

13 July 2018

Energy Security Board

Submission by email to: [info@esb.org.au](mailto:info@esb.org.au)

### **Snowy Hydro Limited Response to Draft Detailed Design Consultation Paper**

Snowy Hydro Limited welcomes the opportunity to comment and provide feedback on the National Energy Guarantee (NEG) - draft detailed design consultation paper.

Snowy Hydro Limited is a producer, supplier, trader and retailer of energy in the National Electricity Market ('NEM') and a leading provider of risk management financial hedge contracts. We are an integrated energy company with more than 5500 megawatts (MW) of generating capacity. We are one of Australia's largest renewable generators, the third largest generator by capacity and the fourth largest retailer in the NEM through our award-winning retail energy companies - Red Energy and Lumo Energy.

The NEG is an important development in achieving a practicable energy and carbon policy. The NEG should be built on the strengths of the existing wholesale market design which for two decades has been a success based on the centralised decision making. The impact of any new market mechanisms imposed on the existing market needs to be considered carefully to avoid any unintended consequences. In particular the issues Snowy Hydro has a strong view on are:

- Any proposal to exclude pre-1997 generation would violate competition and technology neutrality principles, would be detrimental to retail competition, and would not incentivise hydro generation to provide energy services such as system strength and inertia as the NEM transitions to a renewable and intermittent generation mix. Snowy strongly opposes any variation of this proposal.
- The Market Liquidity Obligation if implemented would be ineffective and clearly misguided. There is no magic pudding of unused capacity that can be conjured up by regulation. The proposal is likely to encourage financial shenanigans by Participants exploiting competitors' enforced Buy/Sell market making obligations.
- Trade reporting is not required. It will give more advantage to financial speculators who sit outside the NEG, than to new entrant/small retailers. There already exists various sources of OTC trade reporting. For instance Brokers report OTC trades. In addition, the AFMA annual surveys cover the remaining bi-lateral OTC trades. Hence mandated trade reporting across the whole industry may only marginally increase transparency but would come at a significant cost. This cost benefit trade would not justify trade reporting. Snowy Hydro advocates that if the Reliability Guarantee is triggered the independent Auditors report to the Australian Energy Regulator (AER) would be sufficient to check compliance.
- With the existing 9 month process there is more than sufficient time for the Australian Energy Market Operator (AEMO) to procure off market reserves. Hence there is no need to replicate processes and the procurer of last resort should be aligned with the Long Notice Reliability and Emergency Reserve Trader (RERT).

In closing our message is don't rely on market interventions. Have faith in markets. With more policy certainty through the NEG, the market will have sufficient certainty to deliver investments which will be in the long term interest of consumers.

Snowy Hydro appreciates the opportunity to respond to the Consultation paper. Any enquiries should be addressed to me by e-mail to [kevin.ly@snowyhydro.com.au](mailto:kevin.ly@snowyhydro.com.au)

Yours sincerely,

A handwritten signature in black ink, appearing to read 'K. Ly', with a stylized flourish at the end.

Kevin Ly  
Head of Wholesale Regulation

## EXECUTIVE SUMMARY

Overall Snowy Hydro is supportive of the NEG framework that should allow the integration of energy and climate policy. The current market design and contracting arrangements will complement the NEG's ability to deliver new investment to lower emissions without compromising reliability and security. Our broader views on how the NEG could be implemented without adversely impacting on the factors underwriting the success of the NEM to date are as follows:

### Emissions Guarantee

- The Emissions Guarantee is on the right track, it is a framework which is scalable with Australia's future international carbon emissions commitments. The proposed design is flexible and can adjust to market changes over time while addressing the overall emissions reduction target.
- Australia needs to do its fair share of abatement domestically and the economy needs to have the necessary infrastructure and capability to reduce emissions. Hence Snowy Hydro advocates:
  - There should be limited banking and borrowing of generation allocation. An annual percentage of 5 per cent is supported.
  - Should the Government allow market customers to use offsets to meet their compliance there should be a annual limit of 5 per cent and assurances that the international offsets are from a credible source.
- The emissions registry should be confidential with only individual unallocated generation published. Revealing confidential transactions would compromise counterparties and positions could adversely affect efficient market outcomes.
- The breadth and depth of public data available through Australian Energy Market Operator (AEMO) and National Greenhouse and Energy Reporting (NGERS) is sufficiently wide and deep to allow the AER/AEMO to analyse and make an informed assessment of the state of the emissions requirement through the emissions registry.
- The consideration that pre-1997 renewable generation be excluded from the emissions guarantee is strongly opposed on the following grounds:
  - Violates competition and neutrality principles. There is no justification to target large hydro generation. In an increasingly intermittent generation mix, large hydro generation should be incentivised to provide flexible energy and ancillary services to the NEM.
  - If implemented would be detrimental to retail competition as this would put Snowy Hydro's second tier Retailers Red Energy and Lumo at a disadvantage to other Retailers.
  - Would raise uncertainty for all current and future investments. For instance, why should the cut-off be 1997 and not 2020 (a year before the Emission Guarantee takes effect). That is, all generation in operation at year 2020 with an emissions intensity below the target intensity would be mandated to receive a baseline based on their historical generation and would only be able to use generation allocation/emission rights for their generation above this historical baseline.
- The NEG design should avoid unnecessary complexity. Exempting the first 50,000 MWh of any market customer's load will add complexity to the majority of players in the market and drive strategic incentives on Market Participants depending on their customer load size.

## Reliability Guarantee

- Snowy Hydro commends the ESB for:
  - Recognising internal generation as qualifiable contracts to meet internal Retailer obligations. The NEG's primary objective is to integrate energy and climate change policies and not unnecessarily constrain participants' freedom to contract.
  - Recognising centrally cleared and bespoke Over the Counter (OTC) contracts play key roles in contract/hedge risk management.
  - Recognition that the effectiveness of the Reliability Guarantee depends heavily on the accuracy of demand forecast - hence we support independent checks and balances on AEMO's demand forecasting.
- The firmness of qualifiable contracts is central to the effectiveness of the Reliability Guarantee. Hence qualifiable contracts must recognise the quality and duration of the supply and/or demand response source. An appropriate duration criteria is a source that can meet a period of peak demand for 4 continuous hours. Snowy Hydro has performed fundamental analysis that supports this position.
- Trade reporting and trade repositories would be expensive to implement and a daily administrative burden on the industry. A viable alternative to improve transparency without unnecessary cost burdens is to utilise Broker recorded OTC trades and for the industry to work with the Australian Financial Markets Association (AFMA) annual surveys to get more granular OTC reporting.
- Large vertically integrated retailers being required to support liquidity in markets for the period of the gap will not physically increase supply and ensure the reliability of the NEM. The Market Liquidity Obligation (MLO) will impose potentially very large trading risk on these entities with no improvement on reliability.
- The book-build approach is unnecessary. The market already operates efficiently by allowing participants to enter into their own trades. Financial market participants can also conduct their own bookbuild process without the need for AEMO to set procedures and guidelines that detail how the overall process would be conducted.
- Reliable and timely forecasts regarding the nature and duration of the reliability gap is important and the Australian Energy Regulator (AER) acting as the independent entity to assess and decide on a request from AEMO to trigger the reliability obligation is welcomed.
- The Procurer of Last Resort should be aligned with the existing nine month Long Notice RERT. There is no justification to duplicate multiple mechanisms targeted at the same market issues. The reliability settings of targeted levels of unserved energy and the Maximum Price Cap (MPC) should be used as the primary investment signals for additional supply.

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## **1. EMISSIONS REQUIREMENT**

Snowy Hydro supports the proposed design of the emissions requirement. The proposed design is flexible and can adjust to market changes and international climate change commitments over time.

### **1.1. Setting and reviewing the electricity emissions target**

Snowy Hydro is supportive of policies which can achieve the Government's stated emissions reduction target, maintain system security and reliability, and continuing efficient energy costs for consumers. National consistency should be a priority with regulatory frameworks which are in the long term interests of consumers. A consistent approach across the NEM should be taken to energy policy, with a single trajectory of electricity emissions targets set under the NEG. The coordination between governments through the NEG would mean that one overarching policy and one overarching mechanism where individual state and territory renewable energy targets would be incorporated into the NEG framework.

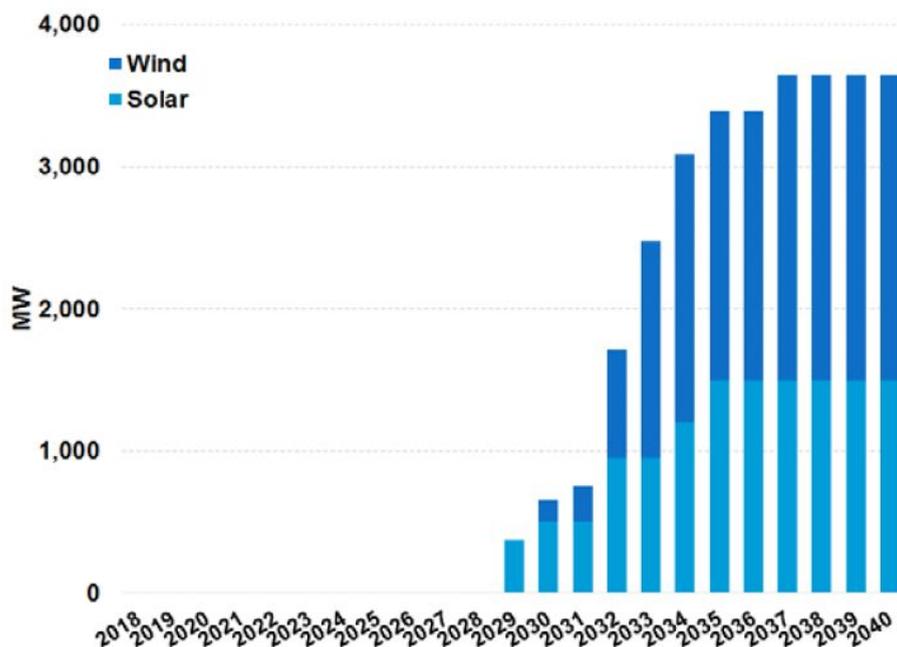
The lack of a national, coordinated approach to climate and energy policy settings has created distortion in the market and an uncertain environment for investment in new generating capacity to meet the future needs of the NEM. Snowy Hydro therefore supports the Government's proposed approach to setting the initial electricity emissions targets and amending future targets under the NEG. There is an important role for governments to play in setting stable policy frameworks, then letting markets work to deliver secure, reliable energy and consumer outcomes in response to consumer demands. Australia's commitment to follow a trajectory consistent with reducing emissions by 26 per cent below 2005 levels by 2030 is welcomed. The Commonwealth Government's proposal to initially set the electricity emissions target for ten years, from 2021-30 and to undertake regular five yearly reviews will ensure ongoing consistency with Australia's international commitments and further enhance investor certainty.

We support the Government taking account of variations in demand when the next five year set of electricity emissions targets are set in 2025. We agree that changing the target every year based on revised demand forecasts would create uncertainty and impact on investment.

#### **1.1.1. Snowy 2.0 will assist meeting the Emissions Guarantee**

An independent study by Marsden Jacob Associates (Marsden Jacob) highlighted the market benefits of Snowy 2.0 across numerous emissions targets. The report noted that Snowy 2.0 would have a profound influence on the NEM outcomes using the Large-scale Renewable Energy Target (LRET) and the Victorian Renewable Energy Target (VRET) development scenarios. Snowy 2.0 would provide substantial market benefits to the NEM and economic benefits to individual retailers through its renewable dispatchable capacity, storage size, location in the NEM, fast response and inertia. Figure 1 below shows the level of additional renewable investment that would be possible with the market benefits derived by Snowy 2.0.

**Figure 1: Additional renewable generation development with Snowy 2.0, LRET+VRET scenario (MW)<sup>1</sup>**



## 1.2. Emissions Registry and flexible compliance options

Snowy Hydro understands the role of the emissions registry and flexible compliance options that will likely be in place under the emissions reduction requirement.

Snowy Hydro strongly supports registry confidentiality which would require transactions to be confidential and only individual unallocated generation published. We are concerned that revealing confidential transactions would compromise counterparties and positions that could affect efficient market outcomes.

The breadth and depth of this public data through AEMO and NERS is sufficiently wide and deep to allow the AER/AEMO to analyse and make an informed assessment of the state of the emissions requirement. We strongly caution against complying market participants to divulge confidential data/information which would undermine certainty and confidence in operating in the NEM and hence would deter new investment in the NEM and/or create increased costs for these new investments as investors would incorporate an additional risk premium for investing and operating in an intrusive regulatory environment.

We support the ESB's preference that only some market-wide information will be made public with the greater transparency expected to help smaller market customers find more opportunities to allocate output within the registry. The use of unallocated generation being published should provide transparency in the market.

<sup>1</sup> Source: Marsden Jacob, 2017, "NEM outlook and Snowy 2.0"

<<[http://www.snowyhydro.com.au/wp-content/uploads/2018/01/MJA\\_ReportFinal\\_Jan2018.pdf](http://www.snowyhydro.com.au/wp-content/uploads/2018/01/MJA_ReportFinal_Jan2018.pdf)>>

### 1.2.1. Pre-1997 Renewable Generation

Snowy Hydro does not support the consideration that pre-1997 renewable generation may be excluded in the emissions reduction requirement. The NEG is substantially different to the Renewable Energy Target (RET). The RET is a policy to encourage additional renewable investment. The hydro baselines are an artefact of the RET conceived 17 years ago, in a very different context to today. In comparison the NEG is a technology neutral policy that aims to integrate reliability with meeting sectoral emissions.

The exclusion of pre-1997 renewables generation would effectively:

1. Violate competition and neutrality principles. There is no justification to target large hydro generation. Large hydro generation should be incentivised to provide energy and ancillary services to the NEM and the distinction 'old' and 'new' renewables is no longer relevant. The current context of increasing intermittent and variable wind and solar generation will mean the Snowy scheme will become even more important to fill in the gaps and provide system stability services. Any policy that reduces the incentives for the Snowy scheme to provide these services would not be in the long term interests of consumers.
2. If implemented it would be detrimental to retail competition as this would put our second tier Retailers Red and Lumo at a disadvantage to other Retailers.
3. Would raise uncertainty for all current and future investments. For instance, why should the cut-off be 1997 and not 2020 (a year before the Emission Guarantee takes effect). That is, all low emissions generation in operation in year 2020 would be mandated to receive a baseline based on their historical generation and would only be able to use emissions rights for their generation above this historical baseline.

The Commonwealth Government only recently highlighted that "*Snowy Hydro is a critical player within the National Electricity Market (NEM). The company owns and operates 5500 MW of generation capacity including the iconic Snowy Mountains Scheme.*"<sup>2</sup> The Treatment of pre-1997 renewables proposal would adversely target Snowy Hydro and Hydro Tasmania renewable assets, is not a technology neutral approach, and would be detrimental to retail competition.

Snowy Hydro refers to the ESB's note that "*all renewable generators will contribute to achieving the emissions reduction trajectory established for the electricity sector under the Guarantee*"<sup>3</sup> which can only be achieved through a technology neutral approach.

### 1.2.2. Applying the emissions reduction requirement

Snowy Hydro is concerned with the additional measure by the ESB to support retail market competition by including that the first 50,000 MWh of any market customer's load will be

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<sup>2</sup> Commonwealth Government Media Release, 2018, "*Historic Snowy Deal Complete*"

<sup>3</sup> ESB, 2018, "National Energy Guarantee Draft Detailed Design Consultation Paper", pp32

exempt from the emissions reduction requirement. This proposal will add complexity to the majority of players in the market and drive strategic incentives on market participants depending on their size.

### **1.2.3. Flexible Compliance options**

As previously noted in Snowy Hydro's NEG Consultation Paper<sup>4</sup> submission we welcome the ESB's intention to provide flexibility for retailers to meet the emissions guarantee reducing instances of non-compliance, and lowering the costs of complying with the mechanism. Snowy Hydro supports the limit proposed by the ESB for market customers to only be allowed to carry forward up to 5 percent of the first year's electricity emissions target per MWh of load plus a fixed amount of 60,000 tCO<sub>2</sub>-e.

The 5 per cent fixed percentage will not limit access to low emissions generation that others in the market require to deliver full compliance under the emissions reduction requirement.

### **1.2.4. The role of offsets**

Should the Government allow market customers to use offsets to meet their obligations under the emissions element, Snowy Hydro supports the Government's proposal to cap the number of offsets that could be used across the electricity sector with a review every five years. The Government could review the use of offsets under the NEG in 2025 along with setting the next five years of targets.

The use of offsets should be limited to enable a lowest cost outcome while still meeting the overall objectives of the emissions requirement. International offsets should also be limited on the grounds of the quality of the source and the driver to develop domestic abatement capability. The combined use of domestic and/or international offsets should be capped at 5 per cent. Only high quality/credible international offset units should be allowed under the NEG compliance options.

## **2. RELIABILITY REQUIREMENT**

### **2.1. Qualifying Contracts**

Snowy Hydro understands that liable entities need certainty as to what instruments will qualify for compliance under the reliability obligation. This can be successfully achieved by building on the existing strengths of the market. The NEG should ensure it enhances rather than undermines the liquidity and transparency in the wholesale electricity markets while ensuring that compliance options remain flexible.

#### **2.1.1. Firmness Factor and the need for at least 4 hours of continuous supply**

Snowy Hydro strongly supports the ESB's proposal that if the Reliability Guarantee is triggered, "firmness" of contracts used for compliance will be taken into account. The

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<sup>4</sup> Snowy Hydro submission to the "National Energy Guarantee - Draft Detailed Design Consultation Paper".

firmness factor that applies to each contract should consider characteristics such as strike price, volatility and likelihood of cover over the period of the gap.

With the energy industry's investment focus shifting to a combination of firm lower emissions gas generation, renewables and enabling technologies, more than 3,000 megawatts of firm generation exited the market in Australia over the last few years. For an electricity system to work properly and contribute to reliability there needs to be sufficient dispatchable and flexible capacity that can operate continuously on a sustained period of time.

Hence qualifiable contracts must recognise the quality and duration of the supply source. Snowy Hydro preference is an appropriate duration criteria where the supply/demand source can meet a period of peak demand for 4 continuous hours.

### **Supporting Analysis**

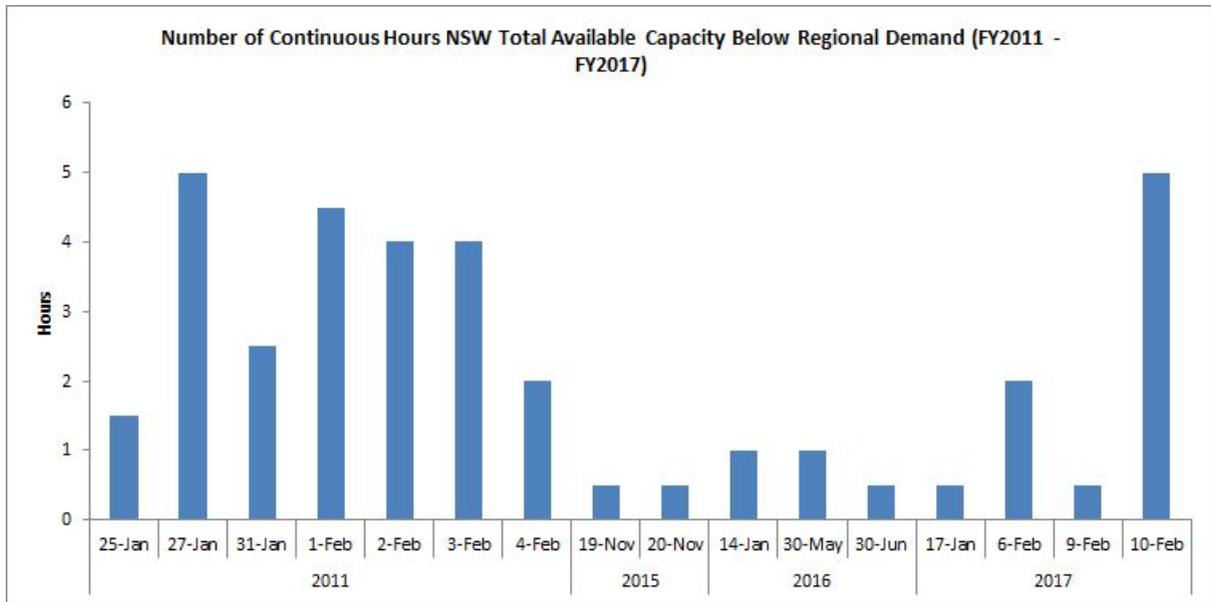
The following graphs shows for each region from the period between financial year 2011 to 2017 the number of **continuous hours** in each NEM Region where the total available capacity was **lower** than the regional demand. Please note the following:

- Interconnector flows were not included due to the firmness of the flow is dependent on a number of factors including binding transmission constraints, diversity of coincident peak demand in adjacent regions, and spot price differences between regions.
- Available Capacity does not mean that all the available capacity could be used when the market requires it due to the risk of unreliable supply and forced outage risk.
- The NEM's safety net mechanism of the RERT would be activated before Available Capacity is at or below the regional demand to satisfy not breaching the Lack of Reserve 2 (LOR2) condition. That is, there needs to be sufficient reserve supply to meet demand following the loss of a the largest credible contingency for the Region.

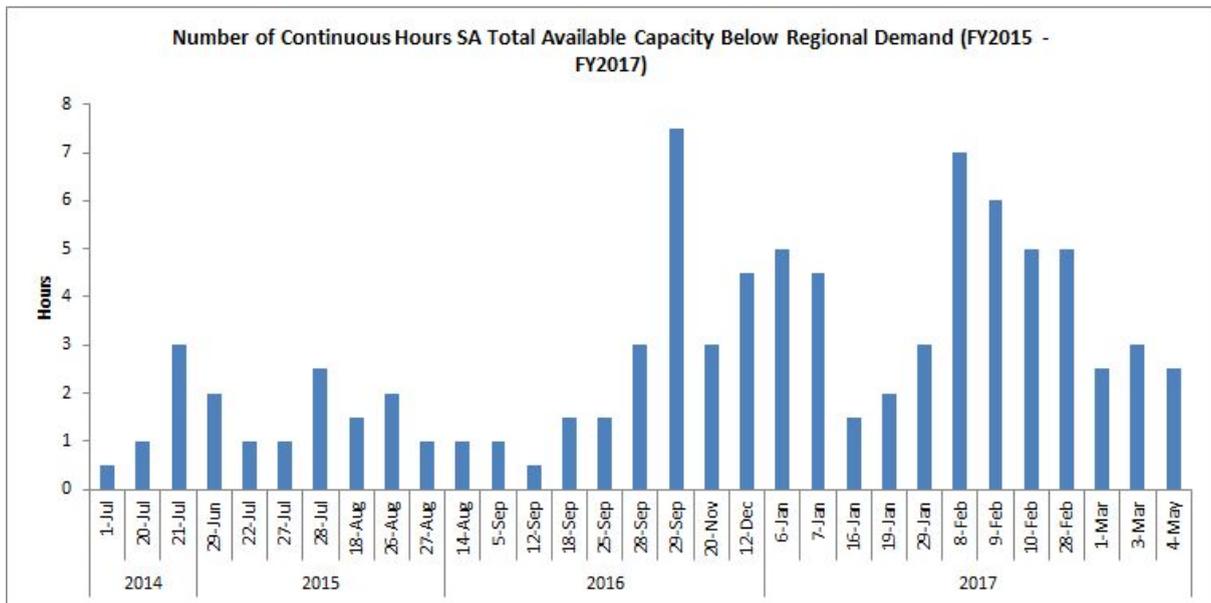
Hence, it can be seen that comparing Regional Available Capacity to Regional Demand is an appropriate proxy for determining whether there is sufficient on-market supply to meet demand without resorting to off-market / market interventions to ensure there is no load shedding.

The following graphs illustrative the need for supply/demand response sources that can sustain output for a continuous period.

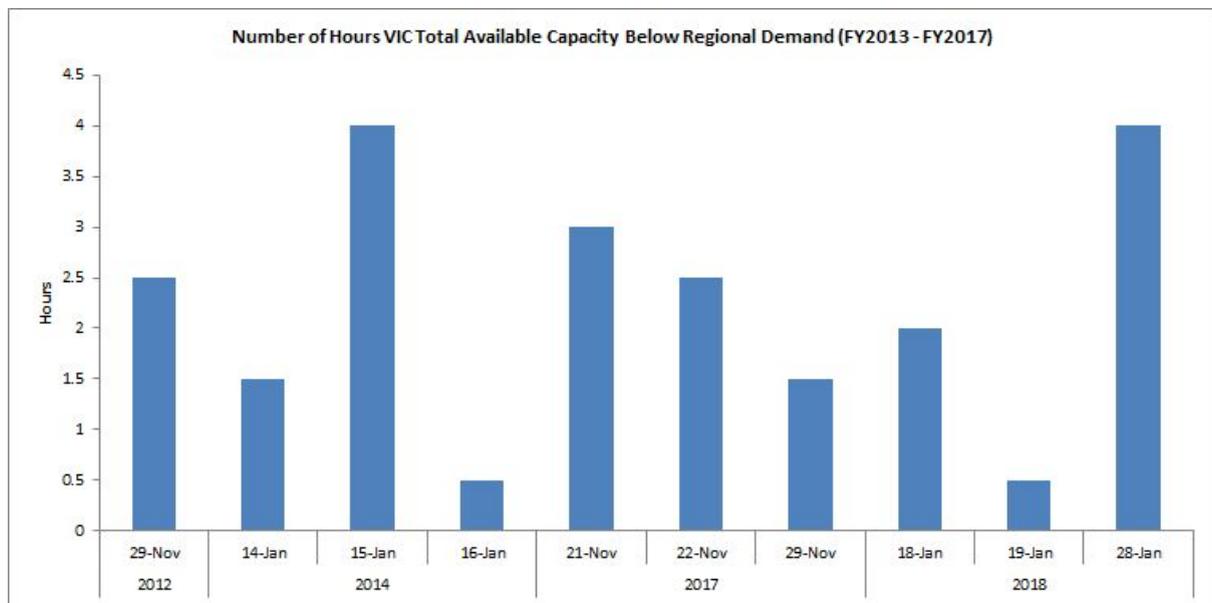
**Figure 2: NSW incidences where Available Capacity was below Regional Demand**



**Figure 3: SA incidences where Available Capacity was below Regional Demand**



**Figure 4: Victoria incidences where Available Capacity was below Regional Demand**



**In summary:**

In the three regions of NSW, South Australia, and Victoria there has been numerous periods where the Regional Available Capacity was below the Regional Demand for at least 4 continuous hours. This analysis justifies the need to assess the duration of supply of qualifying contracts. An assessment based on a Trading period (ie. 30 minutes) would be too short and would give a false sense of reliability that there is sufficient dispatchable supply to meet peak demand. A much longer duration of for instance 12 hours may be too conservative and result in overbuild of dispatchable sources. Hence the ability of the dispatchable source to continually provide supply/demand response for at least 4 continuous hours would ensure that the NEM has sufficient reliable supply/demand response to meet a prolonged period of peak demand without resorting to market interventions.

It is envisaged that as the NEM’s current fleet of dispatchable generation progressively retires the duration of continuous response would need to be increased beyond 4 hours to meet system reliability requirements.

**2.1.1.1. Other issues related to firmness and price discovery**

It is important that the source must have a high level of reliability such that it can be relied on to start-up and supply energy when it is required.

As the NEM generation mix becomes more variable and intermittent, it becomes more imperative for the NEM’s central dispatch to capture the operational intent of Market Participants and improve the price discovery process for all Stakeholders to optimise their generation and consumption decisions. We therefore firmly believe that dispatchable should mean that wholesale demand response is able to be centrally dispatched in the Spot market and it must act in good faith as per the relevant provisions in the National Electricity Rules.

Snowy Hydro welcomes the AER assessing compliance with the Reliability Guarantee using an external auditor’s assessment of the liable entities’ qualifiable contracts. The Auditor

would assess whether a liable entity has adopted a reasonable approach to measuring firmness. The approach will provide assurance to the AER that reported positions are realistic and include only qualifying contracts that meet a period of peak demand.

### **2.1.2. Generation with vertically integrated retailers**

Snowy Hydro commends the ESB for recognising that vertically integrated retailers should be allowed to use their own generation to meet their reliability obligation. It is important for market efficiency that all types of contracts including OTC and load following arrangements would qualify as qualifiable contracts to meet the Reliability Guarantee.

Snowy Hydro believes that if there are concerns with vertical integration, they should be addressed through the Australian Competition and Consumer Commission (ACCC) rather than in an add-on to the core objectives of the NEG.

There should be no restrictions on the use of internal hedges to satisfy the Reliability Guarantee. Any restrictions would likely impose inefficiencies and higher cost on vertically integrated entities without any clear corresponding benefits. The NEG's primary objective is to integrate energy and climate change policies. The level of market concentration is a matter for the ACCC.

Snowy Hydro notes the policy assessment of vertical integration was performed by the Energy Reform Implementation Group (ERIG) in 2007. ERIG<sup>5</sup> noted suggestions that vertical integration could be exacerbated by financial market imperfections. If this is the case, it does not suggest vertical integration is a problem *per se*. Rather, it suggests barriers to entry into financial markets are a problem, and the correct policy response is to deal with the barriers to entry.

In summary, the NEG is not the right place to address market concentration issues. Bolt on policy objectives would most likely unnecessarily constrain participants' freedom to contract, in turn raising hedging costs and ultimately, electricity prices.

### **2.1.3. Ensuring liquidity, transparency are not negatively affected by the reliability obligation**

Snowy Hydro does not support the proposals from the ESB to manage concerns about the liquidity and transparency of contract markets in the electricity market. We believe that once the Reliability Guarantee is triggered the independent Auditors report to the AER would be sufficient to check compliance with the Reliability Guarantee.

### **2.1.4. Trade Repositories**

Snowy Hydro does not support that all qualifying contracts must be reported into centralised trade repositories. The ESB noted that *"in 2009 at the G20 summit, Australia committed to practices to improve the transparency of OTC derivatives and risk management practices in the wake of the global financial crisis (GFC)."*<sup>6</sup> This is incorrect as those GFC reforms arose

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<sup>5</sup> ERIG, Energy Reform – the way forward for Australia, page 126

<sup>6</sup> ESB, 2018, "Technical Working Paper - Qualifying Contracts", pp 14-15

because of concerns with the need to manage system risk arising from counterparty credit exposures (for example, for interest rate derivatives). This has not previously been a problem in the electricity sector, and for this reason electricity derivatives were exempted from mandatory clearing requirements introduced in Australian financial markets. Should any design be implemented it should not impair efficiency or increase electricity costs for consumers.

The repositories will require significant IT changes and time setting up systems. We are therefore concerned that the trade repositories will add costs which far outweigh the benefits.

#### **2.1.5. Trade Reporting**

The ESB proposes a trade reporting approach. Snowy Hydro is concerned that trade reporting could be expensive to implement and a daily administrative burden on the industry with no clear benefits. It will give more advantage to financial speculators such as banks and hedge funds who sit outside the NEG, than to new entrant/small retailers. There already exists various sources of OTC trade reporting. For instance Brokers report OTC trades. In addition, the AFMA annual surveys cover the remaining bi-lateral OTC trades. Hence mandated trade reporting across the whole industry may only marginally increase transparency but would come at a significant cost. This cost benefit trade-off would not justify trade reporting.

Instead Snowy Hydro proposes utilising the Broker recorded OTC trades and that the Industry works with AFMA to improve the annual OTC survey to get more granular reporting thereby increasing transparency.

This credible survey will allow greater visibility of of bi-lateral electricity hedging products and backfill any missing data allowing an extra source of information for public use. Snowy Hydro agrees with the ESB that this approach *“may be particularly beneficial to smaller entities that rely on this style of arrangement.”*

#### **2.1.6. Market Liquidity Obligation**

Snowy Hydro does not support large vertically integrated retailers being required to support markets for the period of the gap. By definition once the Reliability Guarantee is triggered the market will be in a tight supply/demand situation and there is no surplus physical supply capacity and therefore forcing Gentailers to perform a market maker function would not physically increase supply and ensure the reliability of the NEM. The MLO will impose potentially very large trading risk on these entities.

It is unclear with energy limited generators what the opportunity cost of their generation may be. Hence suggestions of forcing the entity to post tight bid/offer swaps up to its registered capacity is inefficient when the opportunity cost of these energy limited plant are changing all the time. The MLO requirement would simply increase risk to the Gentailer which ultimately has to be passed through to consumers. It also risks an inefficient use and misallocation of scarce resources for fuel-constrained plant, again worsening consumer outcomes.

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<sup>7</sup> ESB, 2018, *“Technical Working Paper - Qualifying Contracts”*, pp 15-16

Snowy Hydro highlights similar issues with the efficient pricing of tight bid/offer spreads for Combined Cycle Gas Turbines (CCGT) and Open Cycle Gas Turbines (OCGT) where access to gas and transportation becomes a real issue to efficient pricing.

The MLO if implemented would be ineffective and clearly misguided. When the NEM supply/demand balance is tight there is no unused capacity that can be conjured up by regulation. The proposal is only likely to encourage financial shenanigans by Participants trying to exploit competitors' enforced Buy/Sell market making obligations.

As an alternative to the centralised MLO approach, a market making function developed by the industry would be preferred. An industry lead approach would be driven by incentives to provide liquidity through market making and should be explored fully before consideration on imposing the MLO.

#### 2.1.6.1. Relevance of Other Jurisdictions

The ESB notes that the MLO promotes transparency, liquidity and provides access to qualifying contracts with the approach "*broadly consistent with mechanisms used in other markets where liquidity and competition is a concern, such as the UK, New Zealand and Western Australia.*"<sup>8</sup> Snowy Hydro however believes care must be taken in making comparisons to the rest of the world or to non-NEM states which are very different markets and whose mechanisms are not necessarily providing the outcomes they were intended to provide.

A recently commissioned paper by NERA Economic Consulting<sup>9</sup> on the International Experience of Vertical Integration in the Electricity Sector noted that forcing vertically integrated firms to trade like standalone businesses has little or no impact on liquidity. The report noted that implementing such measures in Britain and New Zealand had not increased either liquidity or competition but merely shifted them into regulated products. The additional regulation is likely depressing liquidity.

The Irish regulators considered forcing large electricity firms to trade in short-term contract markets to promote liquidity however the NERA report highlighted respondents to the consultation presented evidence that such policies would harm competition, in this case by increasing the deficits of the companies affected and exposing them even further to anticompetitive action. The Irish regulators have held back from imposing a trading obligation, pending observation of how new market arrangements will work.

In the UK the equivalent to the MLO has brought some benefits to the market, however, these benefits have come at the cost of a subset of market participants while the established smaller players are finding it hard to compete<sup>10</sup>. Five market participants in the UK are required to cross-subsidise their competitors' risk management activity at an annual cost of some £20 million<sup>11</sup>.

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<sup>8</sup> Energy Security Board, 2018, "Technical Working Paper Qualifying Contracts", pp16

<sup>9</sup> NERA Economic Consulting, 2017, "International Experience of Vertical Integration in the Electricity Sector"

<sup>10</sup> Andrews, A, 2017, "Is the Secure and Promote liquidity fix fit for purpose?", <<  
<https://www.newpower.info/2017/04/is-the-secure-and-promote-liquidity-fix-fit-for-purpose/> >>

<sup>11</sup> RWE, 2017, "Secure and Promote Review: Response to Consultation"

The Western Australian example is very different to the NEM and care must be taken in making any comparisons between the two. The WEM has a capacity mechanism and is not an energy-only market. The market demographic is also very different in the WEM as the continued dominance of Synergy in the WEM means that market power remains a headline concern in the market compared to the NEM where there are numerous vertically integrated businesses operating. Across the NEM market concentration is also likely to diminish further with the growth of renewables and the closure of Liddell.

## 2.2. Book-build

The proposed book-build as a voluntary market mechanism to be conducted by AEMO is not supported by Snowy Hydro.

We believe in the decentralised approach where there are already sufficient incentives under the NEG for market participants to enter into their own trades to meet NEG compliance.

Further to this if there was a need for a book build, financial intermediaries are well placed to initiate this process without the need for centralised facilitation.

## 2.3. Forecasting the Reliability Requirement

Snowy Hydro agrees with the ESB that *“accurate forecasts about the balance of demand and supply over time, and the extent of any reliability gap, will be fundamental to the ongoing success of the Guarantee”*<sup>12</sup>. It is important that inputs used in the forecast are transparent and the methodology that is used to determine the forecast is clearly understood. As the electricity system continues to transform it is likely that there could be increased errors in forecasting making it harder for participants to depend on these forecasts to make long term investment decisions and therefore we support the measures the ESB has taken to improve these forecasts. The Guarantee is dependent on the use of robust and reliable forecasts.

Reliable and timely forecasts regarding the nature and duration of the reliability gap is important for Market Participants to weigh up the costs and benefits of investment in new supply and/or accelerating wholesale contracting activities to manage potential liability under the reliability obligation.

Addressing the forecasting issues is fundamental to the operation of the reliability obligation. Significant demand forecast conservatism has recently contributed to the activation of the RERT which increased costs to consumers. The Australian Energy Council correctly noted recently that AEMO *“anticipated a high demand peak and dispatched several providers with long notice periods and minimum run times. On each day the demand subsequently fell below AEMO’s forecast, and, in hindsight, the dispatch proved unnecessary.”*<sup>13</sup>

AEMO should continue to be responsible for the accuracy of the market demand forecast and openingly consult with Market Participants to understand how their forecasts can be improved. Snowy Hydro advocates that the Australian Energy Regulator (AER) act as the independent entity to assess and decide on a request from AEMO to trigger the reliability obligation.

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<sup>12</sup> Energy Security Board, 2018, “Technical Working Paper - Forecasting the Reliability Requirement”, pp5

<sup>13</sup> Australian Energy Council, The RERT locker, March 2018, accessed at:  
<< <https://www.energycouncil.com.au/analysis/the-rert-locker/> >> on 6 April 2018

Snowy Hydro welcomes the consultation and quality control arrangements for the development of the ESOO and in turn, support AEMO's assessment about any reliability gap. AEMO should be required to assess ESOO forecasts against AER best practice guidelines and consult with stakeholders on the forecast methodology. We believe the independent review of the forecasts will build confidence in the reliability obligation over time.

Snowy Hydro supports the reliability gap being calculated consistent with the current reliability standard, which is expressed as weighted average estimate of expected unserved energy (USE). The USE represents an acceptable trade-off between reliability and cost.

To date the reliability standard has essentially been met. The energy-only market has been robust and delivered the required levels of generation investment, system reliability and security. The decentralised decision making in the NEM has ensured investments have been prudent. The reliability standard of 0.002 per cent unserved energy has provided an appropriate balance between providing a reasonable level of reliability without significantly increasing costs to consumers in providing a higher target.

#### **2.4. Procurer of Last Resort**

When the NEG comes into effect, there is the need for only one safety net mechanism. There is no need for a duplication of the Procurer of Last Resort and the 9 month Long Notice RERT.

Snowy Hydro is concerned that the Long Notice RERT has not functioned efficiently and as result:

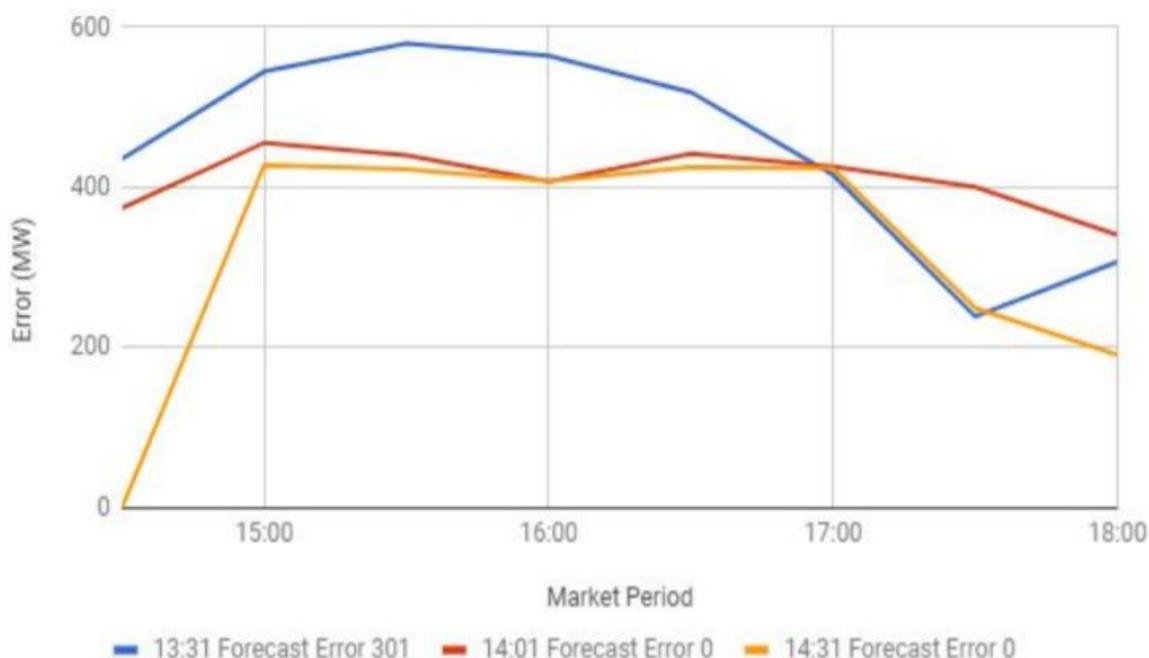
- the cost of off-market reserves is higher than it should be;
- the triggering of the procurement process has deterred or crowded out market responses;
- the revenue structure of the RERT incentivises both off-market supply and demand response.
- the forecasting of demand to trigger the RERT process has been overly conservative.

As a result of these highlighted inefficiencies it would be problematic to extend the Long Notice RERT to 12 months to align with the Procurer of Last Resort. Instead Snowy Hydro advocates that the Procurer of Last Resort is rebadged to be the Long Notice RERT and is triggered at T- $\frac{3}{4}$ . This means Retailers have a period of 2 and  $\frac{1}{4}$  years from when the Reliability Guarantee is triggered to close and remove the reliability gap and hence remove the need to enter the Long Notice RERT process.

As indicated earlier, the conservatism of AEMO to over forecast demand is unnecessarily triggering activation of the RERT with the direct cost of the RERT being passed on to consumers. As a consequence, AEMO's RERT is impacting market participants by not allowing them to earn a return on investment thereby decreasing future investment in new or existing plant.

For instance, on the 19th January 2018 when the RERT was again activated for 6 hours, AEMO significantly over forecasted demand. Figure 5 shows that AEMO's last VIC/SA demand forecast before the RERT was activated was around +550MW in error, and subsequent forecasts were also around +400MW in error.

Figure 5 - VIC/SA Demand Forecast Error (MW)<sup>14</sup>



#### 2.4.1. Interaction with proposed Enhanced RERT

The Reliability Guarantee would negate the need for an enhanced RERT. The Reliability Guarantee will oblige retailers to hold a minimum amount of contracts with dispatchable generators in relation to their own demand. One of the key features of the enhanced RERT rule change if the Rule is made would allow AEMO the power to procure up to 3 years of a forecast supply shortfall. With the concerns outlined on over forecasting demand and crowding out market innovation and participation, Snowy Hydro believes the enhanced RERT would be inefficient and unjustified. Snowy Hydro believes with more policy certainty through the NEG, the market will have sufficient certainty to deliver investments which will be in the long term interests to consumers.

Snowy Hydro does not support the proposal for a further safety net if AEMO and/or a relevant state government considered that circumstances in a particular jurisdiction require action to ensure the ongoing reliability of the electricity system. The market should allow the Procurer of Last Resort (ie. Long Notice RERT) to work as intended without the need for further urgent rule changes.

Recently the AEMC made a rule change under an expedited process to reinstate the long notice RERT<sup>15</sup>. The expedited process did not allow for a detailed and robust discussion of risks to the market and how the use of the long notice RERT would reduce that risk.

<sup>14</sup> Snowy Hydro analysis

<sup>15</sup> AEMC, 2018, "Reinstatement of the long notice Reliability and Emergency Reserve Trader", <<  
<https://www.aemc.gov.au/rule-changes/reinstatement-long-notice-reliability-and-emergency-reserve-trader> >>

## 2.5. Demand Response

The NEG has been designed to include Demand Response (DR) contracts as qualifying contracts for the purposes of the reliability requirement. Snowy Hydro has concerns whether demand response will ensure the reliability requirement of the NEG is met at least cost.

What encompasses a DR contract is vitally important. As noted in the previous section on firmness, the DR contract should include the following to work as intended to meet a period of peak demand:

- Based on measurable attributes such as duration of continuous fully rated response to meet a prolonged peak demand period.
- Reliability to respond and be available to supply a dispatchable service.

If the DR achieves the above then there will be confidence that the DR would work as intended.

Snowy Hydro has been actively involved in the AEMC's consideration on how to best facilitate more demand response in the wholesale market in the Reliability Frameworks Review and how to facilitate more wholesale Demand Response in the NEM including the suitability of specific mechanisms to do this<sup>16</sup>. We believe the existing and available commercial incentives for demand response in the NEM are sufficient. There is no credible proof of a problem with the current market design, market signals and market frameworks do not provide the appropriate price signals and incentives for the uptake of demand response.

The lack of transparency around how much wholesale demand response is currently being utilised is the greatest factor in understanding whether the level of demand response is efficient and the value it actually brings to the NEM. This could only be achieved through the DR being scheduled in the central dispatch process and informing AEMO and other Market Participants with its intention to participate in the NEM.

As noted in the Snowy submission<sup>17</sup> to the Consultation Paper to the NEG, dispatchable should mean that the source is able to be centrally dispatched in the Spot market, its intentions are known to the Market Operator and Market Participants, it has the same obligations as scheduled generators in the NEM to follow dispatch, and it must act in good faith as per the relevant provisions in the National Electricity Rules. To aid the price discovery process and market efficiency, demand response must follow the same rules that apply to scheduled generation and load.

## 2.6. Liable Entities

The reliability guarantee should apply to retailers and large energy user registered as a Market Customer under the Rule. We welcome and support the reason the ESB has noted regarding the reliability guarantee proposal that will set a threshold size of 5 MW peak demand at a single site for large customers to be deemed liable entities under the reliability requirement. Snowy Hydro believes this is important as it represents 20 percent of annual consumption in the NEM.

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<sup>16</sup> Snowy Hydro submission to the "Reliability Frameworks Review Directions Paper" <<  
<https://www.aemc.gov.au/sites/default/files/2018-05/Snowy%20Hydro.PDF> >>

<sup>17</sup> Snowy Hydro submission to the "National Energy Guarantee - Draft Detailed Design Consultation Paper".