

13 June 2025

Barry Sterland
Martin Stokie
Commissioners
Productivity Commission
By email: 5pillars@pc.gov.au

Dear Mr Sterland and Mr Stokie,

Investing in cheaper, cleaner energy and the net zero transformation

The Justice and Equity Centre (JEC) welcomes the opportunity to respond to the Productivity Commission's inquiry into investing in cheaper, cleaner energy and the net zero transformation (the inquiry).

Energy efficiency as productivity reform

Improved energy efficiency and electrification at a household as well as industrial or systemic level, should be prioritised as a critical productivity reform measure.

The JEC recognises the utility of framing decarbonisation in terms of the cost of the marginal unit of emission abatement. Energy transition planning, which is currently transmission and supply-side focused, obscures the 'low-hanging fruits' that could drive greater productivity in emissions abatement and energy system investment. Optimising electrification, improving energy efficiency, more flexible demand, and optimised distributed energy resources (DER) utilisation have not been sufficiently prioritised. The cost of this network-centrism is borne by consumers through poor energy productivity, which results in them paying higher prices for both energy and emissions abatement.

While welcome action is occurring in some of these areas, there is insufficient recognition of the long-term risk to productivity from an energy transition which embeds inefficient and inflexible demand (particularly at a household level) and overinvests in long-term generation and network infrastructure. This not only reduces scope to invest more productively elsewhere, but unnecessarily burdens consumers, and the wider economy, for decades.

An appropriate focus on productivity in energy, while addressing equity and emissions, involves prioritising electrification and improved energy efficiency and flexibility at a household level. In collaboration with over 60 industry and community stakeholders, the JEC has produced a *Roadmap for efficient and electric homes* intended to set out what such a focus would look like at all levels of government. It is available at <https://jec.org.au/resources/roadmap-for-efficient-and-electric-homes-making-all-australian-homes-healthy-and->

[affordable/#:~:text=The%20Justice%20and%20Equity%20Centre,JEC%20and%20ACOSS%20from%202023](#) and will be attached with this submission.

We urge the Commission to consider the recommendations in the Roadmap in the context of the aim to reduce the cost of meeting carbon targets.

Price efficiency of the wholesale spot market

Addressing productivity in emissions reduction and the energy system must involve examination of the energy wholesale market.

We contend it is very likely the National Energy Market (NEM) wholesale spot market does not produce an efficient price using an orthodox economic meaning of the term. Excessive market power as well as market structures which either enable market manipulation or make it impractical to determine if manipulation is occurring, very likely enable sellers in the spot market to push prices higher than they would be in an efficiently functioning market. This can be considered a drag on productivity, with the excess cost paid for by consumers facing higher than necessary prices for a critical good (and critical economic enabler).

Consumers in fact pay the cost of this productivity drag through the inflationary impacts high energy costs have on every other good or service produced in Australia, due simply to energy being an input to all other value creation. Reconstituting spot market structures and settings to remove the possibility of artificially inflated energy prices – for instance by compensating market participants on an ‘as bid’ basis – could have a substantially positive impact on productivity throughout the Australian economy.

We urge the Productivity Commission to extend the inquiry to consider the price efficiency of the NEM wholesale market.

Price efficiency vs operational efficiency

We appreciate that the Productivity Commission’s inquiry takes place in the context of a number of other reviews of different aspects of the energy system. However, as it stands, none of these reviews are currently considering substantive changes to the structure of the spot market itself.

The Nelson Review into the NEM wholesale market settings could inquire into whether or not the wholesale market itself is fit-for-purpose. However, while it has not yet completed its review, in the first stage the panel has concluded that the wholesale market is ‘efficient in operational time’.

Without context, an economist might assume the criteria for ‘efficiency’ in a market is the market’s capacity to consistently reveal prices that accurately sum the aggregate demand and supply for the given good. Concluding the spot market is economically efficient in operational time would seem to amount to a claim that energy could not be supplied more cheaply, given the resources available. Notably, this was not the conclusion of the Australian Energy Regulator (AER). In their submission to the Review, they highlighted a number of reasons to conclude the market was not economically efficient. Specifically, there was evidence of the

ability of sellers to manipulate the market and the ability of dominant market participants to exploit their dominance. We quote their submission at length:

First, since 2022, we have seen a significant reduction in generator offers in the \$0-100 range. This is particularly notable in South Australia where the mid-priced offers have now all but disappeared. This dynamic is resulting in increased price volatility and creates greater incentives for participants to withhold capacity with the intent of benefiting from the higher prices this can create. Both of these effects can contribute to higher wholesale prices and increased contracting costs.

A case study we examined in our Report indicates that, at least in certain instances, participants can take advantage of market conditions to make significant financial returns from this strategy... We have also observed coal generators in other regions offering into the market at prices well above costs and contributing to high price events, with a flow-on impact on contract markets.¹

...

[i]ssues of market concentration and competition need to be considered across the range of services and capabilities the market needs, not just in aggregate.... [O]wnership of dispatchable generation remains concentrated and a few large participants are often needed to meet demand outside of solar hours. This increases the scope of those participants to exercise market power. The top 4 participants control 69% of the dispatchable generation in Queensland, 87% in NSW, 88% in Victoria and 86% in South Australia.²

That is, there are good reasons to believe that the prices revealed are higher than is possible. At the very least it suggests an issue worth examining.

To clarify the position of the Nelson Review panel (potentially), in the case of the energy market, the phrase 'efficient in operational time' may have two reasonable meanings:

- the economic meaning (outlined earlier), and
- the 'operational' meaning: that the spot market correctly matches the quantum of energy dispatched to the quantum demanded; that it enables energy to be delivered at the locations it is demanded; and that it dispatches the cheapest mix of generation, given the available resources.

Note on the third point in the second definition, the cheapest mix refers not to the price, but rather the composition of energy from different sources (renewable, thermal, different types of storage, etc.).

Crucially, these two meanings of efficiency – economic efficiency and operational efficiency – should not be conflated. It is entirely possible for a spot market dominated by a single supplier who was able to extract rent from their monopoly position to nonetheless conform to the

¹ AER, 20 February 2025, 'NEM Review – Initial Consultation', p2.

² AER, 20 February 2025, 'NEM Review – Initial Consultation', p3.

second definition – operational efficiency – and be accurately described by the Nelson Review as ‘efficient in operational time’. Obviously, however, such a market could not be said to be efficient in the economic sense of term, and would not be efficient from the perspective of consumers, who paid monopoly prices for their energy, or from the perspective of one interested primarily in the overall productivity of the economy.

The Nelson Review panel has taken the view that the economic efficiencies of the wholesale market need not be considered at this time. This is the traditional regulatory viewpoint: the economic inefficiency of the market has been considered an acceptable concession to achieve prices sufficient to incentivise energy generators and storers to enter and remain in the market.

We contend that while the Nelson Review may reasonably have chosen not to analyse and consider the implications of inefficiencies in the NEM wholesale spot market, the issue of should be considered by the Productivity Commission.

Artificially higher prices may have been considered acceptable in the past as a necessary concession to market sufficiency, but that is no longer the case. Increasingly, investors are not receiving investment signals from the spot market itself but are instead investing on the basis of extra-market supports that underwrite the risk of investments, such as the NSW Long-Term Energy Service Agreements (LTESA) or the federal Capacity Investment Scheme (CIS). Indeed, a primary aim of the Nelson Review is to design a contract that does precisely this: move risk for energy investments from the investor to a public-service-providing entity (as yet unspecified).

Indeed, the starting premise of the Nelson Review is that the spot market does not do a good job of providing investment signals and an alternative mechanism or measure for producing investment signals is required. However, the result of adding this alternative mechanism without adjusting the spot market is almost certainly that the economic inefficiency in the spot market will now be expressed as pure windfall profit for investors and a clamp on productivity for the Australian economy. We consider this a relevant area of examination for the Commission.

We welcome the opportunity to meet with the Productivity Commission and other stakeholders to discuss these issues in more depth. Please contact Michael Lynch at regarding any further follow up.

Yours sincerely,

Michael Lynch, PhD
Senior policy officer