public interest
ADVOCACY CENTRE

Submission to the AER Issues Paper - Guidelines to make the Integrated System Plan actionable

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About the Public Interest Advocacy Centre

The Public Interest Advocacy Centre (PIAC) is an independent, non-profit legal centre based in Sydney.

Established in 1982, PIAC tackles barriers to justice and fairness experienced by people who are vulnerable or facing disadvantage. We ensure basic rights are enjoyed across the community through legal assistance and strategic litigation, public policy development, communication and training.

Energy and Water Consumers' Advocacy Program

The Energy and Water Consumers' Advocacy Program (EWCAP) represents the interests of low-income and other residential consumers of electricity, gas and water in New South Wales. The program develops policy and advocates in the interests of low-income and other residential consumers in the NSW energy and water markets. PIAC receives input from a community-based reference group whose members include:

- NSW Council of Social Service;
- Combined Pensioners and Superannuants Association of NSW;
- Ethnic Communities Council NSW;
- Salvation Army;
- Physical Disability Council NSW;
- St Vincent de Paul NSW;
- Good Shepherd Microfinance;
- Affiliated Residential Park Residents Association NSW;
- Tenants Union;
- Solar Citizens; and
- The Sydney Alliance.

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Introduction

The current regulatory framework is designed to deliver efficiency of incremental investment to a centralised generation and transmission system which has already been 'built out'. The National Energy Market (NEM) is in a period of rapid and fundamental transformation from an energy system relying primarily on centralised, fossil-fuel generation with passive demand, to one with a low- or zero-emission generation fleet interacting with more sophisticated and active demand-side behaviour.

If not planned for and managed well, this transition may result in an inefficient electricity system and a slow and non-optimised emissions reduction pathway, adding costs to a system that is already increasingly unaffordable for many residential, commercial and industrial consumers.

The AER and other stakeholders have an important role to play in aiding the understanding of what is and is not economically efficient and in the long-term interests of consumers. In addition, PIAC considers it beneficial if the AER, as an expert regulator, has a formal role in ensuring the economic efficiency of the ISP development path, to ensure it is prudent and in the long-term interests of consumers. Given the strategic importance of ISP projects to meeting affordability, emissions and reliability goals, the AER's contribution would build trust in both the process and outcome of the ISP, and hence assist the timely delivery of an efficient development path.

PIAC considers that the AER, as an expert regulator, is well placed to do this through the development of these guidelines, the dispute resolution process and an independent assessment of elements of the ISP.

Principles for risk allocation and cost recovery

Given the need for investment in new generation and networks to deliver an ISP's optimal development path, it is essential to determine appropriate risk allocation and cost recovery arrangements between industry and consumers.

PIAC considers risk should be borne by those best placed to manage it. Therefore, it is not appropriate for consumers to bear investment risk in its entirety for projects that alleviate physical constraints or to underwrite financial instruments to cover the financial impacts of curtailment.

Distinct from the allocation of risks, is the recovery of costs – noting that while the costs and risks are generally related, they are not necessarily the same.

PIAC's key principles for cost recovery are:

- That costs are recovered according to a beneficiary-pays framework, such that those who benefit from a given investment should also pay for that investment.

- Where there are multiple beneficiaries, the costs should be recovered proportionally to their share of the benefits.

- Where it is not practical and transparent to identify or measure the beneficiaries, a causer-pays principle should be used.

- Cost recovery should also include the risk, to the extent it exists, of the underutilisation of assets and hence asset stranding.

- Cross-subsidies, such as consumers in one region bearing the costs for transmission investments to benefit those in another region, should only be permitted where they are accepted by informed consumer feedback or are immaterially small.

Principles for forecasting

PIAC considers forecasting should be guided by the following principles:

- Forecast methodologies and inputs should be transparent and open to scrutiny by stakeholders.

- Forecast inputs and outputs should incorporate a range of scenarios to reflect degrees of confidence and uncertainty, rather than relying single scenarios. These degrees of confidence and certainty should be expressed in associated publications and communications.

- Forecasters should learn from the accuracy or otherwise of past forecasts by themselves and others. In particular, forecast methodology should seek to incorporate some form of 'error correction loop' – using the convergence or divergence of predicted and historical values in past forecasts as an input into future predictions, so that performance can improve over time.

Responses to consultation questions

Question 1

Do stakeholders agree with our proposed objective for the ISP guidelines?

The AER consultation paper proposes that:

> … the objective of the ISP guidelines is to provide certainty, transparency and accountability for AEMO, RIT–T proponents and stakeholders to promote:
> - ISPs that identify the optimal development path that optimises the net economic benefit to all those who produce, consume and transport electricity in the relevant market
> - RIT–Ts that identify the credible option that maximises the net economic benefit to all those who produce, consume and transport electricity in the relevant market
> - effective stakeholder consultation and engagement in the ISP and RIT–T processes.[1]

PIAC agrees that the guidelines must provide clarity, transparency and accountability, not only for AEMO and RIT-T proponents, but also for stakeholders such as consumer advocates. We also

[1] AER, *Guideline to make the Integrated System Plan actionable – Issues Paper*, November 2019, 16.

support facilitating effective stakeholder engagement in both the ISP and RIT-T processes as critical to the success of delivering the ISP overall.

However, we have concerns regarding the first and second dot points of the proposed objectives.

For consistency with the National Electricity Objective (NEO), the first point should refer to promoting an ISP that optimises and/or promotes the long-term interests of consumers (as defined in the NEO) rather than the net economic benefit of those who produce or transport electricity. The current wording implies that it may be appropriate for consumers to be exposed to a degree of inefficiency or investment risk that is inconsistent with their long-term interests.

If the ISP is to truly be a strategic, whole of system plan with at least a 20-year horizon, it is essential that this be in the interests of consumers first and foremost to ensure that all options to meet consumers' needs and wants are considered equally and fairly. The economic outcomes for producers and transporters must be an outworking of this and not an objective or target in itself.

The first and second dot points do not differentiate the objectives of the ISP guidelines from those of the existing RIT-T guidelines. PIAC considers this would be improved if the ISP objectives more explicitly referred to addressing some of the unique characteristics and challenges of projects which would make up an ISP including that:

- individual projects should, in combination with others, deliver a coherent, whole of system development path rather than being in isolation;

- ISP projects are more likely to require more complicated cost-, risk- and benefit-sharing across multiple regions that don't necessary align with how costs have traditionally been recovered; and

- the direct beneficiaries of many ISP projects may be new or existing generators rather than consumers, which does not necessarily align to the current risk allocation framework.

PIAC recommends the proposed objectives be amended such that ISP guidelines promote:

1. An ISP that identifies an optimal development path to meeting the long-term interests of consumers as defined in the NEO, and should not refer to the net economic benefit of those who produce or transport electricity;

2. RIT-Ts that identify credible options that help address the unique characteristics and challenges of strategic projects forming the ISP's whole of system development path; and

3. effective stakeholder consultation and engagement in the ISP and RIT–T processes.

Question 2

Do stakeholders agree with our proposed approach to flexibility and prescription for AEMO in the CBA guideline? Will this provide sufficient certainty and transparency to stakeholders?

PIAC supports the AER's proposed approach to classify cost-benefit analysis elements as either requirements, considerations or AEMO discretion as an appropriate framework to balance certainty and flexibility. The effectiveness of this, however, is heavily dependent on which particular elements are classified into each category and we look forward to continuing to engage with the AER and stakeholders on this.

Following from our principles for forecasting listed earlier, that the methodologies and inputs be transparent, PIAC recommends the AER's decisions to classify elements into each category be clearly described and subject to periodic review.

Question 3

What are stakeholders' views on our proposed approach to AEMO's development of inputs and assumptions? Are there additional principles we should consider?

As noted earlier in this submission, PIAC considers forecasting should be guided by the following principles:

- Forecast methodologies and inputs should be transparent and open to scrutiny by stakeholders.
- Forecast inputs and outputs should incorporate a range of scenarios to reflect degrees of confidence and uncertainty, rather than relying on single scenarios.
- Forecasters should learn from the accuracy or otherwise of past forecasts by themselves and others.

As such we support the AER's proposed approach to assessing AEMO's development of inputs and assumptions. However, we recommend the AER include a feedback and error-correction loop. This should occur not only in AEMO's forecasting methodology, but also into the AER's process for assessing AEMO's forecasting methodology.

Question 4

What are stakeholders' views on our proposed approach to AEMO's development of reasonable scenarios? Are there additional principles we should consider?

Forecasting in the energy market is inherently a probabilistic process and there is no single 'correct' answer in predicting the evolution of a complex system such as the NEM. Therefore, scenario analysis is a critical risk-management tool to guard against inefficient over- or under-investment.

PIAC considers the AER's high level approach described in the paper to be appropriate. However, further detail of how this will be implemented is important to determine how successful it will be. PIAC looks forward to exploring this issue further.

Question 5

What are stakeholders' views on our proposed CBA steps for the ISP? Are the amended steps from the RIT–T application guideline applicable to the ISP analysis? Are there particular areas where a worked example would be helpful in providing this guidance?

PIAC is generally supportive of the AER's proposed approach to assessing the ISP's cost benefit analysis methodology. However, we note that there are a number of unique characteristics and challenges of projects that would make up an ISP development path that are not present in other transmission projects such as:

- individual projects should, in combination with others, deliver a coherent, whole of system development path rather than being in isolation;
- ISP projects are more likely to require more complicated cost-, risk- and benefit-sharing across multiple regions that don't necessary align with how costs have traditionally been recovered; and
- the direct beneficiaries of many ISP projects may be new or existing generators rather than consumers, which does not necessarily align to the current risk allocation framework.

These differences must be considered and, to the extent they can, addressed in the ISP's cost benefit analysis process.

In particular, we recommend the ISP's cost benefit analysis methodology include analysis and consideration of the fairness and efficiency of both risk-allocation and cost-recovery of candidate ISP projects. We look forward to continuing to investigate this matter.

Question 6

What are stakeholders' views on our proposed approach to AEMO's selection of development paths for assessment? Are there additional principles we should consider?

We support the AER's initial view but note that, as part of the commercial considerations for selecting a set of development paths, the ISP also should consider the fairness and efficiency of both risk-allocation and cost-recovery. We look forward to continuing to investigate this with the AER and AEMO.

Question 7

What are stakeholders' views of characterising the ISP counterfactual development path? Should replacement and small augmentation expenditure be included or excluded?

The counterfactual must not be a defined as a 'do nothing at all' scenario, but rather as a BAU-scenario without major, strategic investments other than those already committed or likely to commit. Otherwise, as Biggar notes in advice on TransGrid's modelling for the Powering Sydney's Future project, 'the cost-benefit analysis becomes dominated by extremely large congestion costs later in the modelling period… [which is] not credible since some action would be taken to address them well before they reached astronomic levels.'[2] Such skewed modelling is unlikely to result in an accurate assessment of the most efficient solution.

Therefore, we support an ISP counterfactual or base case that contains replacement and small intra-regional augmentation which would reasonably be expected to progress in the absence of an ISP-like process. This approach should not be limited to network investment, but also extend to investments and retirements in centralised generation, decentralised generation, distribution network investment, consumer behaviour and the development of ancillary or supporting markets such as those for demand response.

Question 8

What are stakeholders' views on quantifying costs and market benefits? What market benefits do stakeholders consider need to be estimated using probabilities?

Given that AEMO is proposed to no longer be required to assign quantitative probabilities to each scenario, another mechanism is needed so as not to skew modelling results, in particular for High Impact Low Probability (HILP) events. We agree that assigning probabilities to specific events (such as a HILP) rather than market-wide scenarios may be one way to do this. However, it may be premature to prescribe a single method to do this or to preclude alternatives.

Therefore, PIAC recommends that the guidelines require AEMO to appropriately and defensibly temper the impacts of HILP or similar events in their modelling yet provide some flexibility for what mechanism they choose to do so. This is particularly important as alternatives to probability-weighting ISP scenarios are still being developed and consulted on.

PIAC strongly supports AEMO consulting on its methodology for valuing expected benefits and costs. We also support AEMO providing detailed breakdowns of the costs and benefits of each development path. This information is critical to ensure the transparency of AEMO's process and will assist stakeholders independently replicate and verify the ISP modelling.

Further, the ISP should specify where, for any given project, any one group of consumers may not be better off on balance of their share of costs and benefits. This might occur, for example:

- where the direct beneficiaries of a new Renewable Energy Zone are generators, and the consumers in a given region who are funding new shared transmission system investment may receive a portion of the market benefits that is less than their share of the cost; or

- where the cost of an interconnector to consumers in a given region outweighs the benefits to that group of consumers.

[2] Darryl Biggar, *An assessment of the modelling conducted by TransGrid and Ausgrid for the "Powering Sydney's Future" program*, May 2017, 2-3.

Question 9

What are stakeholders' views on whether and how AEMO should conduct sensitivity analysis in its ISP process?

Forecasting is inherently a probabilistic process and very rarely can any method produce a single 'correct' answer in predicting the future evolution of a complex system like the NEM. Rather, forecasters will develop a range or distribution of potential outcomes, and develop measures of confidence attached to each of those outcomes. We consider this probabilistic approach, which incorporates uncertainty into forecasting processes and their outputs, should typically be preferred to an approach which yields only one predicted outcome and does not capture the spread of potential scenarios.

PIAC understands that AEMO already largely takes this approach – for example, using Monte Carlo methods to simulate values such as Unserved Energy (USE) levels in each region a large number of times, then examining the distribution of these simulated values to gauge the likelihood of a 'reliability gap' occurring.[3] We consider there is value in considering further how confidence and uncertainty can be visually represented and otherwise communicated in a way that supports understanding by stakeholders.

In general, where a particular forecast result or input comprises a range of values rather than a single value (for example, the USE simulations described above), visual representation and commentary on that information should seek to depict the distribution of that range rather than (or at least in addition to) extracting a single instance. Depicting a single case risks conveying the erroneous impression that a one definitive outcome has been predicted, as opposed to a distribution of potential outcomes. This may cause stakeholders to over or underestimate the probability associated with particular scenarios, with negative consequences for decision-making.

Where for brevity or illustrative purposes a single number is provided or case depicted, we consider information should be provided as to how the range was reduced to that single value.

More broadly PIAC considers AEMO should continue seeking means to convey the uncertain nature of its forecasts in communications. Ideally measures of confidence and certainty would be incorporated into the 'headline' messaging, as well as in more technical documents. As well as better guiding market and policy responses, this would provide greater defensibility to forecasting approaches after the fact of any unforeseen event that attracts public attention.

We appreciate the challenge of conveying such complex information to a broad audience, support AEMO's existing efforts, and welcome opportunities to further explore how this might be achieved.

Question 10

What are stakeholders' views on our proposal to provide AEMO with the flexibility to choose its decision making approach(es) to determine the optimal development path, subject to consultation and justification? Does this satisfy the draft rules requirements

[3] AEMO, *Reliability Forecasting Methodology Issues Paper*, April 2019, 27.

and sufficiently mitigate the risks of over-investment, under-investment, premature or overdue investment?

See response to Questions 4, 7 and 9.

Question 11

What are stakeholders' views on our proposed approach to describing the identified need to be used by TNSPs in applying the RIT–T for an actionable ISP project?

We agree that the identified needs for an actionable ISP must be outcome-focussed and not pre-determine a particular solution or technology.

Question 12

What are stakeholders' views on how AEMO should take option value into account in the ISP, and TNSPs in RIT–Ts for actionable ISP projects?

Incorporating the option value of particular candidate projects, along with other processes such as scenario modelling and sensitivity analysis, is an essential tool to help mitigate the risk of inefficient over- and under-investment through the ISP development path. We look forward to engaging on this matter further as more detail is available on how option value and other modelling considerations are proposed to be incorporated into the AER's guidelines.

Question 13

What are stakeholders' views on our proposed guidance on non-network options in the CBA guideline?

It is essential that non-network options are included in the ISP to ensure it is truly a whole of system plan and delivers the most efficient development path.

However, consideration of non-network options must reflect the fact that the non-network options relevant at an ISP-level are likely to be different to those for many other RIT-Ts due to the larger scale and strategic nature of the system needs they are addressing.

Further, given the long planning horizon of ISP modelling, it is essential that modelling of non-network options be forward-looking and include the expected growth in size, capacity and sophistication of the market for non-network services in the future and not be unduly limited to responses AEMO may receive as part of consultation on the ISP.

As noted in our submission on the draft ISP Rules:

> … it is unclear whether non-network solutions could also be incorporated where it is not best delivered by a TNSP. In addition, it is not clear whether changes to regulatory and market settings such as a change to the wholesale market price settings or the Reliability Standard could also be considered as part of an ISP development path. PIAC considers that without

being able to consider options such as these, the ISP may miss out on delivering the full potential benefit to consumers.[4]

Question 14

What are stakeholders' views on our proposed approach to RIT–T application guidance for actionable ISP projects and non-ISP projects?

PIAC supports the AER's proposed approach and looks forward to further detail on the specific amendments to the existing RIT-T guideline for actionable ISP projects.

Question 15

What are stakeholders' views on what network development should be included in the base case of the RIT–T for actionable ISP and non-ISP projects? What are stakeholders' views on what generation (and other) development should be included in the base case of the RIT–T for actionable ISP and non-ISP projects?

We look forward to continuing to engage with the AER and AEMO on this matter. In particular PIAC considers AEMO's modelling of non-network options be forward-looking and include the expected growth in size, capacity and sophistication of the market for non-network services in the future and not be unduly limited to responses AEMO may receive as part of consultation on the ISP.

Question 16

What are stakeholders' views on the scenarios to be considered in RIT–Ts for actionable ISP projects? Would the 'feedback loop' help to overcome any misalignment between the ISP and RIT–T?

We look forward to continuing to engage with the AER and AEMO on this matter.

Question 17

What areas of the ISP do stakeholders require further transparency and/or consultation to engage effectively in the process?

The proposed ISP and RIT-T process aims to determine an optimal pathway for the system as a whole and then the optimal solution to each identified transmission project, respectively. However, determining the optimal solution to recover costs is not explicitly conducted in the current planning processes. Instead, it is implicit in the Rules for all regulated transmission investments and, therefore, is not on a project-specific basis.

This is insufficient for strategic projects as the regulatory framework was designed to deliver efficiency in incremental investments. As described in PIAC's submission to the AEMC's COGATI

[4] PIAC, *Submission to ESB on draft ISP rules*, January 2020, 5.

review, the misalignment of benefit accrual and cost recovery for strategic projects risks exacerbating the current affordability challenges facing many consumers in the NEM.[5]

PIAC recommends the ISP and subsequent RIT-Ts include analysis of how risks and costs are shared between different energy businesses and consumers, and between consumers in different regions. This can then be used to build trust in the fairness of the overall development path or to identify areas for intervention where the impacts may not be fair or equitable (such as the recovery of costs between regions being misaligned from the accrual of benefits, as noted in Question 8).

Question 18

What are stakeholders' views on our proposed guidance on dispute resolution in the RIT–T and ISP processes? What specific guidance on dispute resolution would stakeholders value?

PIAC agrees it is preferable for any problems or errors relating to the various elements of the ISP and its development to be raised and resolved as part of the ISP process itself rather than separately. However, as noted in our submission on the draft ISP Rules:

> … we do not support limiting grounds for dispute only to matters previously identified in submissions to AEMO (or an NSP) by the disputing party.
>
> There are many potential barriers which may prevent stakeholders from being aware of, or able to raise an issue in the ISP development or RIT-T consultation processes. The long-term interest of consumers is best supported by a merits-based assessment of issues, and the fact alone of a matter not being raised during the consultation process has no bearing on whether a disputed matter is one of merit.[6]

This position notwithstanding, we support the AER providing clear guidance on the matters and process for dispute resolution.

Question 19

Do stakeholders agree with our proposed approach to compliance and enforcement of the rules and binding guidelines?

No comment.

5 PIAC, *Submission to COGATI Access and Charging consultation paper*, April 2019.
6 PIAC, *Submission to ESB on draft ISP rules*, January 2020, 4.