



MORRISON&CO

The Energy Security Board

Emailed to: info@esb.org.au

8th March, 2018

Response to NEG Draft Design Consultation Paper

Dear Board,

HRL Morrison & Co is pleased to have the opportunity to comment in response to Energy Security Board's Draft Design Consultation Paper, of 15th February, on the National Energy Guarantee.

MORRISON & Co

Morrison & Co has been investing in infrastructure assets for more than 20 years, including electricity businesses in Australia, New Zealand and the United States. It manages the listed company Infratil Limited. Infratil owns a majority stake in Tilt Renewables, which is a significant operator and developer of renewable generation in Australia and New Zealand. Infratil has also started up an electricity and gas retail business in Australia, Lumo, which over a period of 10 years grew to over 500,000 customers and included peaking generation.

NATIONAL ENERGY GUARANTEE

Achieving the NEG objective

The end goal of the NEG is to facilitate:

- Reliability of supply
- Reduced carbon emissions
- Lower prices

Physically bringing this about requires further investment in generation capacity (or demand side management) and in particular investment in low emissions capacity if all three objectives are to be advanced. The design of the NEG should be aligned with achieving this outcome – it should facilitate the desired investment.

EMISSIONS REQUIREMENT

Calculation of emissions per MWh

The consultation paper asks for stakeholder views on how a retailer's emissions should be determined for various types of contracts.

Contracts where the generation source can be specified

It is noted that gentailers (vertically integrated retailer with generation of their own) can organise internal contracts between their retail load and generation arms so as to identify a generation source, and thus an emissions quantity, for much of their demand. Similarly retailers holding PPAs with specific generation sites would be able to organise an allocation to specific retail loads.

For other retail demand, it is not possible to internalise the allocation of emissions to specific retail load. For general energy contracts (as opposed to LGCs) between parties, there has not been a need to contractually specify a generation source. Retrospectively constructing a network of bilaterally agreed, but unambiguously reconciled system-wide, contract paths to individual generators for all energy settled would be a burdensome administrative addition to the current NEM framework of a gross pool. Such a requirement would also strand the derivative contracts currently providing the main means to signal forward pricing and to manage price risk.

Contracts that specify neither emissions per MWh nor a generation source

Before detailing design requirements, we should recall the objective. The NEG is aiming to bring about an orderly and cost effective reduction in carbon emissions. Investment in new lower emissions capacity is incentivised by the difference in prices achieved by new low and by new high emissions plant. For cost effective improvement in emissions, the NEG design should make those differences in price clear and certain to prospective investors, so as to achieve the most efficient level of investment without unnecessary margin for risk. If the present array of forward contracts is unable to give guidance on the value of lower emissions plant, a market in other contract types should be developed to facilitate investment decisions and lower their risk premia.

This purpose, of price signaling to investors, applies regardless of any changes to market rules that allocate emissions to spot market transactions. Defining an emissions value for every MWh transacted is not necessary when the objective is to limit the annual quantity of emissions. The cumulative effect on climate change is not sensitive to 'ownership' of the emissions.

While it is always possible to bundle different attributes into a combined price, it is not possible to avoid having separate price components identified for the purpose of rewarding suppliers and charging purchasers. Imposing an emissions constraint

effectively creates a separate shadow price, which must be recognised when making investment, operation and consumption decisions. In the case of a NEM-wide emission intensity requirement, the shadow price clearly applies to the level of emissions - ie MWh generation * intensity. The suggestion of emission specified swaps, around which a secondary market can develop and discover the price differences, is a device in effect to force the market's shadow price to appear.

How the contract market may evolve to support compliance with the emissions requirement?

Such shadow prices can be more or less transparent depending on the market arrangements. The efficiency of managing the risks arising from the emissions obligation depends on the liquidity of the observable market transactions. Gentailers will have access to much of the range of generation with different emissions intensities. Other retailers will need a market to provide the instruments for managing their emissions risks. Without comparable ability to address new emissions requirements, new, small or specialised retailers would be at a competitive disadvantage, which would likely lead to increased examination of retail price controls.

Further it would be more effective to hedge emissions risk with instruments separate from the energy spot and contracts market. Imposing a regime that imputes transactions of emissions, according to an energy trader's hedge position, would lead to optimising adjustments unrelated to just energy price risk. Separating emissions management would minimise distortion to the efficient competitive market operation, risk management, investment etc., which is provided through the current NEM arrangements.

A comparatively simple cheap and efficient mechanism (with low barriers to entry) would be to have a centralised national market for emissions deviations relative to the emissions requirement (ie credits and debits), and let the market determine the price for "emissions corrections" that just clears the market. In this case, it could be done quite simply since the price should not vary by region or by individual time period, but would slowly evolve over time reflecting the target trend in emissions intensity – accounting for any banking/borrowing facility. There really only needs to be one product to trade (or 2 bundled products with different emission intensity) to establish a price for emissions corrections and hence the implied value for deviations of emissions intensity.

There would be a strong incentive for a secondary market of this type to emerge. The "product" is relatively simple and the need for trading the "emissions corrections" would be high – even between the big gentailers, and it would be difficult to make this discriminatory. A liquid transparent spot market could develop with associated forward contract markets. Once a price is observable and the market is sufficiently liquid, renewable generators should be able to sell a zero emission attribute for a market price related to their 'over performance'. Indeed many small stand-alone generators would want a market into which emissions improvements can be sold, or the cost of high emissions defined.

Are there alternative schemes?

The management of emission trajectories is by way of the choosing the generation to operate and the generation in which investment is warranted. Even if the machinery to implement such trajectories, by way of retailer obligations, can be designed, one would expect that a more elegant solution would be to apply the mechanisms such that the emissions requirement is allocated between generators, rather than retailers. This is consistent with retailers not really being part of the physical supply chain, but rather efficient managers of the risk in selling energy, from a spot wholesale market, as fixed price retail energy. As such, they are not natural underwriters of new generation capacity.

The operation of the emissions requirement in particular jurisdictions

Whatever the machinery used to establish the legal basis for allocation of the emissions obligation, the policies of individual states should be acknowledged. History suggests that these will continue to evolve. In other markets, such as USA, it is common for states to run schemes in addition to the federal framework.

As market participants take actions according to the property rights of emissions attributes, there should be confidence that state schemes will not lead to double counting or loss of expected rights. If the NEG is clear, stable and well designed, it would seem more likely that new state schemes will develop so as to be broadly compatible with the NEM-wide arrangements. For example, the national RET scheme has provided a standard way to define what is “renewable” electricity.

We also need to allow for corporates seeking access to low emissions energy, so as to meet other social or policy obligations, currently by way of PPAs with renewable energy developments.

RELIABILITY REQUIREMENT

Triggering the requirement

The consultation paper asks for stakeholder views on what trigger point would be most appropriate and proportionate to the identification of the reliability gap.

Design of reliability requirement

The reliability requirement creates the incentive to invest in dispatchable resources. The proposed design is aimed at incentivising retailers to invest in dispatchable resources.

Competitive retailers are not really in a position to underwrite new capacity as they don't “own” customers for more than a relatively short period. If the objective is to get sufficient

investment without increasing risk premia, it is desirable to facilitate forward markets with enough liquidity for efficient risk management. This can be achieved when the dispatchability obligation being allocated to retailers is standardised and tradeable. If retailers are forced to invest themselves, those with significant balance sheet (ie gentailers) would have significant competitive advantage, and the market would tend to become more concentrated.

What trigger would be most appropriate and proportionate to the identification of the gap?

The reliability obligation arises from a gap being identified in the amount of dispatchable energy available for the total demand. It may be that an identified forecast shortage of dispatchable resources is occasional or slight. It might not be a proportionate response to implement always some specific regime of contract analysis and obligation allocation. Intermittent obligations would not result in a strong driver for a secondary market to evolve to entice the most efficient investments.

There is a problem to be addressed, but the consultation document does not address why the existing framework has not delivered signals in the market for effective integration of intermittent generation. The current spot market (with current high cap price) should provide sufficient efficient incentives – provided the market is allowed to ‘work’. Our view is that new entry by intermittent generation has been accelerated by a combination of market interventions, such as the RET scheme, and by ‘on the meter’ long term PPAs where the buyer of the PPA, in particular State agency buyers, have not always had clear obligations or incentives to evaluate the consequences of correlated intermittency. (By “correlated” intermittency, we are recognising the difference between a collection of generators with frequent but random outages, and generators, like wind turbines, that tend to all decrease output at the same time.) The aggregate effect has been to increase the systemic risk from correlated intermittency, until market better adjusts to its consequences.

When a dispatchability gap is identified, there is hierarchy of possible responses to address reliability in a proportionate way:

- For a forecast temporary gap in dispatchability, a small amount of reserve trader activity, similar to what has happened recently with the procurement of additional reserves by AEMO for this summer, is a pragmatic response that is not too disruptive for market operations and incentives.
- If there is an indication that current market incentives sometimes leave the system short of dispatchability, a properly designed type of capacity market can address that need (as happens in many other jurisdictions). It might be that the

price of the dispatchability requirement is normally low with not many participants active in this market, but the mechanism would be intended to minimise disruption to efficient market operation and investment.

- For a sufficiently severe forecast gap in dispatchability, a mechanism to allocate obligations to individual retailers can be available as a back-up. As an intervention, a requirement for every retailer to have certified contract adequacy is more difficult to implement in a deregulated market, such as the NEM, than where retailers are regulated monopolies. The danger of an overly zealous response is to weaken the market's competitive structure.

By retaining the ability to respond to any forecast dispatchability shortfalls in a proportionate way, the NEG can provide the required assurance of reliability (combined with other mechanisms) without unnecessarily threatening the market's competitiveness and drivers for efficient prices.

Thank you for the opportunity to respond to the consultation paper. Please feel free to contact me should you wish to discuss any points further.

Yours sincerely

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