require guidance on how AEMO should navigate overlapping or conflicting government policies, as well as transparency about which policies are included. Currently, AEMO has discretion to determine which policies to account for when policies are at different stages of development, and the scenario development process can result in some policies being overachieved when federal and state commitments differ (AEMC 2025). To address this, Climateworks recommends that AEMC direct the AER to develop a structured policy prioritisation framework, with accompanying transparency and accountability mechanisms. This would give AEMO a systematic approach to evaluate government commitments and devise infrastructure plans that genuinely reflect policy direction.

Such a system would include:

(1) ***Policy prioritisation framework (5a):*** A hierarchical policy prioritisation process and specific rules for resolving conflicts. The framework would establish how and when AEMO should prioritise policies based on their level of commitment and materiality to energy system planning, giving greater weight to policies with direct implications for electricity demand or supply. The framework would also establish jurisdictional precedence rules to address situations where federal and state policies directly conflict.

    The framework would enable AEMO to make more systematic judgements about policy certainty and merit, and provide a process for navigating policy complexity. It could be codified in the National Electricity Rules or Cost-Benefit Analysis Guidelines, with clear examples of how different policy combinations would be treated, ensuring consistency and predictability in AEMO's planning approach.

(2) ***Disclosure of policy inclusions (5b):*** An obligation for AEMO to publicly disclose which government policies are included and excluded in each ISP scenario, providing a clear rationale for these decisions based on the policy prioritisation framework. This disclosure would extend to documenting how AEMO resolves discrepancies between competing policies, such as when federal and state commitments diverge. Additionally, AEMO would publish sensitivity analyses that examine how variations in policy assumptions would affect the optimal development path, allowing stakeholders to understand the robustness of energy infrastructure decisions under different policy trajectories.

(3) ***Policy review mechanism (5c):*** A policy review mechanism that would enable AEMO to reassess the optimal development path when there are material changes to the policy landscape, such as shifts in emissions targets, major policy modifications or substantial changes to funding commitments. This would ensure that infrastructure planning remains aligned with current government direction while avoiding unnecessary changes resulting from minor policy adjustments. The framework would establish clear thresholds for what constitutes a material policy change that warrants ISP reassessment, balancing the need for policy responsiveness with the stability required for long-term infrastructure investment and grid reliability.

Recommendation 6: Implement a rule change and/or require the AER to adjust the Cost-Benefit Analysis Guidelines so AEMO embeds contingency planning in the modelled scenarios where there is uncertainty in power system needs and/or policy achievement.

AEMO has to plan an energy system in an environment of acute uncertainty. However, by modelling sensitivity analyses and a range of assumptions, it is possible to pinpoint the areas of greatest uncertainty and create scenarios for different conditions. This presents an opportunity for AEMO to better navigate unknowns and adopt a role in energy system planning more closely aligned with government policy.

Climateworks recommends that AEMC direct the AER to include in the Cost-Benefit Analysis Guidelines an obligation for AEMO to identify key uncertainties in its electricity network infrastructure analysis and undertake sensitivity testing to explore how different assumptions affect system requirements. The anticipated pathway, and alternate responses where change is not consistent with expectations, could be transparently detailed in planning and forecasting material, including the ISP. Having alternate responses would enable governments and energy system stakeholders to plan and allocate resources in alignment with the expected pathway or alternative responses. This would provide a clearer basis for decision-making under uncertainty.

For example, Climateworks' modelling indicates that CER and demand management will play a crucial role in achieving a 1.5 degrees Celsius-aligned energy system. Current initiatives, including the Demand Side Statement of Opportunity, will assist AEMO in better understanding and considering these aspects.However, uncertainties remain regarding the pace and scale of adoption and the behaviour of actors within the system. AEMO’s forecasting and planning could trigger alternative actions if changes are not in line with expectations, such as increased investment in grid-scale generation and storage.

This alternative pathway approach offers two key benefits. First, it enables AEMO to plan confidently for a 1.5 degree-aligned future, while preparing for deviation. Second, it empowers governments and stakeholders to understand and shape unfolding trends, allocating resources accordingly. Transparent contingency planning is essential for managing risks and maximising opportunities in a dynamic transition.

Recommendation 7: Further address overbuild risk by recommending the Australian Government employ risk-allocation mechanisms, such as the NEM Review's proposed Electricity Services Entry Mechanism (ESEM) framework and/or direct government investment.

It is important to consider the degree to which current energy consumers may bear the risk of building infrastructure for potential future demand that may not eventuate. When infrastructure is built in anticipation of large industrial consumers, hydrogen production facilities or export industries that haven't yet committed to connecting, consumers bear the risk of additional costs if these anticipated loads don't materialise. While some level of anticipatory building is necessary to enable rather than constrain the energy transition, the risk and cost should be shared between governments and those who stand to benefit.

One way to address this tension is by embedding contingency planning into the ISP, as outlined in Recommendation 6. This would involve setting out a pathway most consistent with government policy and building adaptive mechanisms into the ISP where infrastructure deployment does not eventuate at the scale and/or pace expected. In addition to this measure, risk allocation mechanisms beyond the ISP could help manage the potential for overbuilding. The NEM Review's proposed ESEM contracts, along with frameworks like direct government investment, could mitigate the risk of stranded assets for consumers.

If adopted, the NEM Reviews recommended ESEM contracts offer a promising mechanism to shift risk from consumers to a broader range of market participants and governments. By enabling longer-term contracting and visibility of ‘hidden resources’, the ESEM could provide certainty to

investors while allocating the risk of uncertain demand expansion to a government implementation body. Under this approach, if anticipated industrial loads or hydrogen facilities fail to connect, the financial exposure would be managed through the contract warehousing system rather than across the existing consumer base. Proposed changes as part of the NEM review will also require distributed energy resources and demand response providers to schedule their resources for dispatch, making them visible to AEMO and reducing the need for large-scale resources.

Complementary financial mechanisms could further mitigate the potential cost impacts of overbuild. For example, direct government investment in infrastructure is another option, particularly for assets critical to the energy transition. The choice among these mechanisms would be guided by the circumstances of each infrastructure investment, the degree of demand uncertainty and the policy objectives they serve.

Thank you for taking the time to consider our submission. We welcome an opportunity to brief your team to provide further insights from our work.

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