



public interest
ADVOCACY CENTRE

Submission to the AER's draft RIT-T and RIT-D guidelines

14 September 2018

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.

Contact

Miyuru Ediriweera
Public Interest Advocacy Centre
Level 5, 175 Liverpool St
Sydney NSW 2000

T: (02) 8898 6525

E: mediriweera@piac.asn.au

Website: www.piac.asn.au



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1. The Regulatory Investment Test in context

1.1 The NEM in transition

The National Energy Market (NEM) is in the middle of a 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. The uncertainty in demand growth, the cost trajectories of new technologies and the potential for new ‘game-changing’ technologies will place a greater importance on the robustness of modelled outcomes and the optionality offered by certain solutions.

In order to fully unlock the benefits of this transition, some investment will be required in the transmission and distribution networks. At the same time, the NEM is also facing a crisis of affordability for many residential, commercial and industrial consumers. This creates tension between new investment to unlock the benefits of the future energy system and avoiding exacerbating the current affordability issues.

1.2 The RIT as a proposal to stakeholders

The Regulatory Investment Test (RIT), along with other planning and economic oversight processes in the Rules, plays an important role in balancing the competing interests of network investment and affordable electricity supply. It is intended to provide a transparent and robust way to ensure network service providers (NSPs) make prudent and efficient investment decisions in the long-term interests of consumers including an unbiased assessment of all network and non-network alternatives.

This is especially important given that, under the current regulatory framework, consumers bear all of the risk of inefficient network investment once the expenditure is approved.

With this in mind, PIAC considers that the RIT must be part of ongoing engagement between NSPs and stakeholders to prove that the investment being proposed is indeed in the long-term interests of consumers. As the Consumer Challenge Panel 20 (CCP20) noted in its earlier submission to this review, “the guidelines must move towards a more ‘customer centric’ process that ensures a more successful engagement with consumers and industry stakeholders.”¹

Recommendation 1

PIAC recommends that NSPs consider the RIT as part of ongoing engagement with stakeholders and as a proposal to consumers to demonstrate that the benefits to consumers from the proposed network investment.

1.3 The AER’s draft guidelines

PIAC strongly supports many of the proposed changes the Australian Energy Regulator (AER) has made to the RIT guidelines. We comment on opportunities to further strengthen the guidelines in Section 5 and raise other issues related to the application of the RIT guidelines in the current regulatory framework in Sections 2 to 4.

¹ CCP20, *Final Response to the RIT Issues Paper*, April 2018, p 3.

2. Network cost-allocation

2.1 Misalignment of cost-benefit analysis and cost recovery

A fundamental issue with the regulatory framework as it currently stands is the misalignment between the evaluation of costs and benefits during the RIT process and the way in which costs are recovered once the expenditure is approved.

The RIT is designed as a NEM-wide cost-benefit analysis. As a result, the modelling is insensitive to where in the NEM these costs or benefits occur – it only considers the total costs and total expected benefits across all consumers throughout the NEM. This is in contrast to the way that costs are recovered through network costs which are primarily based on where the network expenditure occurred.²

For many projects, this may not be a significant issue as the expected benefits from a particular investment accrue exclusively to consumers within the network's jurisdiction. However, this is not necessarily the case for investments on interconnectors, major flow paths and projects closer to the borders between meshed network jurisdictions. In these cases, a significant proportion (even the majority) of benefits may accrue to another jurisdiction.

This misalignment effectively means that one set of consumers may be paying for the benefits received by a different set of consumers. This is counter to one of the fundamental principles of the NEM which is cost-reflectivity. Further, if the misalignment between costs and benefits is large, a particular project may actually have a negative net economic benefit (i.e. an overall detriment) for consumers in one network's jurisdiction despite being positive NEM-wide.

Recommendation 2

PIAC recommends that RIT proponents must consider the division of costs and expected benefits between different consumer groups rather than purely in aggregate to ensure there are no significant instances of cross-subsidisation or inequity between these consumer groups.

Example: the South Australia Energy Transformation RIT-T

The issues described above are exemplified by the current RIT-T process being undertaken by ElectraNet (and supported by TransGrid) on their SA Energy Transformation RIT-T. Following their modelling of multiple credible options, ElectraNet's preferred option was a 330kV interconnector from South Australia to Wagga Wagga in NSW (option C3i).

Putting to one side the questions raised by PIAC and other stakeholders regarding the magnitude and likelihood of the expected benefits to consumers, the preferred option has a disproportionate split of costs and expected benefits between SA and NSW. As noted in analysis done by The Energy Project, the expected benefits from the preferred option is split approximately 60% to SA consumers and 40% to NSW consumers.³ This is in contrast to the costs which are borne 27% by SA and 73% by NSW consumers. This is summarised in Table 1.

² There are mechanisms in place to apply network costs across network jurisdictions. However, as discussed in Section 2.2, we consider the effectiveness of these in certain cases to be marginal.

³ The Energy Project, *Submission: SA Energy Transformation RIT-T Project Assessment Draft Report*, pp 15-16.

Table 1 Summary of costs and benefits to NSW and SA consumers from the preferred option

	NSW consumers	SA consumers
Costs borne (ElectraNet modelling)	73% (\$1,100 M)	27% (\$400 M)
Expected benefits accrued (ElectraNet modelling)	40% (\$556 M)	60% (\$831 M)

Further, PIAC contends that while the costs are relatively fixed and predictable, the expected benefits, particularly those calculated for NSW consumers, are relatively variable given they are contingent on a number of different factors.

As we noted in our submission to ElectraNet's PADR, PIAC considers this misalignment between the cost-benefit analysis and the cost recovery to be a limitation of the current RIT-T design and is detrimental to the long-term interests of consumers. This is especially true with the upcoming focus on interconnector expenditure, as in AEMO's Integrated System Plan (ISP).

2.2 Limitations of inter-regional network charging

It must be noted that there are mechanisms in place which allow some costs to be transferred across network boundaries, such as inter-regional transmission charging. However, PIAC understands that these mechanisms may be better suited to network investments where a minor portion of incurred costs need to be recovered from an adjacent region. They do not appear to be suited to cases where a significant portion of the incurred costs need to be recovered from another region as may be the case with building new interconnectors (such as the SA to NSW interconnector described above) or upgrading existing interconnectors.

Recommendation 3

PIAC recommends the AER and AEMC review the arrangements allowing networks to allocate costs to an adjacent network to ensure they remain appropriate where significant benefits from an investment accrue in the neighbouring region.

3. RIT-T and ISP projects

AEMO's Integrated System Plan (ISP) sets out a number of transmission projects for the NEM following optimisation of the size, location and timing of potential options. These projects are arranged into three groups based on the optimised time for the project. It is apparent that there is an intersection between what the ISP has modelled as the preferred plan and the role of the RIT-T.

As we noted in our earlier submission, "it is essential that the ISP and RIT-T processes and content are aligned to ensure there is consistency and oversight of the transmission planning and investment decisions, while also ensuring there is no unnecessary duplication of effort which can lead to delays, costs and uncertainty."⁴

While we maintain our position that there must be greater alignment between the ISP and RIT-Ts, it is important to note that the ISP and RIT-T perform two similar yet different functions to achieve

⁴ PIAC, [Submission to RIT application guideline review Issues Paper](#), April 2018, p 8.

the long-term interests of consumers. The ISP models the most efficient system for the whole of the NEM at a high level, based upon the best available information and assumptions at the time. The ISP outcomes are limited by the difficulty for stakeholders to actively debate the detailed assumptions and modelling for a particular project and the ISP process may be unable to respond to rapid developments in the industry.

On the other hand, the RIT-T examines the most cost-efficient solution to a particular identified need. As a result, it is better able to examine alternative options (including deferred timing) in greater detail than the ISP and drives more active discussion with stakeholders. It also requires the proponent to articulate the issue to be addressed and the risks involved (i.e. the identified need) in terms of impacts on consumers rather than purely a system optimisation exercise. This process helps to tie the proposed expenditure more directly to the long-term interests of consumers. Further, by delving into greater depth and timing, this should be able to use more accurate modelling information and assumptions than the ISP for each discrete project.

PIAC supports the AER's proposal in its RIT-T worked example 5 that the proponent consider the detail and timing of projects in AEMO's network development path through scenario analysis rather than by including it in the base case.⁵ This reflects the fact that these projects are not committed and would require RIT-T or another regulatory approval to proceed. If a proponent were to consider these projects as part of the base case this would equate to assuming that the individual projects which make up the network development path all provide net benefits, pre-empting the possibility of finding that they do not provide net benefits. This is circular logic and skews the result of the RIT-T modelling: conducting a cost-benefit analysis under the assumption that the project in question provides net benefits.

Recommendation 4

PIAC recommends that the ISP be better aligned with the RIT-T but not completely replace the need to conduct a RIT-T – such as by using the ISP as a starting point for modelling. However, this must not abrogate the proponent's responsibility to select inputs, use the most up-to-date information available and conduct modelling which is both appropriate and proportionate to the identified need.

Recommendation 5

PIAC recommends that RIT proponents not take the ISP's network development path as part of the base case. Rather we recommend it be considered as part of reasonable future scenarios.

A number of stakeholders have also noted that the requirement to do a RIT-T may hamper meeting the timeline suggested in the ISP for Group 1 and 2 projects. If this is the case, PIAC suggests that exemptions from conducting a RIT-T, or portions of a RIT-T, should be granted on a case-by-case basis rather than as a blanket determination. This is particularly important as further refinements to AEMO's ISP modelling processes in subsequent editions may materially change the size, location and timing of ISP projects.

⁵ AER, *Draft regulatory investment test for transmission application guidelines*, July 2018, pp 18-19.

Recommendation 6

PIAC recommends that, if exemptions from any RIT-T obligations for ISP projects are to be provided, they only occur on a case-by-case basis.

4. Renewable Energy Zones

Renewable Energy Zones (REZ) represent a significant departure from the majority of transmission investment in the NEM. This is because it is speculative investment to facilitate new generation connection. Consumer-funded transmission investments to date have primarily been to meet new forecast load. PIAC does not consider the current regulatory framework for funding transmission investments are appropriate for REZs. Under the current framework, such investments would be funded by consumers through prescribed transmission services whereas the direct benefits of the network investment to facilitate the REZ accrue to the connecting generators. This is also complicated by the speculative nature of the investment as, under the current framework, consumers would be left to pay for the network investment regardless of whether or not the prospective generators connect.

Recommendation 7

PIAC recommends that Renewable Energy Zones should not be fully underwritten by consumers. Instead, we suggest that generators, governments or network businesses should underwrite at least part of these assets.

5. Responses to AER’s explanatory statement and draft guidelines

Explanatory statement chapter	Comments
4 The RITs in promoting the NEO	<ul style="list-style-type: none"> PIAC supports the AER’s framing of how the RIT contributes to meeting the National Electricity Objective (NEO). In particular, we support the point raised in our earlier submission that while the RIT does promote competitive neutrality, it should only pursue this as a means of achieving the NEO rather than a goal in itself.
5.1 When does the RIT apply?	<ul style="list-style-type: none"> PIAC maintains its earlier position and supports the AER’s position that the relevant cost threshold for whether a RIT is required or not is the amount the NSP would fund through its regulated revenue (i.e.: prescribed transmission services for TNSPs and direct control services for DNSPs). In other words, other sources such as co-contributions from generators or governments should offset the total project cost for the purposes of checking the RIT cost thresholds. We consider the purpose of the RIT cost thresholds to be an initial threshold question regarding the amount consumers have at risk via the RAB and hence whether it warrants the additional scrutiny and rigour of undertaking a RIT. We do not consider that there necessarily needs to be consistency between the treatment of external funding at this initial threshold stage and in the cost-benefit analysis once a RIT has commenced. This is also discussed in our response to 6.5 Accounting for external funds in this table.
5.2 Consumer and non-network engagement in the RITs	<ul style="list-style-type: none"> PIAC supports the principle of requiring greater, more meaningful engagement with stakeholders. As noted in Section 1.2, we consider NSPs should use the RIT process as part of ongoing engagement of their stakeholders to prove that the investments being proposed are in the long-term interests of consumers. In order to achieve this, it is essential that the modelling underpinning the RIT must be able to be scrutinised. We recommend the Guidelines require NSPs to share detailed modelling, inputs and assumptions with interested stakeholders. We note that potential confidentiality concerns should not be a barrier to this as sensitive data can be anonymised and/or shared on a confidential basis.
5.3 Aligning the different RIT processes	<ul style="list-style-type: none"> No comment

5.4 Cancellation of RIT assessments	<ul style="list-style-type: none"> • No comment
6.1 Identified need	<ul style="list-style-type: none"> • We note the importance of defining the identified need as it sets the basis for the entire cost-benefit analysis. As such, we agree with the AER’s concerns that it must not favour or preclude certain credible options. • PIAC supports the principles put forward by the AER to guide NSPs in expressing the identified need (section 3.1 of the AER’s RIT-T and RIT-D draft guidelines). However, we question why these principles appear to be inconsistent between the RIT-T and RIT-D. We do not see any need for these to be different and would encourage consistency between the two guidelines where possible. • Further, PIAC supports the proposal from the Consumer Challenge Panel to include a hold point early in the RIT process to ensure the identified need is appropriately stated.⁶ However, we question whether it is sufficient to do this after the first report is published. We recommend the AER consider whether this hold point should be done prior to the first report – such as part of the annual planning reports published by NSPs.
6.2 Option value	<ul style="list-style-type: none"> • PIAC supports including more guidance and in-depth worked example on option values.
6.3 Scenario value	<ul style="list-style-type: none"> • PIAC supports the proposed principles to guide scenario development – in particular the guidance provided in section 3.8.1 of the draft guidelines which gives examples of some of the NEM developments any RIT proponent must be mindful of when developing scenarios. • We also agree with the AER that the number and choice of reasonable scenarios should vary depending on the particular type and scale of the credible options included in a RIT process. • As noted in Section 3, we do not support including the network development path outlined in the ISP as part of the base case for RIT modelling.
6.4 Replacement projects and forming a base case	<ul style="list-style-type: none"> • PIAC supports the AER’s direction on treating replacement expenditure. • In particular, PIAC supports clarification that the base case must be a credible option which includes expenditure which “meets legal obligations or is consistent with efficient industry practice.”⁷ As noted in our earlier submission, it is essential that the base case be defined in terms of a ‘business as usual’ outcome rather than ‘do nothing at all.’⁸

⁶ AER, *Explanatory statement*, July 2018, p 55.

⁷ AER, *Explanatory statement*, July 2018, p 29.

⁸ PIAC, [Submission to RIT application guideline review Issues Paper](#), April 2018, p 6.

	<ul style="list-style-type: none"> • We also note that additional guidance would be beneficial regarding the definition and treatment of replacement programs (as opposed to separate replacement or refurbishment projects) to help provide consistency between network businesses. • We look forward to the AER’s application note on asset replacement costs providing more detailed guidance on these matters.
<p>6.5 Accounting for external funds when applying RITs</p>	<ul style="list-style-type: none"> • PIAC supports the AER’s position that funds will be treated differently in the cost-benefit analysis of a RIT depending on whether they come from a registered participant within the NEM (such as a generator or another NSP) or from a party outside of the NEM (such as a government). • In this understanding, funding from a registered participant within the NEM would still be included in the RIT cost-benefit analysis as it would ultimately be recovered via consumers’ electricity bills. On the other hand, funding from outside the NEM would effectively improve the cost-benefit of the option as a smaller portion of the total project cost would be recovered via consumers’ electricity bills. • For example, if a generator were to co-fund an option by \$10m, this would part of the generator’s cost of business and ultimately recovered from consumers. Conversely, if that same \$10m of funding were to come from a government co-contribution, this would not be recovered via consumers’ electricity bills but instead via tax base. An important difference between these two methods is that government revenue raised via a progressive tax system recovers costs far more equitably as it considers a households’ ability to pay unlike recovery through electricity bills which currently have little if any regard to an individual households’ ability to pay. • We also note that the RIT is set up as a NEM-wide test rather than an economy-wide test. If external funds were to negatively affect an option’s cost-benefit, then it would follow that any external benefits (e.g.: creating jobs, releasing natural gas capacity for use in industrial processes) derived as a result of the option should improve the cost-benefit. We do not consider it appropriate that an NSP or the AER should be approving investments based on whole-of-economy cost-benefit analyses as that is the purview of governments. • As noted earlier in our response to 5.1 When does the RIT apply?, we do not consider that there necessarily needs to be consistency between the treatment of external funding at the initial threshold stage (to determine whether to conduct a RIT) and in the cost-benefit analysis once a RIT has commenced.
<p>6.6 Treatment of high impact, low probability events</p>	<ul style="list-style-type: none"> • PIAC supports the proposed method of accounting for High Impact, Low Probability (HILP) events through an appropriately probability-weighted scenario.

	<ul style="list-style-type: none"> • We strongly oppose suggestions that HILP events should be weighted higher than their probability – essentially using an uplift factor. This risks leading to a very opaque methodology and may allow RIT proponents to reverse engineer an uplift factor to arrive at a particular outcome. This would pervert the core purpose of a RIT which is to transparently determine the most efficient solution to an identified need. • We appreciate that a HILP event, due to their very nature, may lead to a greater impact on consumers than other credible events – e.g.: with respect to the duration and geographical spread of an outage. Therefore, we support RIT proponents having the discretion to select a VCR which reflects these different impacts in a transparent and defensible way. Some of the range of factors to consider in transparently selecting a VCR value are outlined in our response to 6.9 Value of Customer Reliability in this table. In justifying the selection of VCR values, the RIT proponent’s decision must be transparent, must be backed up with supporting evidence and must be discussed meaningfully with stakeholders early in the process. • PIAC also stresses that the HILP event and scenario analysis must be credible and reasonable. For example, the HILP event itself must be based on business-as-usual and efficient industry responses to the events and not based on ‘do nothing at all.’ Otherwise, as Biggar notes, “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.”⁹ Such skewed modelling is unlikely to result in an accurate assessment of the most efficient solution. • For example, we do not consider it credible to include the complete and continuous loss of supply for six months in the cost benefit study. This is particularly if there are high levels of redundancy in the network including multiple supply points and the network meets the relevant supply standards.
6.7 Environmental policy and the NEG	<ul style="list-style-type: none"> • No comment
6.8 Discount rate and treatment of risks	<ul style="list-style-type: none"> • PIAC supports the AER’s proposal to use same discount rate for all options but allow NSPs the flexibility to justify the need to use different one for particular options.
6.9 Value of Customer Reliability	<ul style="list-style-type: none"> • PIAC supports the AER including greater guidance on the appropriate selection of VCR values, the use of scenarios with different VCR values and the use of sensitivity testing. • We also support the AER requiring RIT proponents to use VCR values from an independent expert and developed using a transparent, fit-for-purpose methodology and that any

⁹ Darryl Biggar, *An assessment of the modelling conducted by TransGrid and Ausgrid for the “Powering Sydney’s Future” program*, May 2017, pp 2-3.

excursion from this must be clearly justified by the proponent. In justifying the selection of VCR values, the RIT proponent's decision must be transparent, must be backed up with supporting evidence and must be discussed meaningfully with stakeholders early in the process.

- We note that the selection of an appropriate VCR value will be important for transparently and defensibly considering HILP events as described in 6.6 Treatment of high impact, low probability events of this table.
- PIAC considers that the VCR value used in modelling must be appropriate to the nature of the event being modelled as opposed to a single one-size-fits-all approach. In general, a robust VCR methodology must transparently account for a broad range of factors including, but not limited to:
 - The season and time of day in which the outage occurs;
 - The duration and geographic breadth of the outage;
 - Consumers' experience of outages from a whole-of-system perspective, with weighting according to where in the system most outages experienced occur;¹⁰
 - Consumers' willingness to pay to maintain or improve reliability levels;
 - Consumers' willingness to accept current or lower reliability levels in return for lower costs;
 - Consumers' willingness to implement demand response (i.e. the value of 'partial' reliability), noting that research and the experience in NSW has suggested many consumers may be willing to do demand response without payment;¹¹
 - The different costs of substitution and levels of expectation for various consumer groups;
 - Alternatives to price/reliability trade-offs for managing reliability. For example, people are more accepting of outages if they have better information about when the outage will occur, the cause of the outage, and estimates of when supply is expected to come back on; and
 - Consumer biases that may influence their response to questions about willingness to pay or accept. For example, the bias of 'Uncertainty aversion' has been shown to affect the consumer response to surveys on VCR. Uncertainty aversion could be accounted for by weighting the analysis according to respondents' experience of outages and ensuring minimum quotas of exposure to different outages.

¹⁰ The AEMC's [2017 Annual Market Performance Review](#) found that 97.2% of supply interruptions occurred in the distribution network, 0.93% occurred in the transmission network and only 1.85% occurred due to wholesale reliability and system security issues.

¹¹ In February 2017, residential and business consumers voluntarily reduced their consumption in response to high demand driven by extreme weather conditions. These consumers were not explicitly compensated for their actions. < <https://www.aemo.com.au/Media-Centre/NSW-Electricity-supply-demand-update> >

7 Integrated System Plan

- PIAC's comments on the interaction of the RIT and ISP are provided in greater detail in Sections 3 RIT-T and ISP projects and Section 4 Renewable Energy Zones.
- PIAC recommends that the ISP be better aligned with the RIT-T but not completely replace the need to conduct a RIT-T. This could be done by using the ISP as a starting point for RIT modelling including inputs, assumptions, scenarios, sensitivities.
- However, this must not abrogate the RIT proponent's responsibility to select inputs, use the most up-to-date information available and conduct modelling which is both appropriate and proportionate to the identified need.
- PIAC recommends that, exemptions from any RIT-T obligations for ISP projects are to be provided, they only occur on a case-by-case basis rather than by a blanket determination.
- PIAC recommends that Renewable Energy Zones should not be fully underwritten by consumers. Instead, we suggest that generators, governments or network businesses should underwrite at least part of these assets.

8.1 New classes of market benefits

- No comment