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Review of gas distribution network reference tariff variation mechanism and declining block tariffs

This submission responds to the issues paper recently published by the Australian Energy Regulator (AER) examining the ongoing use of weighted average price caps and declining block tariffs in gas network price determinations.[1]

The views expressed in this submission are those of the author and not the Monash Business School or its staff. This submission contains no matters of a confidential nature. It can be published in full on the AER's website.

1. Introduction: Emerging disruptions

The energy transition is creating many fundamental challenges for the regulatory frameworks which have governed network expenditure, investment and prices in the provision of electricity and gas services for almost 30 years. In fact, decarbonisation of the energy system is not only 'challenging' these regulatory frameworks, it is aggressively undermining the foundations upon which these frameworks presume to sit.

Over the past 18 months, the Australian Energy Regulator (AER) has published two papers highlighting (perhaps inadvertently) the inability of the regulatory framework to address the disruptions now unfolding as part of the energy transition.

[1] AER, *Review of gas distribution network reference tariff variation mechanism and declining block tariffs. Issues paper for stakeholder feedback.* May 2023

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In November 2021, the AER published an information paper exploring how it might respond to the increasing likelihood that entire gas networks may face stranding.[2] Unfortunately, that paper resolved none of the systemic issues it raised. Instead, the AER deferred the problem to the Victorian gas networks to solve. They were invited to propose their own solutions in their upcoming regulatory reset proposals. Consumers were directed to engage with the individual networks' regulatory processes if they had concerns.

When those submissions came forward a few months later, the AER was bereft of a conceptual framework for addressing the networks' claims for accelerated depreciation. Nonetheless, it conducted a few rounds of public consultation on the networks' proposals. The AER encountered strong resistance from consumer representatives as well as gas retailers (who would be responsible for passing on to the customers the higher prices implied by accelerated depreciation if the AER were to accede to the networks' proposals).

The AER published its final response to the first of the Victorian gas reset proposals a little over a year after publishing its information paper. The best it could do in its final decision was to provide a "more modest" depreciation allowance than was sought by the network.[3] How this allowance aligned with the long-term interests of consumers (as per the AER's legislated objective) was not explained. Nor did the AER's final decision address the many concerns raised by the Consumer Challenge Panel (CCP). The AER's silence in response to consumer concerns was conspicuous – especially since the AER established the CCP specifically to represent consumers' interests in its regulatory decision making.[4] This was a wholly unsatisfactory outcome.

Six months later, the AER published its final decisions for three Victorian gas distribution network businesses.[5] This time the AER conjured a methodology where, in effect, it determined an "appropriate" overall price increase and then back-solved for the accelerated depreciation it would permit.[6]

> *Setting the base real price path constraint at 1.5% per annum allows for an appropriate amount of accelerated depreciation for each distributor.*

The final decision does not explain how the AER settled on a 1.5 per cent price path constraint. No explanation is proffered about how this apparently "appropriate" outcome is aligned with the long-term interests of consumers; whether it represents a sustainable price path; or what it implies for future prices. The final decisions acknowledge concerns raised by consumer representatives and the CCP, but they do not directly address those concerns or reconcile them with the allegedly "appropriate" decision the AER has made.

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[2] AER, *Regulating gas pipelines under uncertainty: Information Paper,* November 2021
[3] AER, *Final decision – APA VTS access arrangement 2023–27*, December 2022
[4] Consumer Challenge Panel, *CCP28 advice to the AER – APA VTS access arrangement proposal*, February 2022
[5] For example, see: AER. *Multinet Gas Networks Gas distribution access arrangement 1 July 2023 to 30 June 2028. Attachment 4 – Regulatory depreciation*. June 2023.
[6] ibid p.9

And so ended a regulatory process that had begun some 18 months earlier with the AER's release of an issues paper into a fundamental element of the regulatory framework.

The AER has now published a second issues paper looking into other fundamental elements of the regulatory framework which are being disrupted by the energy transition. This time the AER is inviting public comment on the ongoing use of weighted average price caps and declining block tariffs in gas network price determinations.[7] On this occasion, the AER has committed to developing a directions paper that will presumably guide its future regulatory decisions. As this submission explains, consumers should prepare for further disappointment.

This submission focuses on only one of the matters raised by the AER's latest consultation paper – namely, the proposed shift away from declining block network tariffs. This submission highlights the AER's lack of authority to answer the question it has raised. Those answers must come from elsewhere within the panoply of relevant decision makers.

This submission proceeds as follows. The next section identifies a number of observations made in the issues paper whose significance has been markedly understated or overlooked by the AER. Section 3 highlights questions about the ongoing viability of the current approach to regulating gas networks' revenues and prices. In section 4, the submission turns to the 'big four' policy questions that must be resolved before we can know whether economic regulation has a meaningful role during the energy transition. Section 5 reflects on the likely outcome of this review and its implications for the role of the regulator. A short conclusion ends the submission.

2. Some key observations in the issues paper and their implications for this review

The issues paper makes a number of key observations without offering commentary on their significance for this review, the long-term interests of consumers, or the ongoing relevance of the regulatory framework. These observations deserve more than the fleeting mentions they are afforded by the issues paper. Three such items are discussed below.

(i) Persistent over-recovery of revenues

Section 4.1 of the issues paper explores the revenues earned by gas networks over 11 years. Figure 1 in the paper (reproduced below) demonstrates a persistent over-recovery by gas networks – that is, the gas distribution network businesses have collectively earned in excess of their 'target revenues' in every year. This finding is significant. It suggests the presence of a stubborn downward bias in the AER's expectations.

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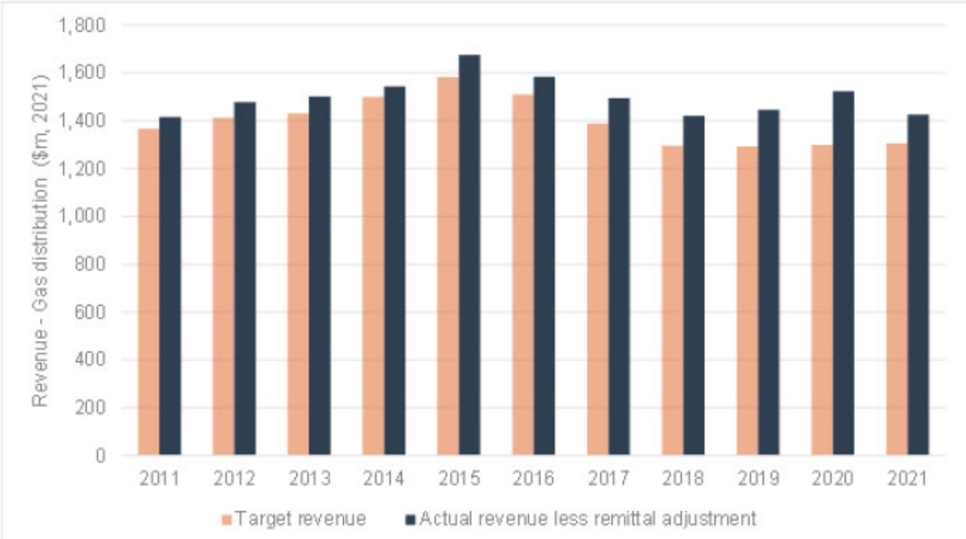
[7] AER, *Review of gas distribution network reference tariff variation mechanism and declining block tariffs. Issues paper for stakeholder feedback.* May 2023

Figure 1 Gas distribution network revenues compared to target revenues[17]



As the AER has previously noted, the presence of bias in regulatory estimates is the obverse of what is required of good economic regulation. Indeed, the AER adopted a principle in May 2021 to guide its approach when applying the legislated national electricity and gas objectives.[8]

> *The guiding principle is [for the AER to produce] an unbiased estimate of the expected efficient return, consistent with the relevant risks involved in providing regulated network services.*

A few months later, it restated this principle though in slightly different terms.[9,10]

> *In our view, the best possible estimate of the expected rate of return—neither upwardly biased nor downwardly biased—will promote efficient investment in, and efficient operation and use of, energy network services.*

While this guiding principle was offered in relation to the AER's determination of a regulated rate of return, it surely applies to all regulatory decisions pertaining to networks' revenue allowances.

In any event, the current issues paper only speculates on possible reasons for the persistent over-recovery of revenue by gas distribution network businesses. These reasons include:[11]

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[8] AER, *Rate of return, 'Assessing the Long-term Interests of Consumers', Position paper*, May 2021
[9] AER, *Rate of return, Overall Rate of Return, Equity and Debt Omnibus, Final Working Paper*, December 2021, p. 8
[10] AER, *Rate of return, Information Paper and Call for Submissions*, December 2021, p. 8
[11] See p.15

- network businesses responding rationally to the incentives created by a pricing model involving declining block tariffs, and
- general economic conditions in the relevant states and territories (though no further explanation is provided).

The AER offers no evidence in support of these speculations but more significantly, it also states:[12]

> *We further note that revenue over recoveries may be due to incorrect initial demand forecasts, or forecasting error. Demand forecasting is inherently uncertain. It may be that we are approving volume forecasts that are too low.*

Consumers would be right to be concerned by this admission-of-sorts.[13] If the AER has consistently produced biased estimates of demand during 'normal' times, what confidence can consumers have about its ability to determine fair and reasonable prices amongst all the uncertainties of the energy transition?

(ii) Consumer sensitivity to network tariff structures and redistributive impacts

Early in the issues paper, the AER makes the following conventional regulatory observation.[14]

> *Declining block tariffs, when passed through to customers by retailers, incentivise customers to consume larger quantities of natural gas.*

Chapter 6 of the issues paper reflects on the impact of alternative tariff structures on consumer incentives as well as their equity impacts. Beyond some examples of declining block tariffs in Figures 2 to 5, the issues paper remains rooted in an abstract discussion. No evidence is proffered in support of the AER's theoretically oriented view that declining block tariffs motivate consumption of larger volumes of gas.[15]

Given the potential consequences for consumers of the decision it is contemplating, the AER should openly test its null hypothesis about the behavioural relationship between tariff structure and consumption. After all, there is a perfectly reasonable alternative hypothesis in which there is little (or no) relationship between tariff structure and consumption because households consume gas for the largely invariable purposes of cooking and heating. This alternative hypothesis suggests household (and possibly small business) demand for gas would be largely insensitive to its marginal price, that is, the structure of volumetric tariffs.

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[12] See p. 15
[13] Under the AER's weighted average price capping regime for gas distribution networks, under-forecasting demand will result in regulated prices that are higher than they ought to be.
[14] See p.2
[15] This submission follows the lead of the AER's issues paper and does not enter into a discussion about any misalignment between the incentives facing network businesses and retailers when designing tariffs.

The issues paper's entire premise for tariff reform is moot if there is insufficient evidence supporting the assertion that declining block tariffs motivate customers to "consume larger quantities of natural gas".

Under such circumstances, the only consequence of shifting to an alternative tariff structure would be the redistributive impacts across different classes of consumers. The issues paper argues it is only possible to speculate "in principle" on these equity impacts.[16] This is a curious argument coming from the AER. Had a network business proposed to switch to declining block tariffs during a regulatory reset, the AER would have rightly required the network to use customer data to undertake detailed modelling of the redistributive impacts of any such proposal.[17] Why this standard of proof does not apply to this review is not explained.

Despite regulatory bodies' repeated refrain over many years that they focus exclusively on promoting efficiency (as per the national energy objectives), this assertion has never been true.[18] This regulatory mythologising about an exclusive focus on efficiency – and the conspiracy of silence about equity – has been labelled the "original sin of economic regulation".[19]

Price regulation always and unavoidably involves matters of equity. Every tariff structure proposed by a network and approved by a regulator has equity impacts. Therefore, *changes* to tariff structures will always and unavoidably have redistributive consequences. The issues paper leaves us no wiser about what these impacts would be as a result of the reforms it considers. While there may be some theoretical arguments for moving away from declining block tariffs, there may be much stronger *real* reasons for leaving tariff structures unchanged.

But there is an even more fundamental concern.

Equity and redistributive impacts are matters deeply situated within the realm of social policy, not economic regulation. The AER has no expertise, authority or accountability when deciding on matters of social policy, namely, welfare transfers between customers and customer groups. Even when such matters are made subject to public consultation (such as this review), the AER has no authority to rank or weight the different views that come forward. It has no authority because these views incontrovertibly pertain to matters of subjective judgement, personal priorities and political values — not economic efficiency.

(It must also be noted that the AER has no authority to anticipate, judge or weight the concerns of voices that do *not* speak out during its consultation process.)

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[16] See pp.22-23
[17] Noting that under current regulatory arrangements a network is actually prohibited from submitting such a proposal during a regulatory reset.
[18] For further information on the national energy objectives – consisting of National Electricity Objective (NEO), National Gas Objective (NGO) and National Energy Retail Objective (NERO) – see: https://www.aemc.gov.au/regulation/neo
[19] Ben-David, Ron. *Response to AEMC draft rule determination. Access, pricing and incentive arrangements for distributed energy resources*, May 2021

Being a matter with such profound social policy impacts, a switch to declining block tariffs can only be implemented if the AER is issued with a clear policy directive to do so – presumably by politically accountable ministers, governments and/or parliaments.

(iii) Industry cost structure and the recovery of residual costs

Another passing observation made in the issues paper concerns the largely fixed cost nature of providing gas distribution network services.[20] While the issues paper does not discuss the marginal cost of operating these networks, we may well imagine it is relatively minor given the fixed cost nature of distribution networks. This suggests that were the AER to approve tariffs based on marginal costs, significant residual revenues would need to be generated by comparatively high fixed charges. Clearly, this is not the case under the current regime. The majority of network revenues are currently generated through variable charges. While the energy rules describe how variable tariffs should be set, they offer no guidance on the recovery of residual revenues beyond requiring their recovery does not distort price signals from variable tariffs.[21]

This is another longstanding example of the regulator making decisions on matters of equity despite its claims about being solely focused on efficiency. It is not clear from the issues paper whether the AER is considering a rebalancing of how it recovers residual revenues for gas distribution networks – that is, putting more (or maybe less) weight on recovery through fixed charges. Clearly doing so, could also have significant redistributive impacts.

3. Is this the end of economic regulation as we know it?

This submission is not the place for a detailed exposition on the foundations of economic regulation or the administrative structures that are currently in place. Nonetheless, some brief observations need to be made in the context of this review.

Economic regulation, as it has operated in Australia's national energy markets, is predicated on market conditions which are broadly in steady state, that is:

- stable, predictable and manageable demand growth
- stable operational and management technologies benefiting from incremental (and capturable) efficiency gains over time
- operating and investment risk profiles that do not vary significantly between regulatory decisions, and which are well-understood by investors, consumers and regulators

[20] See pp.15 & 26
[21] For example, NER 6.18.5(g)(3)

- capital for investment is readily available at an identifiable price (rate of return)
- cost reflective network prices are necessary and sufficient to coordinate efficient investment, operational and behavioural decisions, and
- the overall stability of the energy system means its oversight can be separated from political considerations and left to technical specialists to regulate.

The issues paper euphemistically acknowledges that at least some of these conditions are no longer satisfied.[22]

> *We are undertaking this review now because the context for our work has changed. Further contextual changes are possible if not likely, meaning that any approach we consider appropriate for the immediate future may come to be seen as less appropriate over time.*

Yet despite these "contextual changes", the issues paper remains firmly rooted in the conventional regulatory thinking of the past two decades.

The energy transition represents a fundamental disruption (or "contextual change") to the energy system. It is often said by the regulators that the regulatory framework is no longer fit for purpose. This is an understatement in extremis. Decarbonising the economy creates circumstances that are completely at odds with the conditions predicating the economic regulation of gas distribution networks (as listed above).

The profundity of the disruption now underway is untethering regulators from the markets and networks they were established to regulate. This unravelling of the regulatory model is evidenced by the matters raised in the two recent issues papers published by the AER, as described in section 1 of this submission. Despite its willingness to identify these regulatory shortcomings, the AER simply does not have the authority or purpose to respond to the shortcomings it has identified.

Traditional regulatory theories, beliefs and practices are on collision course with the realities of the energy transition.[23] If we are to avoid the wreckage of that collision being strewn across the entirety of the Australian economy, then four key policy questions must be answered. If these questions are not answered urgently, then the end of gas may foretell the end of economic regulation.

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[22] See p.25

[23] For a further discussion on the collision between the energy transition and regulatory tradition see: Ben-David, Ron. ***On collision course: Economic regulation and the energy transition*.** June 2023

4. Four key policy questions need answering

Whether contemplating gas network tariff reform or the appropriate return of capital to investors in gas networks, the fundamental questions that need answering lie far beyond the authority and capacity of the community of regulators to answer.

Four key policy questions need answering if the economic regulation of gas networks is to remain meaningful. The four questions are interlocked.

First, what is the outcome to be achieved? What is the end state for the reticulated gas networks? What is an acceptable transition pathway to achieve that end state? For how long will alternative outcomes be countenanced (ie. reticulated biomethane or hydrogen)? How, by when and by whom will these alternative outcomes be taken 'off the table' if their viability has not been proven in time?

Second, how will the transition be coordinated? Since its inception, the AER's central mission has been to produce efficient network price signals in the belief that doing so would serve as the central coordination mechanism for investment in, and consumption, of network services. Irrespective of whether the evidence supports this belief, urgent attention must be given to answering questions about whether it is even possible to identify efficient [network] price signals from now on. And if not (as we may well suspect), then questions must be answered about how else the transition of the gas network will be coordinated – including the role of economic regulation and its administrators.

Third, who pays for the energy transition? Perhaps more than any other question, this question features prominently when it comes to the tariff redesign and accelerated depreciation concerns raised by the AER's issues papers. What new principles are needed during the energy transition to guide how costs are recovered through regulated prices? How should cost recovery be shared between different cohorts of customers; between current and future customers; and between customers and investors? Are some costs most equitably shifted on to taxpayers?

Fourth, how are transition risks apportioned? No matter the answers to the first three questions, a successful energy transition will still face innumerable risks. That is the irreducible reality of the energy transition. Some risks are already known. Others are 'known unknowns' while others remain 'unknown unknowns'.[24] Who should bear the full or partial burden of these risks? This question must be urgently discussed, negotiated and resolved. Clearly, managing transition risks cannot be achieved through a 'set and forget' approach to regulation (as has been possible for most of the past 25 years). A dynamic and responsive approach to managing risk is required. This includes clarifying the role of economic regulators in apportioning and compensating those risks.

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[24] With due acknowledgement given to Donald Rumsfeld for the terminology.

The answers to these questions cannot come from within the community of regulators for at least three reasons. First, whatever the answers might be, they will have profound consequences for consumers, communities, investors, taxpayers and the energy transition in its entirety. Such decisions cannot be deferred to regulators. Second, it is becoming increasingly evident (including in the current issues paper) that the regulatory community is too deeply invested in a traditional way of thinking. That way of thinking is rapidly approaching its use-by-date.[25] Third, recent history evinces that leaving policy questions in the hands of regulatory bodies does not end happily.[26,27] We may conject that the third reason follows from the first and second reasons.

In any event, without clear answers to these four policy questions, the AER has no discernible pathway to resolving the matters it has raised in this, and its earlier, issues paper.

5. The likely outcome of this review

Perhaps it is unfair of this submission to raise large and systemic policy questions in response to a small paper from a regulator looking to address a very narrowly identified problem – namely, the ongoing use of declining block tariffs. But by releasing the paper, the AER creates the impression that it can address the issues it has raised.

The issues paper does not explain why the AER has chosen now to raise these matters or raise them in this way. Perhaps a window has opened in its busy work program. Perhaps it feels compelled to be seen to be responding to stakeholder submissions on these matters.[28] Perhaps it considers it has the necessary authority to respond to the questions it raises.

Despite narrowly defining the problem it is trying to solve, the AER will be fully cognisant of the social policy implications of any change to tariff structures. Therefore, it will not be at all surprising if, after going through the effort of drafting numerous papers and hosting various stakeholder forums, the AER settles on a response that merely defers the matter.

Recent history suggests the likely outcome of this review will see the AER allow networks to propose alternatives to inclining block tariffs (and weighted average price caps), provided they comply with AER's consultative requirements such as those required in support of Tariff Structure Statements and the Better Resets handbook. These regulatory processes place a strong emphasis on network businesses consulting publicly on their regulatory proposals before submitting them to the AER for approval. Relying on regulatory processes has been the AER's preferred response to dealing with other similarly complex regulatory challenges created by the energy transition.

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[25] Ben-David, Ron. ***On collision course: Economic regulation and the energy transition.*** June 2023**.**

[26] Efforts by the Energy Security Board (ESB) – consisting of the Australian Energy Market Commission (AEMC), Australian Energy Regulator (AER) and Australian Energy Market Operator (AEMO) – to develop a post-2025 energy market design ended in abject failure. Ministers resolved to dis-establish the ESB in May 2023.

[27] https://www.afr.com/companies/energy/ministers-unplug-energy-security-board-20230519-p5d9ta

[28] See pp.10-11

Examples include: network stranding and accelerated depreciation (see section 1), the introduction of network export tariffs and the design of a network export service incentive scheme.[29,30]

It is now well-accepted that engaging with consumers is an important element in the regulatory process. Doing so is seen to provide 'social licence' for both a network's regulatory proposal and the regulator's acceptance of that proposal. What has not yet been established by the panoply of energy regulators and policy makers is the extent to which such consultative process can, in fact, demonstrate a 'social licence' for change.

Surely there are limits to the matters that can be settled through consultative processes. If this were not true, then there would be no need for the national gas and electricity rules – which run to almost 750 and 1,900 pages, respectively. While this submission is not the place to debate the limits to which public consultation can be used to attain 'social licence' for change, it can proffer a reasonable starting proposition. It would appear reasonable to assume that consultative processes are valuable in identifying the services and service mix consumers value, and their willingness to pay for various outcomes.

The equity and redistributive consequences of the matters raised by the issues paper lie far beyond these reasonable limits.

As already noted in section 2, resolution of such profound questions of social policy incontrovertibly pertain to matters of subjective judgement, personal priorities and political values. The legislation confers no such moral authority on the regulator to exercise judgement over such profound questions. Nor does the legislation provide for the AER to acquire such moral authority via a regulatory process under its administrative control. Put bluntly, the AER cannot lay claim to be acting under 'social licence' simply by virtue of a public consultation process[31], no matter how thorough that process might be. There are legal and moral limits on its authority.

If the AER concludes this review as might be expected given its current predilection for deferring difficult matters to networks and public consultation – thereby laying claim to having a 'social licence' for pursuing change – then it will be assuming for itself the role of a moral and political arbiter. Such action would represent unprecedented regulatory over-reach and a direct challenge to the authority of ministers, governments and the legislature.

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[29] For further information about the AER's approach to network export tariffs, see: https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/export-tariff-guidelines/initiation

[30] For further information about the AER's approach to the design of an export service incentive scheme, see: https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/export-service-incentive-scheme

[31] Whether run directly by the AER or run by networks and then considered by the AER.

6. Conclusion

The energy transition is upending the foundations of economic regulation in the energy sector. This submission explores the implications of this disruption for the Australian Energy Regulator's role in determining tariff structures for gas network services. The AER is clearly aware of the problems it now confronts. Likewise, it appears to be aware of the limitations of its powers to address these problems.

This submission can only speculate on the likely outcome of this review, but recent history suggests the AER will seek an 'authority-to-act' via an appeal to social licence. If this comes to pass, then the AER will assume a role for itself that has previously (and rightly) been the domain of policy makers and legislators. Whether this was the AER's objective when initiating this review is a matter for others to decide.

In any event, having initiated this review, the most honest response by the AER would involve a public admission that it cannot decide these matters and stating boldly that it is sitting atop a regulatory framework that belongs to another time. And when doing so, calling upon policy makers to answer the four key policy questions that need answering if economic regulation is to remain relevant during the energy transition.

Yours sincerely

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<u>About the author</u>

Dr Ron Ben-David holds a Professorial Fellowship with the Monash Business School. He is also the principal of Solrose Consulting. Between 2008 and 2019, Ron served as full-time chair of the Essential Service Commission (Vic) where he led far-reaching reforms in many areas of regulation administered by the commission. Prior to his appointment to the commission, Ron was a Deputy Secretary in the Department of Premier and Cabinet (Vic) and headed the national secretariat for the Garnaut Climate Change Review.

Ron is a board member at ClimateWorks Australia, the Consumer Policy and Research Centre, and the Regulatory Policy Institute (A-NZ). He is an advisory board member for the Centre for Market Design and a member of the AER's Consumer Reference Group and Consumer Challenge Panel. In July 2022, Ron was appointed to the Victorian Gambling and Casino Control Commission as deputy chair.