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### **Submission on Wholesale Demand Response Mechanism**

BlueScope Steel (**BlueScope**) welcomes the opportunity to provide comments to the AEMC on the rule change consultation paper related to wholesale demand response in the National Electricity Market (NEM).

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 with sites in all NEM regions, 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 significant reserve capacity within the NEM. However, recent assessments showing a reduction and potential shortfalls in the dispatchable capacity in the NEM, along with load shedding events last year, raise concerns about energy reliability for BlueScope's process-critical operations.

BlueScope supports the use of demand side response as a means of maintaining system reliability and supporting least cost supply of electricity to all consumers. With respect to the rule changes presented, BlueScope believes that the PIAC, TEC and TAI proposal presents the wholesale market mechanism that would best enable wholesale demand response in the NEM.

However, having a wholesale demand side response mechanism does not completely address the inhibiting factors for consumers engaging in demand side response activities. One of the most significant issues that demand side response faces is the risk and lack of certainty with regard to price. While having access to demand side response products is important, particularly for small customers, a mechanism that provides price certainty and transparency and facilitates participation without taking on significant wholesale price risk would give a greater incentive to participation than purely focussing on access to the wholesale market. While we recognise that the AEMC can only assess what it has been submitted, BlueScope believes that it would be beneficial to assess and implement the rule changes for a wholesale demand response mechanism in combination with a Short-Term Forward Market framework.

Please see attached BlueScope's responses to individual questions. We recognize that enabling and encouraging demand side response participation comes with significant complexity. We have sought to not necessarily answer every question but provide feedback where appropriate and as related to our own experiences.

Thank you for the opportunity to provide feedback. If further comment or clarification is required please contact Bridgette Carter, Manager Energy Sourcing & Utilisation on 02 4240 1749 or David Jenkins, Manager Government Relations on 03 9666 4022.

Yours sincerely



**Bridgette Carter**  
Manager Energy Sourcing & Utilisation

Questions		Feedback
<b>Chapter 4 – Assessment framework</b>		
<b>Question 1: Assessment framework</b>		
A)	Do stakeholders agree with the proposed assessment framework? Alternatively, are there additional principles that should be taken into account?	<p>While the assessment framework as explained is quite high level, the principles seem sound.</p> <p>The assessment framework should also take into consideration equality between different market participants – i.e. demand side response (DSR) participants should not be subject to any greater level of compliance or constraint than any other market participant of a similar size.</p> <p>Given the wholesale market competition issues identified by the ACCC in their recent Retail Electricity Pricing Inquiry, any rule change should also be assessed on its ability to improve market competition.</p>
<b>Chapter 5 – Issues for consultation</b>		
<b>Question 2: Nature of the issue raised</b>		
A)	Is it difficult for consumers to participate in wholesale demand response? If so, which consumers face the greatest amount of difficulty? What is the cause of this difficulty?	<p>It is difficult for consumers to participate for the following reasons:</p> <ul style="list-style-type: none"> <li>• Access is limited and controlled by what retailers are willing to offer.</li> <li>• In majority of cases, participating in demand side response is only possibly if the consumer takes on wholesale market price risk. For small, unsophisticated customers this is a significant barrier.</li> <li>• The market structure and traditional risk management strategies of retailers act as a disincentive to retailers in offering wholesale demand response products.</li> <li>• Consumers are not always appropriately compensated for reducing load.</li> </ul>
B)	What demand response providers and products are currently available in the market?	BlueScope’s experience in the market suggests that there are limited products being offered and limited interest from large retailers in offering demand side response products.
C)	Is there effective competition for demand response as a service to be used by retailers? If not, are consumers able to access the benefits of wholesale demand response directly? Is competition for wholesale demand response as a service increasing?	BlueScope believes that there is limited competition for demand side response as a service. While there have been developments in the number of offerings and the number of products via entry of smaller retailers and aggregators into the market, offerings from larger retailers are still limited. Consumers are able to access the benefits of wholesale demand response directly if they take on a retail contract that is exposed to the wholesale spot market and additional price risk in what is a very volatile market.
<b>Question 3: Wholesale demand response currently in the NEM</b>		
A)	Do stakeholders have views on the existing levels of wholesale demand response in the NEM? Please provide evidence or data to substantiate these views where possible.	While we believe there are material levels of demand side response acting in the market, we cannot substantiate this given the lack of transparency in this market. However given the current barriers and disincentives, we believe that there are also significant untapped resources in this area as well.

B)	Can retailers indicate to the Commission what they are currently doing to facilitate wholesale demand response?	
<b>Question 4: Approach for facilitating transparent, price responsive demand</b>		
A)	<p>Do stakeholders consider there are other regulatory solutions to:</p> <p>(a) providing the demand side with greater access to wholesale prices, and</p> <p>(b) increase the transparency of demand side response to these prices?</p>	<p>Lack of access is not always the key issue for demand side response participation in the wholesale market.</p> <p>The most significant issue that some demand side response participants face is the risk and lack of certainty with regard to prices. While having access to demand side response products is important, particularly for small customers, a mechanism that provides price certainty and transparency and facilitates participation without taking on significant wholesale price risk would give a greater incentive to participation than purely focussing on access to the wholesale market. While we recognise that the AEMC can only assess what it has been submitted, BlueScope believes that it would be much more beneficial to assess the rule changes for a wholesale demand response mechanism in combination with a Short Term Forward Market framework.</p> <p>With respect to increasing transparency of demand side response to the wholesale market price, this information could be made available in an aggregated form.</p>
<b>Question 5: Efficient consumption of electricity</b>		
A)	Do stakeholders agree with our characterisation of how efficient wholesale demand response would improve outcomes in the wholesale market?	BlueScope agrees with the characterisation. In addition, DSR may also facilitate some demand side destruction if participants choose to forgo consuming electricity in general at high prices rather than shift their consumption or make up for lost productivity at other times.
B)	What are stakeholders' views on how facilitating wholesale demand response could affect outcomes in the wholesale energy market?	Wholesale demand response should reduce volatility especially as demand response providers may be more willing to help satisfy demand at prices less than the market price cap compared to peaking generators. End-users will benefit from lower prices even when this limits the return from their demand response service and so they are therefore more likely to offer capacity at less extreme prices.
<b>Question 6: Competition for wholesale demand response services</b>		
A)	Are consumers able to access competitive offers from retailers or third parties to assist consumers to undertake wholesale demand response? Is the level of competition greater for larger consumers?	Offers are generally not competitive unless the customer is very large or the customer is willing and able to take significant wholesale market risk. Our external advisors have suggested that for typical market customers below 1MW retailers will only offer demand response on a shared savings basis where the retailer takes 50% of the benefit which is usually not reflective of their cost or market risk. Secondly a retailer will typically offer demand response at the retailer's option rather than the customer's, significantly limiting the customer's opportunities to benefit.
<b>Question 7: Demand response participating as a scheduled load</b>		
A)	Has the Commission appropriately characterised the benefits of increasing transparency relating to wholesale demand response?	

B)	Do stakeholders consider that if demand response were to participate in the wholesale market, it should do so as a scheduled load (rather than scheduled "negawatts")? Would the pros and cons of participating as a scheduled load differ for different types of demand response providers, e.g. those that have demand response controls on all or only part of their load?	<p>BlueScope does not agree that demand side participants should participate as a scheduled load. If demand side participants are required to schedule load rather than shed-able load, this will act as a disincentive especially for those that only shed a minority of their overall load. For large 24/7 operations with variable loads that are not market participants this would mean building capability to manage this obligation around the clock. The compliance costs are likely to outweigh any benefit in participating.</p> <p>Furthermore, participants will be able to accurately predict the shed-able load however variability in overall load can be significant and very difficult to forecast particularly for large complex processes. Any deviations from the scheduled load could add significant cost and again make it prohibitive to participate.</p>
C)	Do stakeholders consider the obligations placed on scheduled load remain appropriate in the context of demand response? If not, how might they be changed to better allow loads to participate in central dispatch?	<p>Given the variability of DSR, it may be more appropriate to treat DSR as semi-scheduled rather than scheduled.</p>
D)	Which information provision processes should a demand response provider participate in, i.e. pre-dispatch, ST-PASA, MT-PASA?	<p>Demand response would be capable of providing information on the load available to be shed via the pre-dispatch and, at a less accurate level, the ST-PASA. Predicting when you are likely to shed load out beyond this window would be almost impossible and provide little benefit due to the high level of inaccuracy.</p>
E)	How should compliance with dispatch targets and the causer pays procedure apply to demand response providers?	<p>Demand side response can be more difficult to forecast than supply. Therefore, it seems appropriate that the compliance and penalty regime are less stringent.</p>

**Question 8: Reducing barriers to a range of demand response**

A)	To what extent will these mechanisms facilitate more demand side participation throughout the NEM?	<p>The mechanism must not be too onerous and the differences between consumers and generators must be recognised and addressed in the design of the mechanism. Expecting DSR to become a scheduled load is not recognising the inherent complexity and volatility in consumer loads and the magnitude of the obligation that this would place on consumers. As previously stated, this type of mechanism is likely to inhibit DSR, not facilitate more participation.</p>
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**Question 9: Costs of implementing mechanisms**

A)	What is the extent of the upfront costs that would be imposed on participants to introduce the proposals outlined in the rule change requests? Please provide evidence or data to substantiate these views where possible.	
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B)	Will demand response providers have sufficient information regarding expected revenue to make commercial decisions regarding the cost/benefit trade-off to participate in the mechanism?	Information regarding expected revenue is already readily available however the uncertainty associated with the calculation of expected revenue is extremely high due to the inherent unpredictability of the market. As such, BlueScope believe that introducing a Short Term Forward Market (STFM) as a means of reducing risk and increasing certainty of revenue is extremely important measure in increasing the participation and efficiency of DSR.
<b>Question 10: Reducing extent of upfront costs</b>		
A)	Do stakeholders have suggestions for ways these upfront costs could be minimised? E.g. could there to be savings by making changes at the same time as other systems changes?	BlueScope believes aligning the implementation of the mechanism closely with the implementation of the 5-minute rule has the potential of reducing upfront costs by making implementation more efficient.
<b>Question 11: Indirect costs of proposals</b>		
A)	What is the likely extent of any indirect costs imposed through these proposals?	If DSR is required to be facilitated via Retailers, customers could incur costs associated with signing up, negotiating and changing to a different retailer at the end of their contract. Negotiations between aggregators, customers and retailers could also be costly.
B)	How could any such costs be minimised?	
<b>Question 12: Risk allocation for baselines</b>		
A)	Do stakeholders have views on how risks and costs can be best allocated under a baseline used for demand response?	A disaggregated approach would be preferred. We agree with the issues associated with this approach if the customer is negotiating with a Retailer and site this as one of the reasons we do not support the AEC's Retailer led approach.
<b>Question 13: Retailer participation</b>		
A)	Is it necessary to place an obligation on retailers to participate in the mechanism for it to address the issues raised by the proponents?	We believe retailers should be obliged to encourage and facilitate DSR. If retailers only have an obligation to negotiate in good faith, the customer is left at the whim of the retailers appetite to enter into a DSR agreement.
B)	Are there additional obligations these proposals would place on retailers, and do they differ between the proposals?	
<b>Question 14: Embedded generation and storage</b>		
A)	Do stakeholders have preliminary views about the ability for the proposed mechanisms to accommodate embedded generation, in the form of reduced consumption of electricity from the grid in high price periods?	No specific comments – the mechanism should allow participation of embedded generation.

B)	Do stakeholders have preliminary views about the ability for the proposed mechanisms to accommodate, as demand response, increased consumption during low price periods (whether due to charging batteries, increasing production or any other action by the customer)?	
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**Question 15: Thresholds for participation in a mechanism**

A)	What thresholds, if any, should apply to participation in the mechanism for individual consumers and aggregated portfolios? For example, large consumers as opposed to small consumers; a MW size threshold?	The threshold should be as low as 1MW to encourage a broad range of DSR participants.
B)	Should there be thresholds at which different scheduling obligations apply?	

**Question 16: Implementation timeframes**

A)	How long do stakeholders think would be reasonably required to implement the proposals as set out in the rule change requests?	Aligning with the 5 minute settlement rule start date seems to be a practical timeframe.
B)	How could the implementation timeframe be reduced? What trade-offs may need to be made to the design to achieve this?	

**Appendix A – Wholesale demand response mechanism**

**▪ Question 17: Centrally determined baselines**

A)	How important is it to design against the possibility for bias and gaming?	
B)	How can a baseline methodology appropriately align incentives such that the risk of systemic bias is minimised?	

**▪ Question 18: Accuracy of baselines**

A)	How important is it that the baseline methodology is able to accurately estimate consumption?	
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B)	What administrative mechanisms would improve baseline accuracy without imposing excessive burdens? For example, regular review of baseline methodologies by independent experts, or cross-checking against consumption data from customers that are similar to the demand response provider but are not engaging in demand response.	
C)	Can a baseline accurately account for embedded generation and other dynamic resources that might exist behind the meter?	
D)	Should a wholesale demand response mechanism apply only to the types of customers for which baselines can be accurately set, and if so, what types of customers should be eligible?	
E)	How should long-term or permanent changes in a customer's overall level of demand be addressed in baselines? For example, factories may add or retire production lines; households may increase or decrease in size, and may install or remove equipment such as batteries, pool pumps or solar panels.	
<b>Question 19: Settlement under the wholesale demand response mechanism</b>		
A)	Do stakeholders consider one of the settlement options outlined to be preferable? How would this approach to settlement impose costs and risks on market participants?	
<b>Question 20: Other considerations for the wholesale demand response mechanism</b>		
A)	Do stakeholders have views on these other considerations set out in the appendix? (See pp. 62-63 of the consultation paper).	
B)	Are there other considerations not	



	raised that should also be considered when designing a wholesale demand response mechanism?	
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### Appendix B – Separate wholesale demand response market

#### ▪ Question 21: Cost recovery for the separate market

A)	What do stakeholders think about the proposed cost recovery arrangements for the separate market?	
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#### ▪ Question 22: Introduction of a separate market

A)	Would the proposal set out in this appendix be faster to implement than the wholesale demand response mechanism?	BlueScope is not convinced that an out of market temporary mechanism is more time or cost effective than implementing a market mechanism.
B)	If stakeholders do not consider that it would be faster to implement, is there merit in exploring this as an alternative to the other proposed demand response mechanisms? What are the costs and benefits that should be considered in doing so?	No we do not believe that an out of market mechanism is the most effective means of facilitating DSR to improve reliability and reduce volatility in the wholesale market.
C)	Are there any additional mechanisms that could be implemented more quickly than a wholesale demand response mechanism?	
D)	What are stakeholder views on the feasibility of co-optimising this separate market with the existing wholesale market?	BlueScope does not believe that having separate mechanisms is an optimal outcome.

### Appendix C – Wholesale demand response register

#### ▪ Question 23: Wholesale demand response register mechanism

A)	What are stakeholder views on this option to facilitate demand response?	BlueScope does not believe that this option presents the best mechanism for encouraging and enabling DSR. It does not seek to improve market competition and relies heavily on the good faith negotiations of Retailers on behalf of consumers.
B)	What do stakeholders consider the benefits of this option would be?	
C)	What do stakeholders consider to be the costs associated with this option?	

D)	Are there any implications (regulatory or otherwise) that are not raised in the discussion of this option?	
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**Question 24: Standard wholesale demand response offer and mandatory wholesale price pass through offer**

A)	What are stakeholder views on these options to facilitate demand response?	If a customer wishes to be exposed to the wholesale market then a Retailer should be obliged to provide this structure regardless of whether it is associated with DSR or not.
B)	Do stakeholders consider these options to be preferable to a wholesale demand response register?	
C)	Do stakeholders consider these options to be complementary to a wholesale demand response register?	

**Appendix D – Load shedding compensation mechanism**

▪ **Question 25: Issues addressed by LSCM**

A)	Do stakeholders agree that reliability related load shedding inefficiently allocates risks to end consumers? Does the proposed LSCM address this issue?	
B)	Would an LSCM facilitate greater levels of wholesale demand response?	

▪ **Question 26: Benefits and issues associated with an LSCM**

A)	Do stakeholders agree with the outline of the benefits and challenges associated with the introduction of an LSCM?	
B)	What other issues would need to be considered?	