



BlueScope Steel Limited
ABN 16 000 011 058
Altair Building
Five Islands Road, Port Kembla NSW 2505
PO Box 1854, Wollongong NSW 2500
P +61 2 4240 1749 | M +61 412 699 681
E Bridgette.Carter@bluescope.com
www.bluescope.com

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AEMC Reliability Frameworks Review

Submission on the Issues Paper – issued 22 August 2017

BlueScope Steel (**BlueScope**) welcomes the opportunity to provide comments in response to the AEMC's Issues Paper for the Reliability Frameworks Review.

BlueScope is Australia's largest steel manufacturer and the only flat steel producer. We employ 6,500 people in Australian regions and cities to supply our nationwide customers in the building and construction, manufacturing, transport, and agriculture sectors. BlueScope also exports steel products and is a global leader in premium coated and painted steel products, operating in 17 countries.

As a large electricity consumer, energy affordability, reliability and security are fundamental to the competitiveness of our business. Over recent years, BlueScope has transformed its operations to return to profitability. Keeping domestic production costs competitive remains paramount and energy is a major cost in steelmaking. Rising energy costs represent the single largest increase in BlueScope's local production costs. More expensive energy directly affects our capacity to invest and provide employment.

Historically, issues of electricity supply and reliability have not been regarded as particularly high risks to BlueScope's Australian operations, largely due to the reliability and security of supply available within the National Electricity Market (NEM). However, recent assessments showing a reduction, and potential shortfalls, in the dispatchable capacity in the NEM, and the incidence of load shedding events on low reserve days in both South Australia and NSW earlier this year, are raising concerns about the increased risk and likelihood of future unserved energy events impacting on the security of BlueScope's process critical operations.

The consequences of unplanned interruptions to BlueScope's major production and coating operations at Port Kembla (NSW), SpringHill (NSW) and Western Port (VIC) could be catastrophic, with high cost, long term implications for critical plant and equipment. As a result, BlueScope strongly supports the intent of this Review and any outcomes that ensure that the regulatory and market frameworks are appropriate to deliver the most cost effective and reliable supply of electricity across the network.

Response to the questions posed in Issues Paper

While BlueScope is not in a position to provide detailed commentary on a number of the more technical issues raised in the Issues Paper, it has provided responses as appropriate and where possible.

The Commission will note from these responses that BlueScope is very concerned that a number of factors have converged in recent times to make electricity increasingly unaffordable and potentially unreliable for large, energy-intensive manufacturers. Underpinning these responses therefore is the need to ensure that:

- All outcomes associated with ensuring that reliability is maintained can be demonstrated to be the most cost effective options available, avoiding further pressure on the already unacceptably high price of electricity, and
- In consideration of the cost of unserved energy, the potentially catastrophic impacts of unscheduled interruptions of supply to large scale, continuous industrial processes are recognised and managed within the requisite emergency intervention mechanisms.

AEMC Reliability Frameworks Review	BlueScope's Response
Questions extracted from the AEMC Reliability Frameworks Review Issues Paper dated 22/8/2017.	
Question 1 Assessment Principles (a) Do stakeholders agree with the Commission's proposed assessment principles? (b) Are there any other relevant principles that should be included in the assessment framework?	(a) BlueScope agrees with the proposed assessment principles, and, (b) Doesn't believe additional principles are required, however notes that implicit in a reliance on market based mechanisms to deliver an appropriate balance between the cost of reliability and the cost of unserved energy, is that the market is functioning both efficiently and competitively in practice.
Question 2 Assessment Approach Are there any comments, or suggestions, on the Commission's proposed assessment approach?	BlueScope believes the assessment approach is appropriate.
Question 3 Forecasting (a) What are stakeholder's views on the variances occurring in forecasting? Could these variances be minimised through more sophisticated forecasting techniques? (b) Are forecasting errors impacting on NEM reliability?	(a) In general, the principle of minimising variances through improved forecasting techniques should be adopted. (b) Examples such as observed discrepancies between the short and long term pre-dispatch forecasts, and the constant variance between them, suggest that actions such as more frequent updating of data sets, or reviews of actual versus forecast outcomes, could lead to more reliable data and forecasting.
Question 4 Options to accommodate intermittent generation (a) Do stakeholders consider that facilitating additional dispatchable generation, or facilitation of more flexible energy sources, or a combination of both, can more easily achieve the aims of better incorporating intermittent generation in the NEM? (b) What outcomes do stakeholders consider are necessary in order to better incorporate intermittent generation sources into the NEM, from a reliability point of view?	(a) BlueScope supports Finkel's proposed approach to use regional reliability assessments to determine the minimum dispatchable capacity required for each region. By identifying where additional dispatchable generation should be paired with new VRE to maintain reliability, rather applying the requirement for all new investments, costs will be minimised. The approach should also facilitate the diversity in location and technology sought, as it would incentivise new investment away from areas where there are concentrations of existing VRE and minimum levels of dispatchable generation. (b) BlueScope acknowledges that there needs to be careful and balanced consideration of the additional costs associated with paired firming on new VRE and the need for sufficient dispatchable supply to meet the reliability standards. This requires confidence that any adopted approach, including Finkel's recommendation to use the regional reliability assessments, can accurately

<p>(c) What factors should be taken into account when considering a Generator Reliability Obligation (GRO)?</p>	<p>determine the minimum levels of dispatchable generation required to maintain reliability.</p> <p>(c) BlueScope recognises that the implementation of a GRO is a complex and technical issue largely outside of its direct expertise, however in addition to the factors listed from the Finkel Review (refer Box 5.1 of Issues Paper), consideration should also be given to the amount of existing demand response resources available to any region.</p>
<p>Question 5 Credible Contingencies</p> <p>(a) Do stakeholders have an views on whether the existing credible contingency definitions may, or may not, be appropriate given the changing generation mix?</p> <p>(b) What are the differences in the impact of the changes in the generation mix on these definition? Do these differ depending on whether they are thought of as relating to 'reliability' or 'security'?</p> <p>(c) In reviewing the appropriateness of these definitions, are there any particular principles or considerations that the AEMC should take into account?</p>	<p>BlueScope views the definitions of credible contingencies as largely technical in nature, and has no comment on their appropriateness under the changing generation mix.</p>
<p>Question 6 Interconnector</p> <p>(a) What role can interconnectors play in relation to reliability?</p> <p>(b)What factors should the Commission consider in this regard</p>	<p>(a) BlueScope recognises the benefits of interconnectors in providing flexibility to utilise dispatchable capacity across NEM regions. (b) If investment in interconnectors is shown to be a lower cost option than investing in additional dispatchable generation capacity in a particular region, with a similar benefit in terms of reliability and security of supply, then it should be encouraged. Increased system flexibility seems a key requirement of the future system.</p>
<p>Question 7 Contract Market</p> <p>Comment on 'day ahead' markets</p> <p>(a). Is generation and load becoming more capable of varying production and output in shorter timeframes, and if so, what will be the role of contracts? If generation and load could respond instantaneously to spot market signals, how would this change the market?</p> <p>(b). The proportion of intermittent generation in the market is increasing. Caps and swaps have traditionally been sold by dispatchable generators which can turn on or off at will to 'back' their contractual obligations. How will the volume and type of contracts traded</p>	<p>While the Issues Paper flags consideration of Finkel's recommendation with regard to the suitability of a 'day ahead' market to assist in maintaining system reliability (Finkel 3.4), there is little discussion and no structured questions directly relating to this initiative in this section of the Issues Paper. It seems that given its potential to contribute to enhancing short term reliability through greater forward transparency of supply conditions and facilitating market competition, this is an area that could have been included and considered in greater detail within the Issues Paper. BlueScope supports Finkel's recommendation to assess its suitability, and to draw on international experience in assessing its potential benefit within the NEM.</p> <p>(a) As the capability of markets develop to be able to respond to shorter timeframes, it seems likely that there will be an increase in market efficiency, reducing prices and volatility, and as a consequence result in fewer contracts being required as risks reduce.</p> <p>(b) New markets are likely to develop to efficiently manage demand side response and firming requirements, potentially increasing the number and types of contracts available. Retailers and other market participants which have bought PPAs for VRE projects are likely to seek to contracts for firming to manage their exposure or organise this within their own portfolio.</p> <p>(c) In the current market, large customers are limited in their influence on the contract market due to their reliance on retailers and the absence of a demand side response mechanism. The importance of demand side firming should not be underestimated, and is potentially one of the key</p>

<p>change as the generation mix evolves? Will this have implications for reliability?</p> <p>(c). How significant is the demand side in driving behaviour in the contract market?</p> <p>(d). Over time, spot prices may become increasingly decoupled from domestic demand (as discussed in Box 6.3). More and more, spot prices may come down to be driven by relatively unpredictable natural forces (like wind and sunshine), as well as by movements in international markets (like demand for gas). How will this affect the role of prices in supporting reliability through domestic investment and operation?</p>	<p>sources of firming up supply in future market operations. The need to develop market frameworks that support the availability of demand side response at all times should be considered. While the RERT provides contracts to manage short term, identified shortages, an operating demand side market should provide continuous opportunities for consumers to sell capacity into the system.</p> <p>A well-functioning demand side market can significantly reduce volatility in the market and limit generator market power in the spot market which will then reduce prices in the forward market.</p> <p>(d) To manage this, demand should be increasingly incentivised to turn on when supply is most plentiful and prices are lowest where possible, including but not limited to, hot water heating, pool pumps and EV charging. Network and retail tariffs that specifically encourage and reward reduction of demand at critical demand peaks should be promoted.</p>
<p>Question 8 External factors</p> <p>What external factors (ie not the contract, or spot price) are influencing investment, retirement and operational decisions in the NEM?</p>	<p>BlueScope recognises that the ongoing uncertainty in climate and energy policy may influence many of the investment, retirement and operational decisions facing market participants.</p> <p>A clear, integrated national approach within this policy framework is preferred, which improves reliability and affordability of electricity, while also reducing emissions from electricity generation.</p> <p>Market failures in the gas market, resulting in unsustainably high pricing and reduced availability of gas in the domestic market, are also having a significant effect on investment and operational decisions in the NEM, as well as electricity prices and reliability.</p>
<p>Question 9 Efficacy and efficiency of information provision</p> <p>(a) What is the potential for the reports (Energy Adequacy Assessment Projection, Electricity Statement of Opportunities and PASA) to be streamlined or made more efficient given existing interactions</p> <p>(b). Is the information provided by the reports adequate given that it as the purpose of information provision to the market for reliability and investment purposes?</p> <p>(c). In particular, is the information around planned generation maintenance and outages adequate?</p> <p>(d). What other information do stakeholders rely on?</p>	<p>(a) to (c) In principle there are benefits in streamlining any reporting processes, however, as a general concern, BlueScope would ideally like to see greater granularity and detail in the information publicly available.</p> <p>Examples of where greater granularity would have assisted analysis include (i) the latest ESOO which appears to have excluded a number of generation projects that are currently under construction so opening up the basis for selection, ie in terms of certainty/likelihood may have improved analysis; (ii) while there is a number of reports in the market about coal stocks driving prices in NSW, there is little factual data to assist market participants. Improved granularity and timeliness of fuel supply and security issues would improve analysis by participants.</p> <p>(d) Operational cost data; energy storage costs; public announcements on investment decisions</p>
<p>Question 10 Role of Interventions</p> <p>10 (a). What is the role of intervention mechanisms in the reliability frameworks? Does this role change in times of uncertainty?</p> <p>(b). To what extent do stakeholders consider that intervention mechanisms inhibit market based responses, and create distortions within the framework?</p> <p>(c). To what extent are interventions</p>	<p>(a) Currently the role of market interventions in the reliability framework is to address issues associated with inadequate supply that have been created, or not addressed, by the market.</p> <p>(b) As an emergency or contingency response, there is little distortion or impact on the operation of the market.</p> <p>(c) The continuous nature of many of BlueScope's major processing operations means that they are extremely sensitive to interruption. While there may be opportunity for scheduled and voluntary load shedding of</p>

<p>preferable to load shedding?</p>	<p>some processes, the enactment of involuntary load shedding directions, would have significant implications for large scale metallurgical processes such as iron- and steel-making, and metal coating operations. The impact on these processes, and the allied processes of critical suppliers (cryogenics) could be severe, with high cost, long term implications for critical plant and equipment, and extended production outages that would far outweigh any short term costs associated with additional generation or RERT demand side payments within the market.</p> <p>To this end, BlueScope supports the efficient operation of the RERT and voluntary demand side mechanisms, and supply side directions, to ensure that unplanned and involuntary interventions are avoided.</p> <p>The ARENA/AEMO demand response work is an important step in developing an appropriate mechanism to ensure future network reliability.</p>
<p>Question 11 Triggers for Intervention Do stakeholders consider that there is sufficient transparency about the existing triggers for intervention?</p>	<p>BlueScope doesn't have to deal directly with these triggers.</p>
<p>Question 12 Efficiency of the RERT Do stakeholders consider that the RERT is still a relevant mechanism to ensure a reliable supply of energy in the NEM?</p>	<p>As described, BlueScope considers the RERT an appropriate mechanism in the current market, and suggests that it should be prioritised based on cost and effectiveness.</p> <p>Similarly, BlueScope recognises the need, as outlined in the Issues Paper and the Finkel review for an assessment of the options and operation of a strategic reserve to act as either a safety net in exceptional circumstances, and as an enhancement or replacement to the RERT mechanism.</p>
<p>Question 13 RERT procurement trigger (a). To what extent do stakeholders consider that the fact that AEMO can only trigger a RERT for anticipated shortfalls is still appropriate? (b). Is the procurement trigger still appropriate in a world where shortfalls are less predictable, and there is increased demand side participation?</p>	<p>(a) BlueScope believes that the fact that AEMO can only trigger a RERT for anticipated shortfalls is still appropriate.</p> <p>(b) Until demand side markets are better developed the procurement triggers remain appropriate. The concerns expressed in the Issues Paper that suggest that if long term ARENA/AEMO contracts become more common, it could impact on the operation of retailers in this area are unfounded. Demand response should be an option owned and controlled by the consumer, who ultimately bears the risks of any commitment. Where retailers suggest that they are being undercut, this could indicate that they are not providing fair value to the customer or are creating an inefficiency in the process that should be removed. In addition, retailers that own generation have a split incentive that may inhibit efficient functioning of the demand response market.</p>
<p>Question 14 RERT Lead Time (a). To what extent do stakeholders consider that the lead times for the RERT constrain the ability of market-based reserve contracts being realised? (b). What are stakeholder's views on the need for the long-notice RERT? (c). Does the long notice RERT have the potential to limit a market response?</p>	<p>(a) to (c) As per the responses to question 13, the development of demand side markets is an important aspect of future reliability frameworks. In the interim, the availability of long notice RERTs or strategic reserves, to be scaled and available for emergency use, is appropriate and shouldn't impact on demand side responses during normal market operation.</p>

<p>Question 15 Price Discovery To what extent do stakeholders consider that the price discovery process of the RERT could be improved?</p>	<p>BlueScope has not engaged in a price discovery process for the RERT to-date.</p>
<p>Question 16 Demand Response for reliability propose (p.106) (a). What are the reasons why most demand response providers have not participated in the RERT to date? (b). What findings can be taken from the ARENA/AEMO trial in terms of how demand response could be better incorporated into the RERT?</p>	<p>(a) Historically the RERT was largely surplus to requirements, and rarely activated. From the demand side participants perspective there was little motivation to pursue due to the costs of firstly understanding what can be committed, and then the legal costs of entering into a RERT contract. (b) BlueScope will monitor with interest the opportunities and issues identified during the ARENA/AEMO trial.</p>
<p>Question 17 Efficacy of Directions and clause 4.8.9 instructions (a). Are reliability directions fit for purpose given existing trends such as start-up time of generating units and other trends such as higher penetration of variable, renewable energy in the NEM? (b). Are reliability directions and clause 4.8.9 instructions needed given the existence of the RERT? (c). Is the notification process for directions – amount of notice given and clarity – adequate?</p>	<p>While not directly involved in dealing with reliability and clause 4.8.9 directions, it seems that these emergency interventions should be retained to ensure reliability of supply. In previous years there was questions over retaining the RERT mechanism, but given the current shifts in the market, it appears the RERT has an important role in delivering reliability to the network. The same logic seems to apply in consideration of these additional tools available to the market operator.</p>

Please contact BlueScope's *Manager Energy Sourcing and Utilisation* if further comment or clarification is required.

Yours sincerely



Bridgette Carter
Manager Energy Sourcing and Utilisation
BlueScope Steel