

14 February 2025

NEM Settings Review Panel



Submitted online

NEM Settings Review Initial Consultation

The Australian Financial Markets Association (AFMA) is responding to the NEM Wholesale Market Settings Review Initial Consultation.

AFMA is the leading financial markets industry association promoting efficiency, integrity and professionalism in Australia's financial markets, including the capital, credit, derivatives, foreign exchange, energy, carbon, and other specialist markets. Our membership base is comprised of over 130 of Australia's leading financial market participants, including many energy firms who are key participants in the NEM.

Key Points

- **The Review should look to restore the decisive role of the market in NEM investment**
 - **Successfully managing the retirement of coal units is critical to allowing the energy market to navigate the energy transition**
 - **AFMA's members are keen to work with the Panel to develop practical, implementable solutions**
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1. Context

1.1. Need for practical reform

The NEM is in the middle of a generational transformation and it is critical to ensure that appropriate policy settings are in place to allow the market to navigate the net-zero transition without compromising reliability or imposing unreasonably high costs on consumers. The Energy Security Board's (ESB) work was intended to set long term policy to enable the energy market transition but ultimately failed to deliver significant reform. AFMA considers that the ESB failed because it became overfocused on ambitious market reforms with limited support from the industry and which ultimately proved politically impossible to implement. The failure of the ESB's work led state and Commonwealth governments to implement a series of uncoordinated reforms which have complicated the market framework but failed to resolve the underlying issues.

AFMA welcomes the Panel's approach of working more collaboratively with the industry and looking to develop simpler, more practical and implementable policy solutions. Our membership consider that the need for practical reform is now urgent, and they are increasingly willing to move away from long established preferred industry policy positions to support less preferred options which can realistically be implemented and can provide policy certainty to allow the market to navigate the energy market transition.

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1.2. State of the market

The general uncertainty of the energy market transition combined with a number of uncoordinated state and Commonwealth policy interventions have left the NEM struggling to send appropriate market signals to ensure adequate investment in firmed capacity. For some time investment in new capacity has been driven by a range of government policies which has largely supported the construction of variable renewable energy (VRE) assets. The massive expansion of VRE has significantly reduced the emissions intensity of the NEM but has had a significant impact on the commercial viability of traditional baseload assets which are now exposed to long periods of low or negative prices when it can be uneconomic for them to run. On its face the exit of uncompetitive units is a desirable outcome for the market but conventional baseload units still play a critical role in the reliability of the electricity system, making it difficult for them to exit without a negative impact on reliability. As a result, governments have increasingly imposed restrictions on baseload units to make it more difficult for them to exit the market unexpectedly and have contracted directly with a number of units to ensure they stay open. This in turn creates uncertainty for developers of new assets, undermining investment cases and making the required timing uncertain.

Some of the key features of the NEM AFMA has observed are:

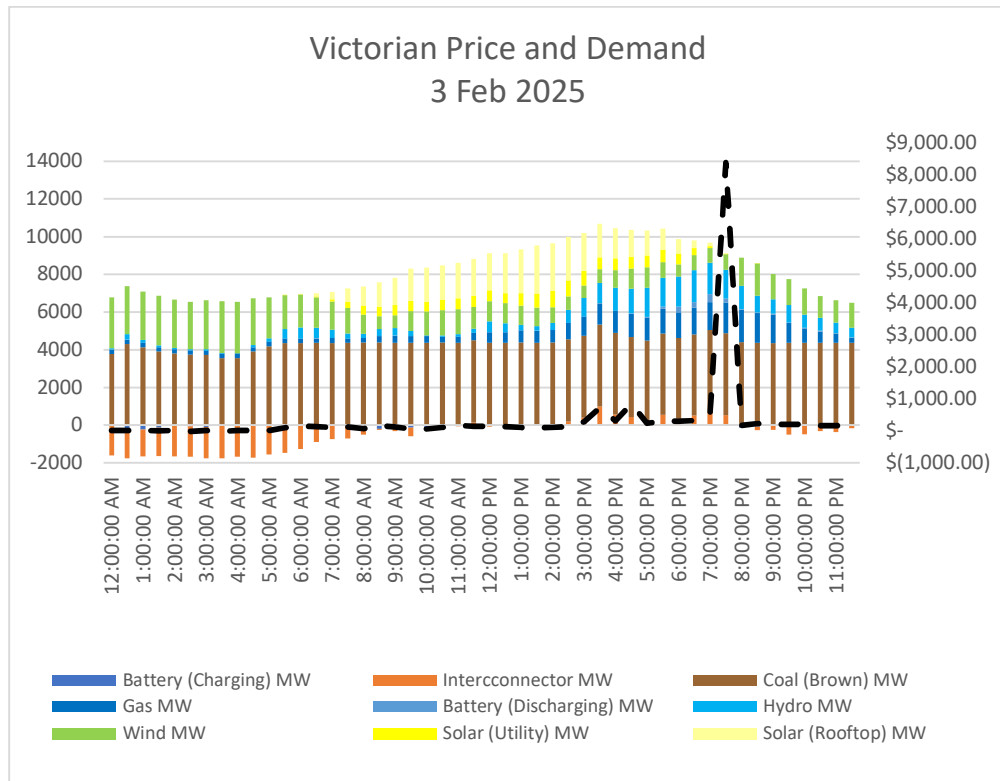
- a) Spot prices remain an efficient operational signal
- b) Long periods of low or negative prices during the day due to abundant solar power
- c) High evening peak prices when peak demand coincides with the roll-off of solar
- d) Moderate overnight prices when coal units run at low output
- e) Occasional periods of extremely high prices when high demand coincides with low VRE and unavailability of conventional units – during these periods there is also increasingly a risk of unserved energy leading to blackouts

As a result of the above features we have also observed ongoing liquidity challenges in the financial market for electricity derivatives as controllable units, that have traditionally provided liquidity, become a smaller part of the market and new capacity is disincentivised from participating in the financial market by the terms and conditions of the Capacity Investment Scheme (CIS) and equivalent state schemes. Reduced liquidity makes it more difficult for retailers to manage their wholesale market risk, decreasing their ability to offer competitive products to retail customers.

1.3. Signals the market is and isn't sending

In an energy only market the spot price is supposed to send market signals to encourage efficient dispatch and investment. Our members consider that while the spot prices continue to efficiently dispatch generation a range of policy interventions have blunted some of the investment signals and therefore made it difficult for the market to invest in new capacity.

The main signal that we are currently seeing working in the market is demand for firming capacity to cover the short (4-5 hr) evening peak. The spread between daytime and evening prices is justifying commercial investment in 2-4 hour batteries, including outside of the CIS, as it has become commercially viable to build short duration storage to capture the premium on evening prices. This can be seen below in the chart Victorian Price and Demand for 3 February 2025.



Open Electricity/ AFMA

We do not think the market signals are working as effectively outside the evening peak. The very low prices typically seen during the middle of the day would seem to suggest that there is limited demand for additional solar capacity, but we are seeing significant investment in both grid-scale and rooftop solar as a result of both household demand for rooftop solar and CIS incentives for grid-sale solar. We also consider that the current moderate overnight prices, when coal units typically run at or near their minimum load, are inadequate to incentivise investment in long duration storage and generation assets that will be required to allow the coal units to retire without compromising reliability.

The consequence of these various market signals is that governments have felt that they need to intervene to support coal fired power stations to ensure reliability and to provide power overnight. These interventions have further blunted the incentives to invest in firming assets that could replace the coal units which has increased the need for interventions to keep the coal units operating as replacement assets are not built. This has left governments and the market in an uncomfortable loop where private investors are unsure when coal units will close, because of the prospect of government intervention to keep them open, and consequently they are unwilling to invest in firming assets to replace coal units, which leave governments feeling compelled to continue to support the existing coal units to ensure the lights stay on.

As strong supporters of the energy only market our members conventional positions on incentivising new investment has been to decrease government involvement in the market and where necessary to increase the market price cap a level that would justify investments in units that may run very few hours in a year. But in the current circumstances they recognise this approach is unlikely to be adopted and that policy interventions are needed to break the loop of non-investment and government intervention by bringing forward investment in adequate firming capacity to give governments confidence that they can allow the existing coal fleet to close without endangering

reliability. We have therefore put together a package of practical reform options that, while not necessarily our members preferred options, we think could help the market to navigate the energy market transition and return to a state where market signals are able to drive investment.

2. Market making

A relatively simple proposal that we think could address one of the most acute problems in the market is the expansion of market making. Low liquidity for electricity derivatives makes it more difficult for retailers to hedge their wholesale market risk and reduced their ability to offer competitive products to retail customers.

A solution that has been successful in the NEM and overseas markets and that enjoys wide support from our membership is to promote market making for the broader market. The Market Liquidity Obligation (MLO), established under the Retailer Reliability Obligation (RRO), has given our members experience of both acting as a market maker in the NEM and the benefits of market making. Members generally consider that the MLO has boosted liquidity and been a positive for the NEM, with parties who have been obliged to act as market makers confident that they can manage the risks of being a market maker.

AFMA continues to consider that the RRO has been ineffective and should be repealed (see section 4). But we support establishing a new market making function to replace the MLO. A number of approaches to market making have been tried in other energy markets with Singapore incentivising voluntary market makers and New Zealand adopting a hybrid model with their four largest participants required to act as market makers in a similar way to the MLO and incentives for a fifth commercial market maker and we consider that similar approaches could be successful in the NEM.

AFMA's members support replacing the MLO with an ongoing market making framework. The detail of the framework including; who then obligation applies to, which products are covered and how the obligations should operate should be developed in co-operation with market participants.

AFMA Recommendations

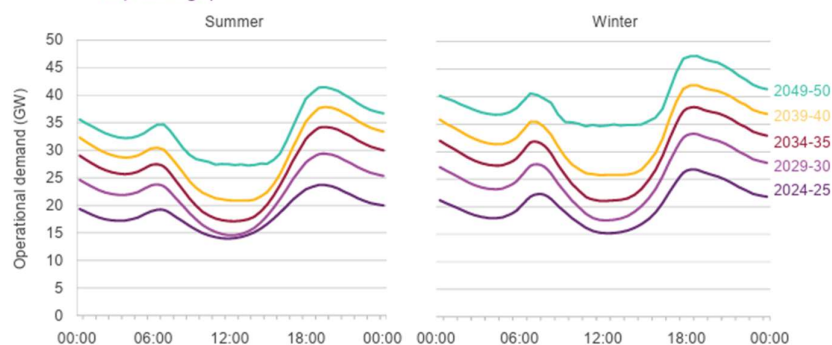
- i. The MLO should be replaced with an ongoing market making framework designed cooperatively with market participants.

3. New financial products

The consultation paper asks for feedback on the extent to which risk management products are able to respond to the changing nature of supply and demand. AFMA's view is that the financial market is capable of developing suitable risk management products and that many of these new products already exist and are likely to be more important features of the market during the energy market transition. These new products have been developed organically by the market to meet participants' hedging needs. AFMA's view is that the market is best placed to develop new financial products and there is no obvious role for government in this process.

The traditional suite of NEM hedging products was developed for a market dominated by large baseload units with reasonably stable operational demand and occasional periods of high demand, usually driven by weather. As shown below in AEMO's Integrated System Plan, the NEM no longer operates this way with solar now dominating daylight hours and rooftop solar, in particular, decreasing operational demand during the middle of the day but high demand remaining in the evenings.

Figure 8 Average operational demand by time of day and season, NEM (GW, 2024-25 to 2049-50, Step Change)



AEMO ISP 2024

This has created challenges for the existing suite of hedge products. The main base products covering all hours of the day remains a relevant product as, despite the changing nature of demand, this product has always had to deal with volatility over the whole day and the market has been able to reprice it to reflect changes in underlying risks. We expect it to remain a key product throughout the transition. We have also observed that the increasing uncertainty in the market has led to an increase in trading of listed option products over base contracts.

Changes to demand have had the most impact on the viability of the traditional 7am-10pm peak product. This product traditionally allowed participants to manage their exposure to steady daytime and evening demand, but with both demand and average prices decreasing during the middle of the day but remaining higher in the evenings this product has ceased to align with participants market risks and has essentially stopped trading. The increase in intra-day volatility has seen time of day products, such as a 4 or 5 hour evening peak product, emerge and although this area of the market is still developing AFMA considers that these products are likely to play an increasingly important role in the market during the transition. We have also observed some development of overnight and morning peak products in the OTC market which we think may also play an important role in the market, although as discussed above in section 1.3 we think there will be limited demand for these products while coal units are operating overnight.

Additionally as weather becomes a more important driver of both customer demand and generation availability we have seen weather products become increasingly important.

AFMA Recommendations

- ii. The market is successfully developing new financial products to meet participants' hedging needs and there is no obvious role for government involvement in this process.

4. Coal retirement

4.1. The policy challenge

As discussed above in section 1 our members consider that uncertainty around the closure of coal plants is one of the key challenges for the market and that developing policies that support the construction of new firming assets to allow the coal units to retire is critical for the energy market transition. As discussed above coal units still perform an important role in ensuring the reliability of the energy system, but they are aging, and the changing economics of the NEM make it increasingly difficult to operate them profitably. As a result, we anticipate that the existing fleet of baseload coal

generators will close and it is extremely unlikely they will be replaced by equivalent baseload assets. It is therefore important for policy settings to support the development of new firming assets to replace both the capacity and system support services that they provide to allow the market to navigate the energy market transition.

AFMA's members consider that a range of technologies will be required to meet the markets need for firming capacity. This is likely to include:

- Batteries – that can provide short term capacity
- Wind – which is likely to provide significant amounts of energy overnight
- Pumped hydro – which can provide long duration storage
- Gas turbines – which can provide firm capacity when other sources are unavailable

Demand side response should also be consider in the technology mix.

AFMA considers that the market is the most efficient way to determine what mix of technologies is best suited to provide firming capacity for the NEM. We are concerned that the current range of state and Commonwealth government policies, particularly the CIS, have directed investment towards technologies that can deliver energy at the lowest cost rather than an appropriate mix of technologies that can deliver both the energy the market needs and the firming capacity required to support higher levels of renewable generation. We also consider that the contractual requirements of the CIS, and equivalent state schemes, have greatly limited the ability of new assets to participate in the financial market, which has reduced their ability to contribute to market liquidity, which could be mitigated by having the scheme operators sell down their positions and make them available to the market.

4.2. AFMA's suggested approach

AFMA considers that a new mechanism is needed to drive investment in firming capacity to allow coal generation to retire without a negative impact on reliability or changing the current market design that works well in the operational timeframe. We think this mechanism should be designed to allow the market to decide on the best mix of technologies and should facilitate new assets participating in the financial market. Our member's view is that it is currently very difficult to make a commercial business case to invest in the types of assets that could provide firming capacity as the current spot prices do not justify the investment, and uncertainty about the timing of coal closures makes it difficult to predict where future prices will go. We think that the key to facilitating the energy market transition is providing an appropriate signal that will make these firming projects investable and, despite our members continued strong support for the energy only market, we think that at this stage in the transition a new mechanism is required to support investment in firming capacity.

We think the key features of the mechanism should be:

- Provide additional revenue to bring forward investment, but not be the main source of revenue for an asset.
- Assets should be able to participate in the new and existing markets for energy, capacity and system services as well as the financial market.
- The market should decide what technologies are developed.
- New and existing assets are able to participate in the scheme. This is important as excluding existing assets creates a risk that new assets will push out existing firming capacity rather than add to it.
- The scheme should not limit the ability of assets to participate in the financial market. As seen with the CIS, restricting the ability of assets to participate in the financial market means that their capacity does not deliver its full benefit to the market as retailers cannot access it to hedge their spot price exposure.

- The mechanism should be transitional to support the closure of coal generation and should be phased out when no longer required.
- It should contain emissions intensity requirements to ensure participating technologies are consistent with the Government’s carbon emission goals.

4.3. Designing an investment mechanism

Our discussions with members have identified a strong consensus that a new mechanism is required to make investment in firming capacity more bankable and they have identified a wide range of possible options. They consider that in the current climate the market will struggle to provide long term investment signals without some type of government scheme to support it.

Members have had substantial discussions about the viability of developing longer dated (5-10 year) electricity derivative products that could provide more revenue certainty to support investment in firming capacity. While there is some interest in these products from our membership they consider it is unlikely that they products will develop organically for a number of reasons including:

- Uncertainty about long term energy prices
- Poor alignment with retail price regulatory determinations, which focus on short term market prices
- The likely prohibitive cost of credit for very long dated products

We therefor think regulation may be required to incentivise this investment. The RRO was also intended to serve this role. In AFMA’s view the RRO is a deeply flawed scheme that has not led to greater investment in firming capacity, as demonstrated by the fact that the ESB’s work and this review are required. We consider that the RRO was flawed as it attempted to use the financial market to drive physical market investment decisions and its intermittent nature, with a complicated annual trigger mechanism, failed to provide the certainty needed to support new investment. We think the better approach is to directly incentivise physical market investment, this approach has been shown to work for both the Renewable Energy Target (RET) and the CIS, and we are confident that it could be applied to firming capacity. The RRO should be repealed once the new mechanism is in place.

AFMA’s members are open to exploring a range of options for this mechanism and would be willing to support a number of sound option that policy makers are confident of being able to implement.

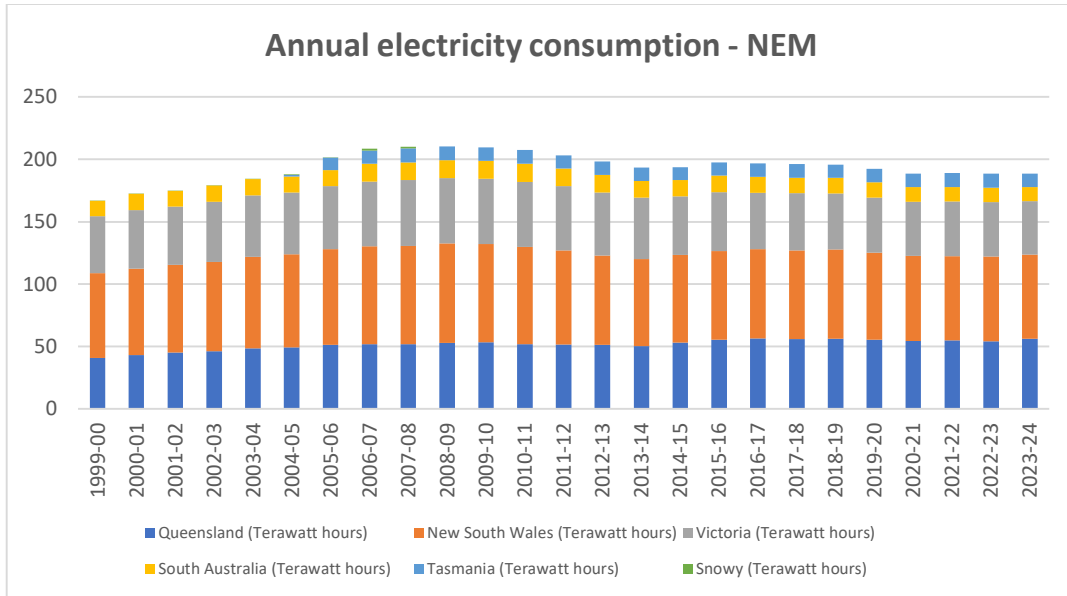
AFMA Recommendations	
iii.	The Panel should work with industry to develop a mechanism to bring forward investment in firming capacity.
iv.	The RRO should be repealed once the new mechanism is in place.

5. Renewable investment

The goal of the Panel is to review the NEM settings to ensure they support the development of firmed renewable generation. AFMA considers that firming capacity is currently the greater challenge for the market. It is challenging to comment on the extent to which new policies are needed to support renewables development until it is clearer what volume of renewables will be built under the CIS. The stated goal of the CIS is for renewable generation to be 82% of total generation by 2030. If the CIS reaches this goal, then the market will have a very high level of renewable penetration and there may be very limited need for policies to incentivise new investment, alternatively if the CIS falls short of this target, then there may be a need for further policy support.

An additional complication is the uncertain outlook for demand growth in the NEM. Historically demand growth has tracked economic growth, but this link appears to have been broken in the mid-

2000s as the Australian economy has become less energy intensive and operational electricity demand has been flat or declining for nearly 20 years (see below).



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If this trend continues there may be limited need for new renewable investment post the CIS but if electricity demand were to increase as a result of electrification or new sources of demand, then policy may be required to ensure that the rate of renewables remains high.

While we are unclear about the extent to which additional policy is required to support increased VRE investment, we suggest that policies should be appropriately scaled to reflect the need for new investment and that any mechanism should not limit the ability of new VRE to participate in the financial market.

AFMA Recommendations

- v. Policy to support new VRE should:
 - a) be appropriately scaled to reflect the need for new investment.
 - b) should not limit the ability of new VRE to participate in the financial market.

AFMA would welcome the opportunity to discuss this submission further and would be pleased to provide further information or clarity as required. Please contact me at lgamble@afma.com.au or 02 9776 7994.

Yours sincerely,

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