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Ms Anna Collyer
Chair
Australian Energy Market Commission
Submitted via www.aemc.gov.au

RE: Submission to AEMC's Consultation Paper for the Review of the Integrated System Plan framework

Dear Ms Collyer,

The Centre for Independent Studies (CIS) welcomes the opportunity to respond to the AEMC's Consultation Paper for the ISP Review.

The CIS is a leading independent public policy think tank in Australia. It has been a strong advocate for free markets and smaller government for 50 years. The CIS is independent and non-partisan in both its funding and research, does no commissioned research nor takes any government money to support its public policy work.

The original conception of the Integrated System Plan was innovative and ambitious but rested on core assumptions that have now been disproven. We submit there is now little prospect the Integrated System Plan can accomplish the intended purpose of efficiently guiding an energy transition in the interest of consumers by better coordinating investment across the National Electricity Market.

The original vision relied on implicit compacts, which are now irreparably broken.

First is that all the states and federal governments would remain uniformly committed to the same goal, and commit to bringing unique and varied contributions to achieving it. These varied contributions to a common purpose justified a much higher degree of integration of planning across the NEM.

Then, to realise a successful integration, governments were expected to take guidance from technical authorities in formulating optimal policy and guiding the most efficient investment. The ISP was meant to be the central document that effected that ambition.

Instead, since the ISP was introduced in 2018 the subsequent years have demonstrated that the states act independently and according to their own

perceived self-interest. At times, states have even derided the ISP's strategy as an 'uncoordinated' approach to justify their own agendas.[1] Their commitments to net zero have been neither uniform nor consistent. Instead of following expert guidance on how to optimally execute the energy transition, politicians at all levels appear to have chosen to go their own way.

The result, in our view, is that the ISP has become the vessel into which all the policy instincts of every government are poured, rather than being an optimal blueprint prepared by experts for governments to follow.

For a few years that vessel presented an image that appeared polished and plausible to the general public. But today, the contradictions policy, as well as the collision of former plans with unfolding reality, make the ISP unviable.

We contend the ISP should be abandoned because, as it stands, it can only serve to deceive the public, and cement poor policy choices. As the AEMO CEO has stated, the ISP actually does nothing to assess the merits of those policies. Responsibility for this should be returned clearly and comprehensively to the politicians who have created the problem.

Yours sincerely,

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Question 2: Do you consider that the purpose of the ISP is accurately reflected in the rules?

Are changes needed to the rules to reflect this? What implications would need to be considered if the ISP's purpose were to change? Do you distinguish between the purpose and role (or uses) of the ISP?

The rules do reasonably reflect the intended purpose of the ISP. It should be incumbent on the Regulator to ensure that the way that the ISP is produced and used properly reflects that purpose, and follows the rules. As has been reflected in our Rule Change Request already, we are deeply concerned that the proper purpose of the ISP is better reflected in the rules than in how the ISP is written. Rule changes are needed to help more explicitly bring the ISP into compliance with its stated purpose.

Specifically, the ISP must protect consumer interests. This is made explicit in 5.22.2 of the National Electricity Rules, which provides the purpose of the ISP:

> "The purpose of the *Integrated System Plan* is to establish a whole of system plan for the efficient development of the *power system* that achieves *power system needs* for a planning horizon of at least 20 years for the long term interests of the consumers of electricity."

That means ensuring that investment is timely and efficient, and balances risks of both over and underinvestment[2]. The current execution of the ISP fails to properly 'consider' government policy. Instead it treats all government policy as essentially infallible and inevitably achieved. This grossly biases the ISP's Optimal Development Path outcomes towards over investment and premature investment in the network. It has no plausible way of balancing the competing objectives outlined in the National Electricity Objective (NEO) by privileging the third objective (government targets) above the interests of price and reliability enshrined in the first.

The implausible 82% renewable energy target for 2030 imposed at a federal level is the epitome of such unrealistic targets being uncritically treated as accomplished in the ISP, ensuring that the true purpose of the ISP cannot be served.

So there is a serious problem in that the Rules are not enforced. The implicit suggestion that the rules should be updated to reflect whatever the ISP has become, assumes that whatever deviation that has occurred away from the rules is acceptable and good. We reject this. If the proper purpose of the ISP cannot

be enshrined in the rules, and that purpose be upheld through enforcement of the rules, then there is no point in proposing adjusting rules to reflect a better purpose. Adjusting the rules in this way can only serve to back-fill legitimacy for the abrogation of due process that has occurred.

In response to this question, we will instead focus on whether the ISP process, or some plausible evolution of it, could be expected to fulful the original purpose which was envisioned.

We argue that three assumptions underpin the original purpose of the ISP that are either severely in doubt, or have not occurred:

1. **Unwavering direction alignment across governments.** That all governments remain aligned and unwavering in their commitment to decarbonise the energy system and pursue a renewable-energy dominated future
2. **Value of integration through varied contributions.** That the various states can benefit substantially from increased integration of planning, because they bring unique and differentiated contributions towards that shared goal (i.e., opportunity for cost effective pumped hydro storage, or differentiated weather patterns that offset lulls in other states)
3. **Technical optimisation directing coordinated policy.** That the ISP would bring a degree of technical skill and competence together in devising a more efficient plan, and that all governments would be generally receptive to incorporating that advice and planning into their policies.

Below we will discuss all these three briefly, with some examples and information to support them. Some examples and supporting information illustrate the confluence of all three topics, which we will discuss under Assumption 3.

Assumption 1: Directional alignment across governments

The Finkel Review from 2017 summarised the intended purpose of the ISP in the following paragraph:

> "Better **system planning** should see AEMO having a stronger role in planning the future transmission network, including through the development of a **NEM-wide integrated grid plan** to inform future investment decisions. Significant investment decisions on interconnection between states should be made from a NEM-wide perspective, and in the context of a more distributed and complex energy system. AEMO should develop a list of **potential priority**

> **projects** to enable efficient development of renewable energy zones across the NEM." (emphasis from original)

This ambition for the ISP is prefaced by an explicit assumption that all Australian governments could and would remain committed to a common and shared plan for decarbonisation and transition towards renewable energy:

> "There is no going back from the massive industrial, technological and economic changes facing our electricity system ... Governments have made commitments to a lower emissions future, but the pathway is blocked by uncertainty about how to get there ... **All governments need to agree** to an emissions reduction trajectory to give the electricity sector clarity about how we will meet our international commitments." (emphasis added)

Today, the evolution of politics has shown that the premise that "there is no going back" was misplaced. The federal Coalition abandoned its commitment to target Net Zero by 2050, the Queensland government has changed, and removed previous renewable energy targets. It has also changed its energy plan to re-invest in baseload coal fired power generation for the foreseeable future, and cancelled at least one major pumped hydro project which previously featured in the 2024 ISP.[3] Plans to invest in large-scale green hydrogen production have also been dropped.[4] Planning arrangements intended to accelerate the roll-out of renewables have been amended significantly.[5]

Attitudes in other states have also softened, for example with the Premier of NSW describing the potential extension of the Eraring Coal fired power station beyond 2027 as "a good thing".[6] And on January 20, 2026, Origin did indeed announce that it would extend Eraring's operations of all four units out to 2029, without any further government underwriting being required.

The potential for such large variations in government plans and policies to occur strikes at the heart of the value proposition that the ISP has at its core. The sequence that would comprise optimal development would be materially affected by a decision that changed the retirement schedule of coal, or development plans for large and deep storage schemes, such as Pioneer Burdekin pumped hydro.

The removal of a couple of GW of planned deep storage in far North Queensland, and the extension of many GW of coal in South East Queensland and Central NSW would fundamentally alter the ideal sequence of transmission.

The Victorian government introduced a policy target for Offshore Wind in early 2022.[7] Despite this the 2022 Integrated System Plan showed no offshore wind, due to the high cost, resulting in none being introduced in the optimisation process. The policy was however reflected as a binding constraint in the 2024

Integrated System Plan. The Victorian Government's Offshore Wind Policy Directions Paper (subsequently removed from government websites) acknowledges that the Offshore Wind targets were for reasons other than economic optimisation:[8]

> "Analysis indicates that to meet net-zero targets using onshore renewables could require up to 70% of Victoria's agricultural land to host wind and solar farms."

Recently, however, the Australian Industry Group (AIG) called for a re-think of the offshore wind policy, citing the very high cost.[9] This is despite AIG supporting net-zero targets and renewable energy in general. In 2025, more than 6GW of offshore wind proposals have been withdrawn for economic reasons, including BlueFloat.[10] RWE,[11] and AGL.[12]

Having positioned itself as indifferent to the costs and benefits of offshore or onshore wind, the ISP has produced sequential reports without, and then with, many GW of offshore wind in the 'optimal' path. It is clear that offshore wind has turned out to be not 'optimal', at least in an economic sense. Projects will only proceed with government underwriting which the Victorian government won't provide alone. The mechanism by which the federal government may provide support is yet to be finalised or accepted.[13]

This makes some kind of policy failure or policy change in the coming years very likely. In this case the ISP will model something different again, challenging the notion that it has provided good value to consumers by moulding itself around government policy declarations that its economic optimisation would never have supported.

The potential for policy changes makes long-term infrastructure planning difficult in many settings. But there are rarely such rapid and material changes in planning as have been seen recently in Australian jurisdictions and political parties. Binding multiple jurisdictions into a more deeply integrated plan can only increase the potential of policy changes across those jurisdictions to rupture the premises on which optimal plans were laid.

Fundamentally, the ISP was conceived at a moment when government policy was moving toward increased ambition for carbon emission reductions. This trend was uniformly replicated across governments. The pace of ambition was increasing, and a reversal was unthinkable. Today, we must reconsider whether such an assumption has withstood the test of time.

Assumption 2: Value of integration through varied contributions

An implicit assumption underlying the original vision and purpose of the ISP is that a deeper level of integration and coordination across states is beneficial.

The intuitive concept is that diversity of weather means that a larger fraction of electricity demand can be served by renewable energy if more is shared through interconnectors. This weather diversity argument is stated in the 2024 Integrated System Plan:

> "In many cases, new transmission will complete a network that can take advantage of the NEM's geographic diversity, allow REZs to transfer their future energy to where it is needed, and maintain a secure and reliable power system."

However, the diversity argument has never been made convincingly. As well argued by Bruce Mountain in his Submission to the EPRA Senate Select Committee:[14]

> "None of the jurisdictions in the NEM have any meaningful advantage in renewable electricity production. Although solar yields are higher inland and to the north, solar panels are now so cheap, the cost of shipping what is slightly cheaper solar from Queensland to Victoria is obviously not viable. Likewise, wind yields in all NEM regions is approximately comparable with the exception of Tasmania which has a state-wide yield advantage of around 5% compared to Victoria. Tasmania however has a cost disadvantage and so its net advantage relative to the mainland is likely to be small and so not able to defray the huge cost of interconnection needed to make that wind generation available to Victoria."

Overall, the cancellation of the Pioneer Burdekin project, the unclear status of Borumba in Queensland and the 'Battery of the Nation' projects in Tasmania, as well as the still-unknown extent of the final cost of the Snowy Hydro 2.0 project strongly suggest that there can be no confidence in there being a strong enough advantage in pumped hydro opportunites between states to justify large interconnectors on this basis.

Professor Mountain's submission also elucidates clearly the techniques which bias the cost-benefit analyses used to justify transmission (pages 8 and 9). On pages 13 and 14, he highlights contradictory claims and findings used to justify VNI West. The project was initially justified by the ongoing exploitation of brown coal out to 2074, and claimed to *delay* in the construction of renewable generation and storage, and *avoid* the need for expensive pumped hydro. Later that analysis was contradicted by claims VNI West would *increase* renewable energy generation and export cheap rooftop solar power from Victoria. Such

contradictions demand that the processes used in planning such integration through interconnectors be revisited.

CIS has also made extensive submissions, including to the EPRA committee, regarding the business case for HumeLink, and how this has not reflected an intent to genuinely protect consumers best interests.[15]

It should also be noted that there can be very high correlation of weather, in particular wind droughts, that span across multiple states. This was particularly evident in the last week of June in 2025, where NSW, Victoria and South Australia all experienced a deep lull in wind output simultaneously. This challenges the intuitive notion that the pooling of resources across borders substantially reduces the cost of providing storage or firm generation.

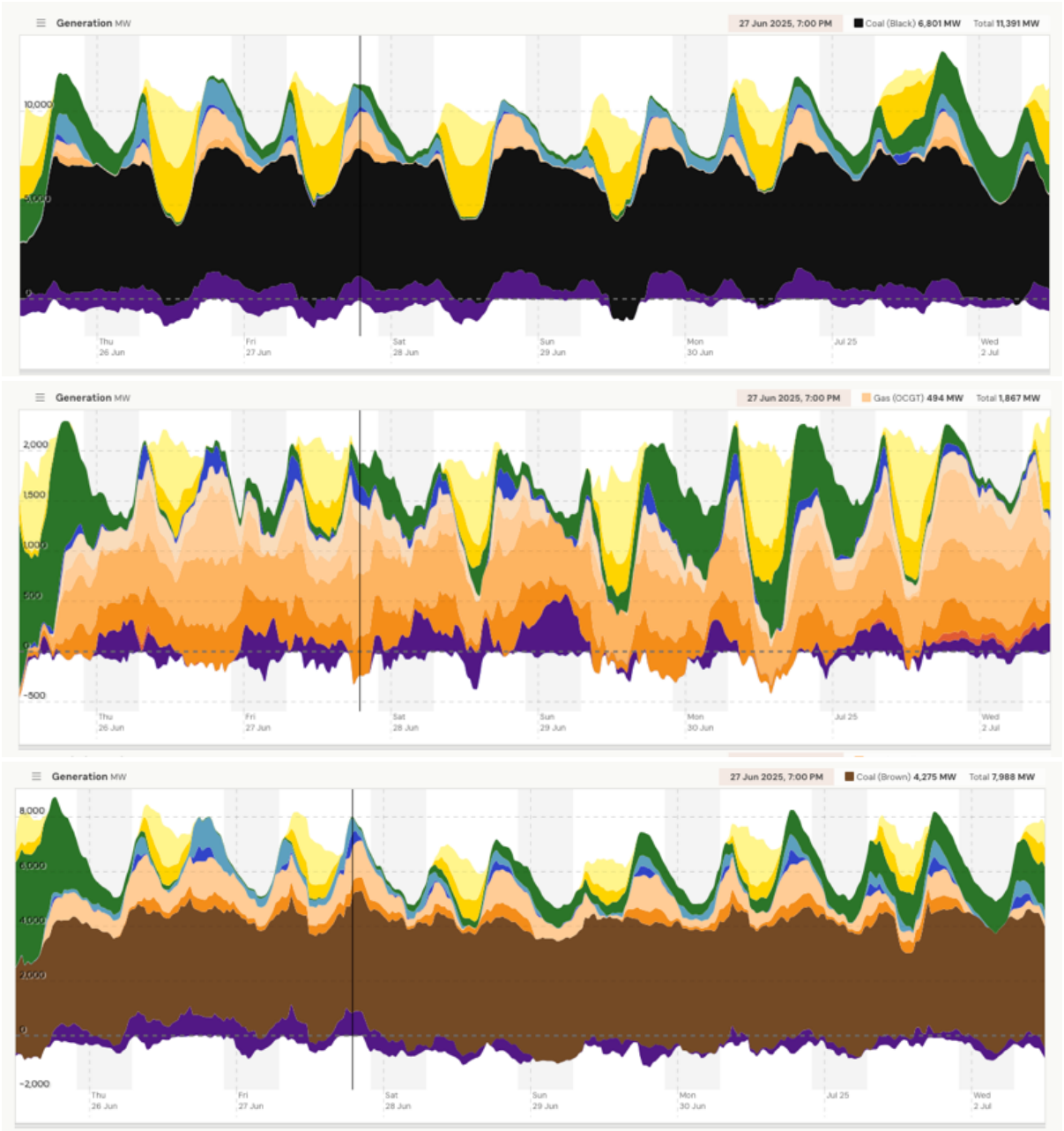

Figure 1: Week of 27 June 2025, showing NSW generation dominated by black coal (top) South Australia dominated by gas (middle) and Victoria dominated by brown coal and gas (bottom). Wind output was substantially depressed across all three states for about a week.

This phenomenon was quantified and highlighted by Global Power Energy, which noted that there were many days in 2024 when wind generation fell far below the 14% of capacity that was assumed by AEMO in its modelling of demanding conditions.[16]

The case of Project Energy Connect warrants special attention as a case study in interconnection, and the ISP process, since it was the first major interconnector included in the modelling.

This project was justified economically on the basis of a trade of contrasting but complementary energy generation capabilities. In particular, it was proposed that NSW's low-cost coal generation would displace high-cost gas generation in South Australia. In return South Australia would be able to export its surplus very-low marginal cost wind power to NSW.[17]

It is noteworthy that at the time this Project Assessment and Conclusions Report (PACR) was written, AEMO had just completed its inaugural Integrated System Plan, and on page 5 was referred to in support of the robustness of the findings. It concluded there would be the highest net benefits with the preferred option, and by implication that there clearly would be net benefits.

A number of changes were incorporated in energy policies, as well as a new estimated total cost of $2.3 billion. The revised proposal was subsequently approved by the AER.[18] At this revised cost the AER highlighted "that the net benefits remain finely balanced and there is a significant zone of uncertainty associated with the benefits". Preceding this comment on page 11 of the Determination, the regulator referred to the fact that the project was now listed as an Actionable Project in the 2020 Integrated System Plan. This is an example of the ISP process lending weight towards approval of a project that was 'finely balanced' at the then known costs.

In addition, the true cost of Project Energy Connect could have been substantially higher without government credit provided by the Clean Energy Finance Corporation. In an ASX release for Spark Infrastructure (part-owner of Transgrid), it is stated:[19]

> "We are delighted with the support received from the Australian Government's CEFC to get this important project across the line. Without it Transgrid's credit metrics would have been materially and negatively impacted such that EnergyConnect would have been unable to proceed".

Transgrid's own media release also highlighted how critical this government support was:[20]

> "The Transgrid's Board's investment decision came after it was able to partially resolve financeability issues for EnergyConnect, which challenge delivery of major regulated transmission projects in the NEM."

Transgrid has gone so far as to clarify that the structure of payment schedules, and the rate of return for regulatory investments made it impossible to invest in large-scale greenfield projects by submitting a rule change request,[21] which said:

> "Our analysis confirms that cash flows from PEC (and many other ISP projects) will be insufficient to support 60% debt funding at a BBB+ credit rating (or indeed an investment grade credit rating at all) for an extended period of time."

Finally, it was revealed in early 2025 that the cost of Project EnergyConnect had blown out to $4.1billion, almost doubling the total cost approved by the RIT-T. When Transgrid announced the cost increase, it had already entered into a new fixed-price contract with Elecnor in order to complete the project at the higher price. [22] Only recently has it been revealed that Transgrid does intend to request $1.1 billion in additional costs to be covered by consumers.[23] Despite assurances that independent modelling still shows net benefits to consumers,[24] this modelling has yet to be made public on the AER website.

Without seeing the revised modelling, it is difficult to see how Project EnergyConnect could be expected to have significant positive benefits at a price that is over double the initially estimated price.

Furthermore, it appears some emergent costs associated with PEC have never been fully incorporated into cost-benefit analyses. For example, AEMO has concluded consultation on the automation of negative residue management for the implementation of transmission loops. This has been undertaken specifically because it is expected that the transmission loop introduced by PEC will result in"the more frequent accrual of negative interregional settlement residues".[25]

In addition, there is increasing and serious network congestion in Southern NSW, in particular between Southern NSW and Central NSW, as well as between Central NSW and the Sydney, Wollongong and Newcastle area (ie Line 39). This is a consequence of the limited capacity for energy to move from the South to North into Sydney, since the grid was originally designed to have the vast majority of generation from coal coming from the North and West of Sydney.

With the addition of significant new wind farms in the Canberra/Yass area, the volume of electricity that can now be dispatched from South of Sydney has increased, and is already resulting in frequent counterprice flows, in particular on days of high demand.[26]

The potential for grid constraints was actually anticipated in the Methodology report for the original PACR Project EnergyConnect, where section 10.5 says:

> "Southern NSW between Wagga Wagga and Sydney is an intra-regional limitation on flows of the preferred option between NSW and Victoria. These constraints will also restrict the ability of the South Australia to NSW interconnector from accessing the Sydney load centre thereby restricting the benefits of the preferred option when flowing into NSW."

The PACR does model constraints via a series of outage and overload pairs. But goes on to say that:

> "The very rapid emergence of renewables along the path has not been accounted for in the economic models. Whilst material congestion is forecast to increase as the coal fleet retires, the rapid development of renewables along the corridor may hasten this congestion, bringing forward the future development of the Wagga to Sydney corridor."

As will be discussed in the following section, there are good reasons to believe that this constraint is already frequently binding, and won't be resolved for some time.

Assumption 3: Technical Optimisation Directing Coordinated Policy

This assumption about the potential for the ISP is the one which has collapsed the most spectacularly.

On December 5, 2024, Daniel Westerman (CEO of AEMO) told the Senate Select Committee on Energy Planning and Regulation in Australia:

> "The ISP is not a tool to evaluate government policy. It's a tool to say what needs to be delivered in order for that government policy to succeed."

This is a transparent admission of the inversion of the relationship between governments and the technical authority of AEMO which makes the ISP conceptually viable. Without any evaluation of government policy, a planning document cannot possibly claim to assist consumers by ensuring that developments are efficient.

As a result, there are many instances where the ISP process has tacitly enabled demonstrably bad investments to take place, or failed to assist in ensuring well co-ordinated and optimal investment.

Watarah Super Battery and Synchronous Condensers

For example, Matt Kean as NSW Minister of Energy made a declaration in October 2022 under the Electricity Infrastructure Act to order the construction of the Waratah Super Battery.[27] In doing so, he referenced the ISP as part of the justification (7 a) and made it clear what the WSB was intended to achieve:

> "The successful on-time delivery of the Waratah Super Battery Project is critical to the affordability, reliability, security and sustainability of electricity supply in NSW, given the planned closure of Eraring Power Station in 2025".

The Revenue Summary published by the AER also makes it explict that the intended purpose of the battery is to allow stable network operation with sufficient transfer into the Sydney, Newcastle Wollongong load centre after Eraring retires.[28]

However, the ISP hasn't made any assessment or evaluation of whether this is a sufficient or efficient way of achieving this goal. In the 2022 ISP, in declaring that the much larger Sydney Ring project is actionable, the ISP only says Waratah Super Battery is an example of virtual transmission, which it recommended be considered as an option.[29] The decision to proceed ultimately rested instead with the NSW Minister.

Ultimately, the prospect of Eraring being closed in 2025 was almost certainly implausible. This was made clear by public comments made by NSW Premier Chris Minns, who said in September 2025 that a group of expert energy economists audited the electricity grid after Labor won office in 2024[30]: "One of the things they told us in unambiguous terms is that we should be prepared to keep the Eraring coal-fired power station open for longer than anticipated... Some decisions keep you up at night, but I've got to say that this wasn't one of them."

On January 20, 2026, Origin Energy exercised an option obtained under the 2024 agreement with the NSW government to continue operating all four units of Eraring until 2029.[31] This second extension of Eraring isn't reflected or anticipated in the 2026 Draft ISP, just as the extension of Eraring to 2027 wasn't suggested or anticipated in the Draft 2024 ISP, or even reflected in the Final 2024 ISP. The ISP provided no guidance as to whether this closure was optimal, or even feasible, at any stage.

This raises the important question of whether the ISP process or AEMO could or should be capable of warning or informing policy makers whether their targets are unrealistic, including more realistic assumptions to help guide more efficient investments.

There is no doubt that AEMO possesses such skills and capabilities.

Data published by AEMO in the Medium Term Projected Assessment of System Adequacy (MT PASA) simulation runs between September 2025 and January 18, 2026 confirm there really was no chance of Eraring power station being closed in 2027 without severe reliability standard breaches occurring, up to 1000 times the unserved energy that would be permissible under the Interim Reliability Measure.

The simulation on January 20, the day the extension of Eraring to 2029 was announced, shows that this extension suddenly resolved the unserved energy problem many MT PASA simulations had consistently identified. This demonstrates that AEMO was capable of producing expert analysis which would challenge the feasibility of previously held targets that were assumed to be accomplished in previous Integrated System Plans.

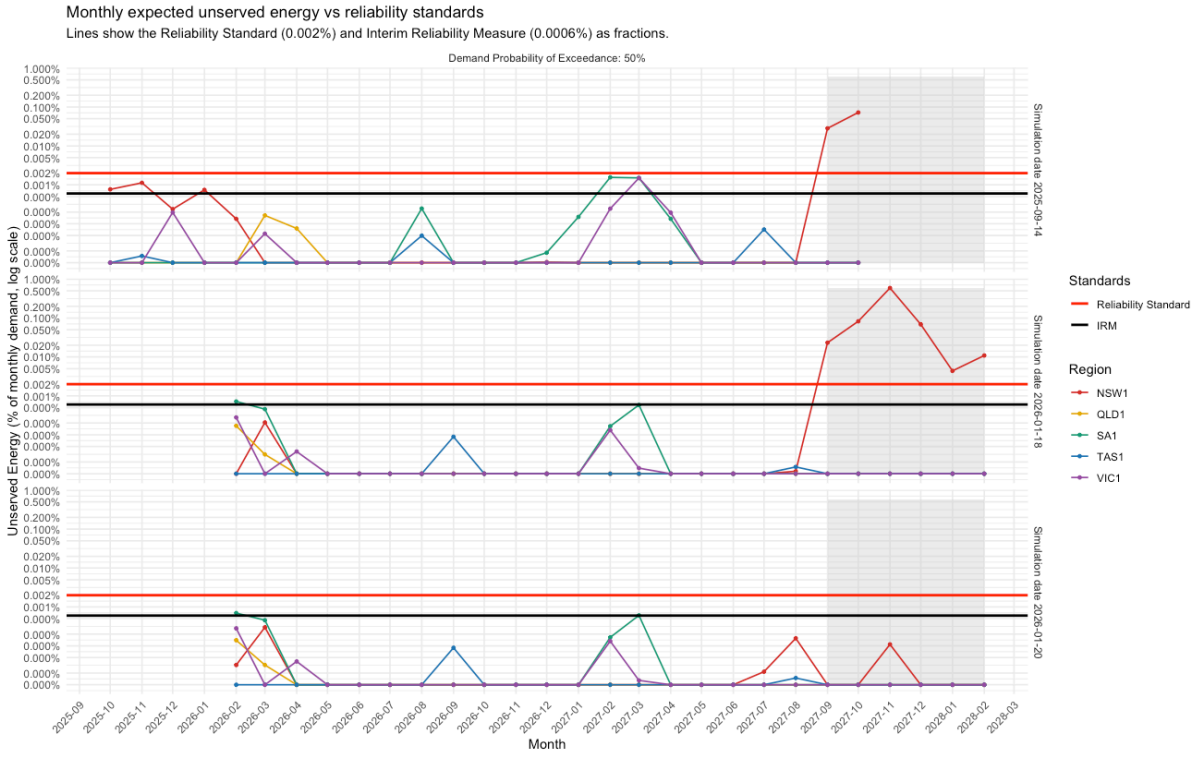

Figure 2: Selected MT PASA data on expected unserved energy relative to reliability standards

AEMO's position on the credibility or feasibility of government policies is now costing consumers substantial amounts of money. The Waratah Super Battery was procured via a 5.5 year service contract, almost all of which will now be for a period when Eraring is still operating, and the services are likely to be of negligible value to the grid.[32]

In addition, the NSW Energy Minister Penny Sharpe also made additional declarations driving investments through the EII Act for synchronous condensers on the assumption that Eraring would close in 2027.[33] Since making that declaration, the forecast shortfall in system security services would have been removed by the extension of Eraring.

The PACR for Meeting System Strength requirements in NSW lodged by Transgrid was disputed by CIS. One substantial ground of the dispute was the failure of the modelling to consider the extension of coal as a credible option.[34] The AER's determination in this dispute concluded that "whether or not coal extensions are credible depends on an analysis of their commercial feasibility" and went on to uphold Transgrid's claim that an extension of existing coal units was actually not commercially feasible.[35] Events since that time have proven that claim to be wrong, since Origin has extended Eraring without any further subsidy. Moreover, at the time of the determination, there were multiple of runs of MTPASA demonstrating massive breaches of the Reliability Standard after the scheduled closure of Eraring in 2027, which should further confirm the commercial feasibility of an extension.

If AEMO, through the ISP process, is incapable of being critical of government policies, or even simply realistic about the plausibility of them, then it cannot prevent premature investments, such as those in Waratah Super Battery, and the Synchronous Condensers recently ordered by Transgrid at the direction of Penny Sharpe.

The creation of Renewable Energy Zones by state governments is also another demonstration of the failure the ISP process to inform, optimise, or coordinate the investment. The experience of NSW provides examples.

<u>NSW Renewable Energy Zones</u>

In the 2020 Integrated System Plan, Central West Orana REZ was declared to be actionable, with an estimated cost of $675 million. Transgrid was directed to produce a PADR, in accordance with the national electricity rules. Yet Transgrid did not proceed with producing a PADR. The NSW government created its own parallel process for approving investments according to ministerial declarations through the Electricity Infrastructure Investment Act 2020, giving legislative force to a policy known as the 'Roadmap'.[36]

This has resulted in NSW government now approving expenditure on a plan for the REZ that is estimated at over $5.4 billion dollars in cost, prior to construction commencing, with a confidential determination that only has a 'Summary Report' published in order to protect the commercial confidentiality of the bids from competitive tenders.[37]

The decision to proceed with this project was initially made by politicians, rather than AEMO or any other technical authority, with then prime minister Scott Morrison and NSW Premier Gladys Berejiklian signing a Memorandum of Understanding in 2020 intending to have 'Pilot' project complete in 2022.[38]

The process for creating additional REZs has similarly been driven by political instincts rather than wholistic planning by a technical authority. For instance, when the New England REZ was initially declared at 8GW of network capacity, the NSW Energy Minister Matt Kean referred to expressions of interest from the market in the CWO Rez to justify the extreme size[39]:

> "The nine-fold level of interest in the Central West Orana REZ was astounding, so it makes absolute sense to go even bigger with the New England REZ."

Decisions such as these, however, become accepted as policy in the ISP process, and incorporated into the 'Optimal' development path.

For example, the 2020 ISP said that the CWO REZ (then estimated to cost $675 million) "is treated in this ISP as a 'no regret' investment option for consumers because the NSW and Commonwealth governments have committed to cover any costs in excess of benefits determined in the RIT-T stage".[40]In the latest Draft ISP, Appendix 5 states of the New England Rez:

> "This project is expected to progress under the Electricity Infrastructure Investment Act 2020 (NSW). The latest 2025 Infrastructure Investment Objectives Report modelling included a second stage (CNSW-NNSW Option 2 below) in the 20-year development pathway that best met New South Wales' legislated objectives for energy infrastructure. Only Stage 1 (both parts) is included in the proposed ODP in the Draft 2026 ISP and ongoing analysis and stakeholder engagement between now and June 2026 is needed to ascertain whether the second stage will optimise benefits to consumers in the 2026 ISP."

This now puts the ISP in the difficult position of potentially having to critique government policy, because the overbuild of an 8GW declaration of network capacity is so clearly excessive given the legislated intent to only have the equivalent amount of generation capacity installed. It even appears unclear whether the ISP process will support the development of even 6GW of capacity. However, because it is policy, the NSW government is still proceeding with plans to build a total of 6GW by 2035.[41] There consequently seems to be no effective

chance for the ISP to effectively optimise transmission corridor capacities connected to the NE REZ, such as QNI.

Project Energy Connect provides another example of the ISP failing to proactively coordinate or optimise investment.

Despite the RIT-T process approving the project with “finely balanced” costs and benefits, Transgrid quickly proceeded just months after the CPA approval to substantially alter the scope of the project by unilaterally proposing to upgrade a 165km section between Dinawan and Wagga Wagga to 500KV. This was announced as being an additional investment of $180million, undertaken with backing of the federal government, with a regulatory investment process to be undertaken later.[42] When the regulatory process was completed through the addition of this uprate to be part of Stage 1 (early works) for VNI West, the cost was estimated at $345 million[43].

This unilateral upgrade highlights again how ineffectual the ‘coordinating’ role of the Integrated System Plan was even then. As highlighted by Reach Solar in a submission to the Contingent Project Application, it would be complementary to Humelink for key sections to be upgraded to 500kV.[44] The potential for greater savings to be identified by anticipating and reducing the need for parallel lines by uprating strategic corridors should be precisely the function that an integrated plan should play. However, it was instead by unilateral decision of a transmission company, acting with the support of a government, that resolved to take the risk that the uprate would be beneficial, about two years before the cost benefit analyses associated with the second project (VNI West) determined that it would be worthwhile.

<u>Sydney Ring South</u>

The case of Sydney Ring South also illustrates a further significant failure of the ISP. Transgrid issued a significant submission to the Draft 2024 Integrated System Plan, arguing strongly for this project to be made actionable, in order to relieve anticipated congestion between Bannaby and Sydney.[45]

In the submission, Transgrid appears to have argued that steps should be taken to urgently advance development of a full 500KV link, including security the corridor, including saying on Page 19:

> “Securing easements for the designated teal corridor from near Greendale to South Creek will be crucial to developing Sydney Ring (South). This section of the corridor is located within the Western Sydney growth area, and land use pressures in this region have been progressively increasing, as evidenced by

> rising land values and a substantial increase in rezoning across the four impacted Local Government Areas. Delaying the development of Sydney Ring (South) introduces the risk that the preferred development corridor for the 500kV double circuit solution becomes no longer viable in its current form. A two-year delay to the 2026 ISP would coincide with the opening of Western Sydney Airport."

Yet the ISP only made the 'flow control' interim measure proposed by Transgrid actionable in the Final 2024 ISP, and directed Transgrid to produce a PADR for this option, according to the rules. However, Transgrid requested a 10-month extension to this process, which has essentially meant that no advance has been made on the regulator process for any Sydney Ring South project between ISPs, which according to Transgrid's submission on the 2024 draft imperils the prospect of alleviating congestion substantially until the mid 2030s. This has been noted as serious concern in the NSW Transmission Planning Review.[46]

Transgrid's submission also clearly questions whether the modelling undertaken by AEMO for the ISP is sufficient even to determine what the optimal development of Sydney Ring South, writing on page 9:

> "Transgrid appreciates and acknowledges work undertaken in the Draft 2024 ISP to model the CNSW to SNW (North) and CNSW to SNW (South) constraints. However, Transgrid notes that the interaction between load growth in Western Sydney and constraints from CNSW to SNW are a significant contributor to anticipated future network constraints."

Transgrid also writes on page 7 that AEMO should consider:

> "Aligning system planning models and approaches with current observations of the network, and the expectations of system operators. This includes reviewing how the ISP models power flows into SNW from central, southern and northern NSW, particularly under high demand conditions, and developing constraint equations that reflect contribution coefficients from generators and loads."

Again, this supports the idea that system constraints have emerged more quickly than AEMO's modelling in the ISP has been capable of anticipating.

In contrast to the NSW Minister's quick intervention under the EII act to accelerate the purchase of synchronous condensers, the NSW government has indicated no awareness of any issue with Sydney Ring South, and has placed complete faith the ISP process, saying: "AEMO's Final 2024 Integrated System Plan (ISP) and Draft 2026 ISP publications set out the need for the Sydney Ring

South project" in response to questions raising concerns about emerging congestion.[47]

These examples provide clear counterfactuals to the premise the ISP can provide an expert, independent coordinated plan that can guide the investment decision of various jurisdictions. The ISP is used to justify ministerial decisions and declarations (CWO REZ), even when it has leant them no support. It has not critiqued or pushed back on government policies that are fanciful or unrealistic (Waratah Super Battery). It does not pre-empt or anticipate opportunities for route and capacity harmonisation across projects (PEC and VNI West). And when it does direct Transmission Network Service Providers (TNSPs) to take action, they are inclined not to follow it (Sydney Ring South).

The Energy Security Board

The willingness of political leaders to reject advice given by experts who have been specifically invited to provide such advice is demonstrated by the fate of the Energy Security Board (ESB). The ESB had advocated for some time that a capacity scheme including coal and gas would be required to ensure reliability. This scheme was dubbed 'coal-keeper' by the renewable energy lobby. The ESB also advocated for some form of Locational Marginal Pricing, which would expose renewable energy developers to some of the costs of developing generation in locations that were inconvenient or costly for the grid. Both of these proposals were consistently advocated by the ESB when the membership of the ESB comprised only the current heads of the three market bodies, including Daniel Westerman of AEMO, Clare Savage of the AER, and Anna Collyer of the AEMC.[48] These proposals were opposed by the renewable energy council, particularly the Smart Energy Council.[49]

Ultimately, the ministerial council decided to reject advice given by expert bodies, comprising the heads of all market bodies including AEMO, by disbanding the Energy Security Board.[50] As clarified by Clare Savage before parliament,[51] senior officials from government departments were given the role of developing policy instead. Given this turn of events, there seems little prospect that technical authorities like AEMO will succeed, as the ISP envisions, in guiding politicians to make optimal investment decisions that cut across their political instincts.

This highlights a clear decision point about the ideal process of policy formation.

Either centralised bodies, comprising technical experts who sit outside of the direct political control of various jurisdictions, can produce policy guidance on the assumption that generally jurisdictional governments will broadly accept them. This would correspond to high-level policy being developed by a group like the

ESB, and specifically, more detailed planning by AEMO in a document like the Integrated System Plan.

Alternatively, the various governments can take more direct control of the development of policy according to their respective interests, utilising expertise within the departments that fall directly under their control. This is ultimately what has happened with state governments choosing their own Renewable Energy Zones, and the federally chaired Ministerial Council choosing to disband the ESB and return policy development back to senior officials.

What has ultimately happened represents a conflation of the two scenarios. Through the ISP, policy decisions of the various jurisdictions have been cloaked in the veil of objective and centralised expertise provided by the ISP. Consequently, we have neither direct political accountability through the democratic process, nor the expert guidance of our peak institutions. In this way, the ISP as it is currently implemented has become a barrier to good policy making and democratic accountability.

Question 3: Do you think the rules strike the right balance between prescription and flexibility for AEMO in developing the ISP?

If not, what would you recommend changing and why? What are the potential costs, benefits and implementation considerations of any changes?

No. We contend AEMO has interpreted one of the rules to be more prescriptive than a reasonable person would interpret it to be, for example government policy being locked into every scenario rather than simply being 'considered' as the rules stipulate. More prescription is needed around AEMO's responsibility to model a plausible, broad, and distinct range of scenarios to resolve the problem of its continued misinterpretation of the NER. The CIS' rule change request and submission provide further detail on these matters.

Question 4: Do you have views on how the economic assessment process applies to ISP projects and are there opportunities to improve it?

What are the potential costs, benefits and implementation considerations of any improvements? Do you think the framework sufficiently balances timeliness and

flexibility with rigour? Do you think the economic assessment process reforms included in TPIR are a useful basis for any improvements to the RIT-T? If not, why not?

TNSPs should not assess own costs and benefits

TNSPs should not assess the costs and benefits of their own projects, nor pay consultants to do the same, as they have a financial incentive to goal-seek the highest cost outcome for consumers rather than the lowest cost. This is a problem flagged by the NSW transmission planning review, which suggests putting in place an independent planner free from conflicts of interest:

> It will be more challenging to accelerate key planning decisions where they are made by a privately owned business that is also competing to provide the projects. There is likely to be greater scope to accelerate planning decisions where they are made by an independent planner that stakeholders have confidence is free from conflicts of interest or inefficient incentives.[52]

TOOT analysis is flawed

The take-one-out-at-a-time (TOOT) methodology used by AEMO is also flawed, as it treats the energy system as a collection of parts largely independent of one another rather than an integrated whole. The last link in a chain of projects will appear to have much higher value than it would if it were assessed as part of an integrated subsystem, which has resulted in projects being approved that were not in consumers' long-term interests. A better approach would be for AEMO to consider certain projects that are dependent on one another for their value as subsystems that should not be separated in a TOOT analysis. This approach ensures a proper understanding of the threshold of transmission cost increases that would make a project no longer viable. The CIS paper, *The six fundamental flaws underpinning the energy transition*, contains more analysis on this issue.[53]

States declaring projects biases cost-benefit analyses of related projects

State ministers can declare projects or order them to be fast-tracked, which then allows proponents of connected projects to treat the declared project as a sunk cost, despite the fact that none of the projects are yet built. As above with the TOOT analysis, this inflates project benefits above what they would be if the entire subsystem were included in the cost-benefit analysis. One example of this occurring is the case of VNI West and the Western Renewables Link project. The Victorian energy minister issued a ministerial order to progress AEMO's preferred option, which involved connecting VNI West to the planned Western Renewables

Link.[54] This then meant that Western Renewables Link was considered a sunk cost in the VNI West cost-benefit analysis,[55] and both VNI West and Western Renewables Link (as a part of the former) were considered sunk in the HumeLink cost-benefit analysis.[56]

Actionable window not functioning well

The current system means that the 'actionable window' grows by two years every time a project is considered actionable in an ISP. This means if a project was considered actionable in 2020, it will then have a four-year actionable window in 2022, a six-year actionable window in 2024 and an eight-year actionable window in 2026. This growth in the size of the window makes it almost impossible for projects not to be locked in, even if their modelled optimal timing ends up being much later than it originally was. This means a project may proceed despite substantial cost increases, increasing the risk of premature and over-investment.

CIS submits the actionable window should be kept at two years regardless of how many times a project has been deemed actionable.

Misuse of 'early works'

As discussed under Question 7, TNSPs have engaged in 'early works' in ways that have locked in the project for consumers, rather than increasing optionality as intended. This means projects are being locked in before an accurate cost benefit analysis has been performed. In a meeting between the AEMC and Transgrid, it was noted that "in practice the final investment decision is at or before CPA 1" and that it is "not realistic for a TNSP to decide to not proceed with a project at the end of CPA 2", as there is "too much reputational risk for a project to not proceed".[57]

CIS submits that 'early works' should not be used for activities that lock in the project but rather for activities that can help reveal potential cost increases which may make the project not worth proceeding with. This was one of the key recommendations of the Transmission Planning and Investment Review (TPIR), which recommended introducing "a NER definition of early works to underpin the AER's assessment of an early works CPA to protect consumers against inefficient expenditure".[58] However, the position of TNSPs that it is necessary to lock in projects before the CPA precludes this outcome, so this attitude requires change for the system to work as intended.

Question 5: What are your views on the ISP dispute resolution process?

Are there barriers to its use? Could potential issues be resolved through other consultation processes during the ISP development process?

Under the current rules, there are barriers which prevent consumers being able to challenge the ISP when it has not followed the rules. The ISP dispute resolution process covers only disputes around the consultation process and does not allow disputes on any other grounds. This means there is no avenue for parties to dispute the ISP on the grounds that AEMO has not met other requirements of the rules. CIS submits that the potential grounds for dispute should be broadened to include all aspects of the ISP and its drafting regulated in the rules in the long-term interests of consumers.

Question 6: Do you think the rules provide for meaningful stakeholder engagement to inform the development of the ISP?

Do you have views on the role and function of the ISP consumer panel? Does the increased scope of the ISP present challenges for stakeholder participation? If so, how could they be addressed? Are the transparency mechanisms in the rules still fit for purpose?

AEMC has stated: “Rigorous stakeholder engagement and consideration of industry expertise ensure the plan is robust and contributes to achieving the NEO”.[59] This is not the case, as AEMO ignores industry expertise and feedback from stakeholders insofar as there is any contradiction with current government policy. This means the ISP is not robust and is prevented from meeting every element of the NEO.

Question 7: Do you have views on the timeliness and quality of joint planning information provided to AEMO?

Are changes needed to improve the joint planning process? Is there duplication that could be addressed or streamlined?

Interaction between frameworks

The interaction between jurisdictional network planning arrangements and the ISP framework is not functioning well. There is a lack of clarity around whether jurisdictions or AEMO are responsible for advancing transmission projects. The final report of the NSW transmission planning review noted "some projects have moved between regimes" including the Hunter Transmission Project and synchronous condensers for Transgrid's Meeting System Strength Requirements in NSW project.[60] The review also flagged how the lack of clarity of responsibility has delayed the Sydney Ring South project:

> A similar decision may also need to be made soon on whether the Sydney Ring South project … remains under the NER or becomes an EII Act PNIP. Sydney Ring South was an actionable ISP project in the 2022 and 2024 ISPs and Transgrid has commenced preparatory activities for its planning under the NER. However, both the ISP and EnergyCo's NIS note that the project may be delivered under the NER or the EII Act. We note that the AER recently granted Transgrid an extension to the RIT-T process for Sydney Ring South so that a Project Assessment Draft Report is not due until 30 April 2026. This extension was granted to allow Transgrid additional time to explore and refine options, but means that the project is now running well behind schedule compared with the timing assumed in the ISP. We consider that the Sydney Ring South project is becoming increasingly urgent so that energy from the SW REZ, and from other states and Snowy via Energy Connect, VNI West and HumeLink, can reach the major load centres in Sydney, Newcastle and Wollongong and maintain reliability when coal-fired power stations close. Developing, consulting on and publishing criteria for assessing which projects are planned and delivered under the EII Act instead of the NER will provide much needed clarity on these issues.[61]

TNSPs withholding critical information

TNSPs are not providing timely cost information to AEMO critical to the cost-benefit analysis of multi-billion-dollar transmission projects. TNSPs are incentivised to withhold information for projects with marginal benefits because this helps ensure projects will get through the regulatory process and TNSPs will increase total profits, despite in some cases such projects providing negligible or negative benefits to consumers.

One example of the poor quality of cost information being provided to AEMO is the case of HumeLink. Transgrid only provided AEMO with information about the cost of the HumeLink project increasing to $4.9 billion in July 2023, before the final Transmission Expansion Options Report (TEOR) was published. As the

TEOR Consultation Summary Report notes, “An updated cost estimate for HumeLink was provided by Transgrid in July 2023”.[62] This was after the draft TEOR was published, which means the draft TEOR contains the old cost estimate of $3.3 billion.[63] However, Transgrid knew about the cost increases for HumeLink in February 2023, well before the publication of the draft TEOR in May 2023.

In a February 2023 letter regarding HumeLink, Transgrid agreed that “there appears to have been oversight on the historical adjustment for escalation” and that “rectifying this comparison will cause the overhead cost estimate to increase”.[64] In May 2023, Transgrid also flagged “unprecedented cost increases for labour and materials as well as significant extensions on lead times for critical equipment” as the reason for entering into “agreements with suppliers to purchase transformers and reactors” in February 2023.[65] Locking in agreements with suppliers made it easier to justify getting early works funding and made it much harder to stop HumeLink being approved if the cost increases wiped out the marginal benefits of the project.

The above suggests that Transgrid was aware of the cost increase for the HumeLink project well before the draft TEOR was published and chose not to share this information with AEMO. This hid the true cost of the project from AEMO and consumers and helped HumeLink clear regulatory hurdles despite not being in the long-term interests of consumers.

Joint planning is not working

Optimising a centrally planned system is difficult when it consists of a chain of transmission projects containing individual links over which individual states have control. Individual states will often make suboptimal decisions for the overall system when it comes to planning transmission projects, and the interaction between frameworks means that the long-term interests of consumers are not being served.

This is illustrated in the case of NSW, in which the jurisdictional planner EnergyCo has demonstrated a lack of competence in accurately determining the basic feasibility of transmission routes. EnergyCo made a key mistake in planning the transmission for the New England Renewable Energy Zone (REZ). New 500kV lines were planned along the existing transmission corridor but “the initial corridor crossed steep terrain which was difficult to access in parts” so the corridor was shifted into a valley of mostly prime agricultural land.[66] This was likely done because the large towers must be built using heavy-lift helicopters and cranes,[67] which carries a high arcing risk near existing lines, making it too dangerous to build near a live transmission line.[68] The original project was

therefore practically unbuildable. Yet EnergyCo did not discover this in the two years it spent on route assessment prior to publishing the original unbuildable Preferred Study Corridor.[69] Changing routes will almost always substantially impact costs, which means EnergyCo would have had no credible way of knowing accurate cost estimates prior to finalising the route.

State bodies being unable to provide accurate cost estimates for the projects they are responsible for creates a problem for attempting to centrally plan a cost-optimised transmission system with multiple links across multiple states. This further emphasises the point made above about how the original intention of the ISP has failed to bring about good planning outcomes for consumers and should be abandoned.

Question 8: Do you think the ISP framework is flexible enough to adapt to new information in a timely way?

Does AEMO have access to the necessary inputs to develop an ISP that is robust and resilient to changing circumstances? Are the existing ISP update clauses useful?

The ISP is not resilient to changing circumstances because AEMO has decided to fully constrain every scenario to current government policy. This means, even in instances where imminent government policy change is expected by most stakeholders, the ISP has been prevented from considering the most likely outcome. This does a disservice to consumers, as the ISP should be considering a range of outcomes based on their likelihood, rather than the range being constrained to only the outcomes the government desires. The CIS' rule change request and submission provide further detail on these matters.

Question 10: What reform(s) do you think the Commission should prioritise through the Review?

What are the costs, benefits and implementation considerations of any suggested reform(s)?

Reform of the treatment of government policy, as set out in CIS' rule change request, is critical and should be prioritised. As long as AEMO continues to model increasingly implausible government targets as accomplished fact, the ISP will

likely continue to deliver suboptimal outcomes for consumers, as the plan will reflect governments' desired reality rather than any future that is likely to occur.

Question 12: What do you think about our proposed assessment framework?

Do you agree with the proposed assessment criteria? Are there additional criteria that the Commission should consider or criteria included here that are not relevant?

CIS submits that an additional criterion should be added. Price of electricity has not been explicitly named as an assessment criterion, despite being a key objective in the NEO alongside aspects such as 'Safety, security and reliability' and 'Emissions reduction', which have been named as assessment criteria. The AEMC does reference cost in describing 'Safety, security and reliability': "We will consider whether our recommendations would enable the reliable, secure and safe provision of energy at an efficient cost to consumers over the long term".[70] However, such an oblique reference is not sufficient to ensure the ISP is contributing to system outcomes that deliver the lowest price to consumers while balancing other objectives. Price should be the first assessment criteria the AEMC uses to assess the ISP. If it is not included, consumers will not be able to trust AEMO and the ISP to be working in their best interest to deliver the lowest cost, reliable system.

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