

13th August 2020

Australian Energy Market Commission Reference: ERC0290 Lodged via the AEMC website

Dear Sir/Madam,

#### **RE: System Services Rule Changes Consultation Paper ERC0290**

Brickworks Building Products Pty Ltd ("Brickworks") welcomes the opportunity to comment on the System Services Rule Changes Consultation Paper.

Brickworks is a domestic manufacturer of building products and a large electricity consumer in the National Electricity Market ("NEM"). Brickworks brands include Austral Bricks, Bowral Bricks, Bristile Roofing, Austral Precast and Austral Masonry.

Brickworks is concerned that the push to install large amounts of renewable generators in the NEM within a short period of time is causing a deterioration in the reliability and system security of the grid, and that this will lead to increased costs to electricity consumers to pay for new services that are created to resolve the deficiencies that have been created by renewable generators.

We do not agree with the assertion in the consultation paper that historically power system security and reliability was merely a "by-product" provided by non-renewable generators. Electricity consumers have a reasonable expectation that the electricity produced by generators provide electricity in a manner that is fit for consumption by end users. We do not agree that the electricity market has evolved to only requiring MWs to be produced with no consideration to the reliability and security of the system. As an electricity consumer, we expect that there should be sufficient obligations imposed on new generators intending to connect to the grid (and existing generators already connected to the grid) to ensure that the reliability and system security is not degraded. We suggest that, should the AEMC determine that there are material issues with reliability and/or system security of the NEM, that the AEMC gives serious consideration to imposing additional obligations on grid connected generators to rectify those deficiencies.

Brickworks does not support the creation of new service markets to provide various sub-components of generated electricity when the onus should be on all generators to produce electricity in a manner that stabilises the grid. Further, the AEMC must consider the cost impact to large electricity consumers if it were to contemplate new markets for system security services. Brickworks notes that only the electricity price can be hedged by retailers which allows retailers to provide firm fixed prices to large electricity customers. This contrasts with how FCAS and RERT costs are passed through to large electricity consumers because they are an unhedgeable market cost incurred by retailers. In recent years, both FCAS and RERT have incurred significant costs which retailers have simply passed through unexpectedly to their large electricity customers. Brickworks is concerned that should additional markets be created, that the costs for these services would be passed through to large electricity consumers. If this occurred, it could result in everincreasing costs regularly being passed through to large electricity consumers which they have no ability to control or manage.





Brickworks provides further specific comments in the attached appendix.

If you would like to discuss this submission further, please do not hesitate to contact myself.

Yours sincerely,

Melissa Perrow

General Manager Energy Brickworks Building Products Pty Ltd



## Appendix – STAKEHOLDER SUBMISSION TEMPLATE

#### **CHAPTER 1** – INTRODUCTION

Question 1: Section 1.2 & 1.3 – Current ESB & AEMO work relating to the rule change requests	
1) What are stakeholders' views on how the rule change processes should be integrated with ESB and AEMO work programs?	Any rule changes being considered by the AEMC should be fit for purpose given the ESB is undertaking the post-2025 market design review.
2) Are there any additional processes that should be closely considered by the Commission when progressing these rule change requests?	
Question 2: Section 1.6 – Timetable for the consultation process	
1) Do stakeholders have any comments on the proposed timetable for the system services rule changes?	

#### **CHAPTER 3** – APPROACH

Question 3: Section 3.2 & 3.3 – Three work streams: dispatch, commitment and investment	
1) Do stakeholders agree with the AEMC's approach to grouping the rule changes, at least for initial consideration?	Brickworks agrees that it is in the interest of electricity consumers that similar rule change requests should be grouped together to allow the AEMC to examine the issues holistically.
2) Do stakeholders believe that Figure 3.1 captures the key issues to be considered for each rule change in each time frame?	
3) Do stakeholders have views on whether/which services should be procured in certain time frames and not others?	

#### **CHAPTER 4** – ASSESSMENT FRAMEWORK

Question 4: Section 4.2 – The system services objective		
assess these rule changes? If not, now should it be amended or revised?	The system services objective should also consider how costs are passed through to large electricity consumers. Brickworks does not believe it is in the interest of consumers of electricity for new service costs to be created by rule changes that are simply passed through to large electricity consumers which they have no ability to manage or control. Additionally, AEMC (and the ESB) should holistically assess the optimal overall solution to minimise the total system cost which is paid for by electricity consumers when considering rule and market structure changes.	

Question 5: Section 4.3 – The planning, procuring, pricing and payment service design framework

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<ol> <li>Do stakeholders agree with the '4Ps' service design framework being used to assess these rule changes?</li> </ol>	We do not agree with the 4Ps as it appears to assume that the rule change will result in new markets being created. If generators were required to ensure that their generation did not degrade the stability of the grid, the individual generators would be incentivised to commercially find the lowest cost solution. This could include installing additional equipment or it could allow the generator to contract with a third party to provide a security service that their generator is deficient in. As that generator would incur the cost, they would be commercially incentivised to ensure the solution is lowest cost. Those generators that incurred a cost, because their generator is currently causing a degradation in system security, would be able to recover total generation costs via their electricity pool revenue and/or hedges or PPAs with retailers. This approach would equalise generators within the electricity market and cause them to bid in a way that allows them to recover their total costs.
Question 6: Section 4.4 – Principles for assessment	
Do stakeholders agree with the principles proposed for assessing the rule change requests? If not, should any principles be amended, excluded or added?	Assessment should also include how costs will be passed through to electricity consumers.

### **CHAPTER 5** – THE RULE CHANGE REQUESTS

Question 7: Section 5.1 – Infigen – Fast frequency response ancillary service market	
1) What are stakeholders' views on the issues raised by Infigen in its rule change request, Fast frequency response market ancillary service?	If the AEMC determines that there are material issues as identified by Infigen, Brickworks supports imposing obligations on non-synchronous generators to provide the level of synchronous inertia that is required to stabilise the grid. Brickworks would also support imposing obligations on wind generators to provide, directly or indirectly, firming dispatchable generation to smooth out the variability of wind generation.
2) Do stakeholders agree with Infigen's view that a change to the NER is required to encourage efficient provision of FFR services in the NEM following contingency events?	
3) What are stakeholders' views on if there are any other issues or concerns in relation to frequency control in the NEM as levels of synchronous inertia decline?	
4) Do stakeholders consider there are alternative solutions that could be considered to improve the frequency control arrangements in the NEM for managing the risk of contingency events as the power system transforms?	
5) Do stakeholders consider that 5-minute markets for FFR ancillary services likely to be effective and efficient in the global interconnected NEM and on a regional basis?	
6) Do stakeholders consider Infigen's proposal will provide adequate pricing signals to drive efficient investment in FFR capability in the NEM?	If AEMC identifies a material issue, Brickworks supporting increasing obligations on all generators to ensure that their generation does not degrade the system security of the grid.
7) What are stakeholders' views on, if introduced, how the costs associated with any new FFR market ancillary services should be allocated?	Any additional costs should not be unknown and/or unhedgeable by retailers as this will lead to costs being passed through unexpectedly to large electricity consumers. If costs are passed through to retailers separately to the underlying electricity pool price, then there must be a mechanism that can set retailers costs so they are known ahead of time and allow retailers to fix the price they offer to sell electricity to large electricity consumers. Further,



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	Brickworks is concerned that the creation of new markets will lead to market power issues due to the limited number of generators that could provide a highly specific service. Brickworks does not agree that the electricity market should be segmented into numerous sub-sets markets; each addressing a particular issue that would not exist if all generators were required to produce electricity in a manner that does not degrade the system security of the grid.
8) What do stakeholders consider to be the likely costs associated with establishing two new ancillary service markets for FFR in the NEM?	Brickworks does not agree with establishing new ancillary service markets.
9) What are stakeholders' views on how the proposed solution may result in any substantial adverse or unintended consequences in the NEM?	The proposed solution would be adverse to large electricity consumers if large costs were unexpectedly passed through to them which they have no ability to manage or control.
10) Are there specific issues with FFR that stakeholders think should be addressed in the NER as part of the establishment of markets for FFR services?	Brickworks does not agree with establishing new ancillary service markets.
Question 8: Section 5.2 – Infigen – Operating reserves market	
Do stakeholders agree with Infigen that tight capacity conditions and increasing uncertainty in market outcomes are problems that an operating reserve would address?	
2) Are there alternative solutions that could be considered to address tight capacity conditions and increasing uncertainty in market outcomes?	Variable generators, such as wind generators, could have obligations imposed requiring them to source sufficient firming generation that is capable of being dispatched to offset any reduced generation from their variable generation.
3) Do stakeholders consider Infigen's proposal would provide adequate pricing signals to drive efficient use of and investment in operating reserve services now and in the future?	
4) How do stakeholders think separate operating reserves arrangements would affect available capacity in the spot, contracts and FCAS markets now and in the future?	
5) How do stakeholders think separate operating reserves arrangements would affect prices in the spot, contracts and FCAS markets now and in the future?	
6) How could the design of an operating reserve market (e.g. criteria for eligible capacity) best support competitive outcomes both in the operating reserves market but also energy and FCAS markets?	Brickworks does not agree that an operating reserve market should exist outside of the existing electricity market.
7) What are the factors that should be considered when seeking to set and procure efficient levels of operating reserve?	
8) Would Infigen's proposed operating reserve market result in any substantial adverse or unintended consequences in the NEM?	
9) What are the costs associated with establishing an operating reserve market in the NEM? If introduced, how should these costs be allocated?	The AEMC must consider the total cost to electricity consumers to identify the lowest cost solution. Any additional costs should not be simply passed through unexpectedly to large electricity consumers which they are unable to manage or control.



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10) What kind of incentive/penalty arrangements would be necessary to be confident the operating reserves procured are available when needed?	
Question 9: Section 5.3 – Delta Electricity – Introduction of ramping services	
1) Do stakeholders agree with Delta that price volatility that occurs when dispatchable generators ramp through their energy bid stacks in response to predictable, daily, high rates of change from solar ramping up and down is a problem that needs addressing?	
2) Do stakeholders think that a new raise and lower 30-minute FCAS would address the price volatility at these times? Are there alternatives that could be considered to address this problem?	Brickworks agrees that 30 mins FCAS services may assist with stabilising frequency and could be lowest cost compared to more expensive fast start FCAS services.
3) Do stakeholders consider Delta's proposal would provide adequate pricing signals to drive more efficient use of and investment in ramping services thanks existing price signals and information provided through the PASA and pre-dispatch processes?	
4) How do stakeholders think a separate 30 minute ramping product would affect available capacity in the spot, contracts and FCAS markets now and in the future?	
5) How do stakeholders think a separate 30 minute ramping product would affect prices in the spot, contracts and FCAS markets, now and in the future?	
6) How could the design of a ramping FCAS product (e.g. criteria for eligible capacity) support competitive outcomes in both energy and FCAS markets?	
7) What are the factors that should be considered when seeking to set and procure efficient levels of ramping services?	
8) Would Delta's proposed new 30-minute raise and lower FCAS products result in any substantial adverse or unintended consequences in the NEM?	The AEMC should assess whether there are sufficient providers of 30 min FCAS in each region to ensure that generators could not use their market power to artificially increase revenue from the services.
9) What are the costs associated with establishing new 30-minute raise and lower FCAS products in the NEM? If introduced, how should these costs be allocated?	
10) What kind of incentive/penalty arrangements would be necessary to be confident the new 30-minute raise and lower FCAS products procured are available when needed?	
Question 10: Section 5.4 – Delta Electricity – Capacity commitment mechanism for system sec	curity and reliability
1) Do stakeholders agree with Delta that there is an increasing risk that capacity capable of providing reserves or services may not be available at times when the power system may need them to respond to unexpected events because of increasing incentives to de- commit?	Brickworks agrees that the AEMC should assess whether additional incentives are needed for dispatchable non-peaking generators as they provide electricity that is fit for purpose for electricity consumers as they do not cause system security issues.



2) Do stakeholders think that a mechanism to commit capacity one day ahead of time would deliver the reserves or services needed? Are there alternatives that could be considered to address this problem?	
3) Do stakeholders consider Delta's proposal would provide adequate pricing signals to drive more efficient use of and investment in reserves and system services?	
4) How do stakeholders think Delta's capacity commitment payment would affect available capacity in the spot, contracts and FCAS markets now and in the future?	
5) How do stakeholders think Delta's capacity commitment mechanism would affect prices in the spot, contracts and FCAS markets now and in the future?	
6) How would a capacity commitment mechanism and payment affect entry, exit and competition in the NEM over the short and long term?	
7) What are the factors that should be considered when deciding how much capacity to commit ahead of time?	
8) Would Delta's proposed capacity commitment mechanism result in any substantial adverse or unintended consequences in the NEM?	
9) What are the costs associated with establishing a capacity commitment mechanism in the NEM? If introduced, how should these costs be allocated?	
10) What kind of incentive/penalty arrangements would be necessary to be confident that the committed capacity would be available throughout the commitment period and/or when called upon?	
Question 11: Section 5.5 – Hydro Tasmania – Synchronous services markets	
<ol> <li>Do stakeholders consider this rule change proposal presents a viable model for the provision synchronous services?</li> </ol>	
a) Could this proposed model be used to provide the essential levels of system strength (and / or inertia and voltage control) needed to maintain security and the stable operation of non-synchronous generation?	determines that there is a material issue from allowing non-synchronous generators to connect to the grid, then it should consider whether additionally obligations should be imposed on generators to require them to, directly or
b) Could this proposed model be used to provide levels of system strength (and / or inertia and voltage control) above the essential level required for security?	muliectly, provide mertia to a lever that is required to stabilise the grid.
2) Do stakeholders consider that the creation of a synchronous services market could have any adverse impacts on other markets in the NEM? If so, what are these impacts?	
3) Would the proposed model set out in the rule change request efficiently price and allocate costs for synchronous services in the NEM?	
<ul> <li>when called upon?</li> <li>Question 11: Section 5.5 – Hydro Tasmania – Synchronous services markets</li> <li>1) Do stakeholders consider this rule change proposal presents a viable model for the provision synchronous services?</li> <li>a) Could this proposed model be used to provide the essential levels of system strength (and / or inertia and voltage control) needed to maintain security and the stable operation of non-synchronous generation?</li> <li>b) Could this proposed model be used to provide levels of system strength (and / or inertia and voltage control) above the essential level required for security?</li> <li>2) Do stakeholders consider that the creation of a synchronous services market could have any adverse impacts on other markets in the NEM? If so, what are these impacts?</li> <li>3) Would the proposed model set out in the rule change request efficiently price and</li> </ul>	



4)	Do stakeholders consider the model set out in the rule change request to be capable of sending price signals sufficient to encourage new investment in synchronous capacity?	
5)	Do stakeholders consider the rule change provides an appropriate incentive mechanism for existing synchronous generators to make operational decisions to provide synchronous services?	The proposed mechanism does not provide any incentive (or obligation) on existing non-synchronous generators to fix their deficiencies which are degrading the system security of the grid.
6)	Do stakeholders consider the rule change provides the appropriate locational signals for the provision of synchronous generators to provide synchronous services?	
7)	What do stakeholders see as the primary opportunities / limitations of the mechanism as proposed by Hydro Tasmania?	Any additional costs should not be unknown and/or unhedgeable by retailers as this will lead to costs being passed through unexpectedly to large electricity consumers. If costs are passed through to retailers separately to the underlying electricity pool price, then there must be a mechanism that can set retailers costs so they are known ahead of time and allow retailers to fix the price they offer to sell electricity to large electricity consumers. Brickworks does not agree that the electricity market should be segmented into numerous sub-sets markets; each addressing a particular issue that would not exist if all generators were required to produce electricity in a manner that does not degrade the system security of the grid.
8)	Would the model proposed in the rule change request enable effective competition in the market for the provision of synchronous services?	
9)	What suggestions do stakeholders have in relation to the first order changes that would be required in NEMDE to facilitate this proposal and any second order changes that may be required as a result of this rule change proposals' implementation?	
Qu	estion 12: Section 5.6 – TransGrid – Efficient management of system strength on the power	er system
1)	Do stakeholders consider that TransGrid's approach addresses all issues related to system strength currently experienced in the NEM?	
2)	Do stakeholders consider that a system strength planning standard met by TNSPs would effectively and pro-actively deliver adequate system strength?	
3)	Do stakeholders consider TransGrid's proposal will provide useful and timely locational and financial signals to new entrants?	
4)	Do stakeholders agree that the 'do no harm' obligations should be removed?  a) If so, do stakeholders consider an alternative mechanism is required to regulate or incentivise the minimisation of a new connecting generator's impact on the local network and proximate plant?	Brickworks does not agree to the removal of the 'do no harm" obligation. We believe this could lead to unintended consequences if the principle was removed.
5)	What are stakeholder's views regarding generators' being required to make a financial contribution for provision of system strength services?	Brickworks agrees that generators, either presently connected or intending to connect to the grid, should incur a cost to fix a deficiency where it is needed to avoid degrading system strength. Any additional equipment needed to meet the system strength requirements, should be at least cost whether this is owned directly by the generator or a third party contracted to the generator.



6)	Would stakeholders be supportive of the ownership of existing private system strength assets being transferred to TNSPs, as suggested in TransGrid's rule change request?	Brickworks is not clear why privately-owned equipment would be transferred to a TNSP or how that would benefit electricity consumers.
7)	Would the proposed, TNSP-led solution to system strength result in any adverse or unintended consequences for market participants in the NEM?	
CH	APTER 6 – SYSTEM STRENGTH	
Qı	uestion 13: Section 6.1 – Evolving the regulatory definition of system strength	
1)	Do stakeholders consider that the AEMC's working description of the effects of system strength, and related problem description of system strength and its components accurately represents all elements of system strength, as experienced in the NEM?	
2)	If not, are there other components of system strength that the AEMC should include?	
3)	What measures might be used to define system strength? Is fault level the only measure that can be used practically, or are other measures available?	
Qı	uestion 14: Section 6.2 – Mechanisms to provide system strength above the essential level	ls that are necessary for security
1)	Do stakeholders consider the centrally coordinated model, as proposed by TransGrid, is the preferable option for providing system strength above the essential levels required for secure operation?	
2)	Do stakeholders consider the decentralised, market-based model proposed by HydroTasmania to be the preferable option for providing system strength above the essential levels required for secure operation?	
3)	Could a hybrid of these models be used to deliver system strength above the essential level?	
4)	What do stakeholders perceive to be each model's strengths and weaknesses?	
5)	Do stakeholders consider there are other, alternative models for delivering system strength above the minimum levels required for secure operation?	
6)	What do stakeholders perceive to be the biggest benefits and risks to introducing a mechanism to deliver system strength above the minimum levels required for secure operation?	Brickworks supports any mechanism that represents least cost to electricity consumers. The system strength requirements should not be set higher than is necessary as this will increase costs to electricity consumers.

Question 15: Section 7.1 – Requirement for a dedicated in-market reserve service, mechanism or market



1) What do stakeholders see as the key drivers or changes in the NEM that could be addressed by introducing an explicit in-market reserve arrangement?	Brickworks does not agree that a new payment for in-market reserves would provide "a fair value for a necessary service that has been provided for free, or below cost until now". Brickworks disagrees that the electricity pool market is simply a market for MWs without holding generators responsible for providing a service which is fit for purpose. Generators that connect to the grid, should be required to provide electricity in a manner that can be consumed by electricity consumers and does not degrade system security or cause reliability issues.
2) Do stakeholders' think there is a need for an explicit in-market reserve arrangement in the NEM. If yes, do stakeholders consider the need to be permanent or transitional?	If increasing variable generation capacity is causing a lack of reserves at times when they produce lower than expected generation, then the AEMC should consider imposing obligations on variable generators to provide firming dispatchable generation that would cover events when their variable generators are incapable of producing electricity at their expected capacity level.
3) How would an explicit in-market reserve mechanism or market impact stakeholders? What would be the key benefits and costs? Would it effect stakeholders' operational or investment decisions?	Any additional costs should not be unknown and/or unhedgeable by retailers as this will lead to costs being passed through unexpectedly to large electricity consumers. If costs are passed through to retailers separately to the underlying electricity pool price, then there must be a mechanism that can set retailers costs so they are known ahead of time and allow retailers to fix the price they offer to sell electricity to large electricity consumers.
4) Do stakeholders see there to be an explicit need for a capacity commitment mechanism as proposed by Delta? Do stakeholders see this as a separate need to an inmarket reserve service?	Brickworks believes that there may merit to requiring a day ahead ex-ante commitment mechanism if it provides reliable electricity at least total cost to electricity consumers.
Question 16: Section 7.2 – Achieving security and reliability using dedicated in-market reserv	ves
1) Do stakeholders have views on whether an in-market reserve market or mechanism should solve primarily for reliability outcomes and security outcomes second? Or can this be more effectively co-optimised?	
2) How do stakeholders see an explicit in-market reserve market or mechanism interacting with the existing NEM reliability framework? What are the policy design priorities for a new operating reserves arrangement that would deliver the reliability needs of the power system?	
3) How do stakeholders see an explicit in-market reserve market or mechanism interacting with the existing NEM security framework? What are the policy design priorities for a new in-market reserve market or mechanism that would deliver the security needs of the power system?	Brickworks does not agree that the electricity market should be segmented into numerous sub-sets markets; each addressing a particular issue that would not exist if all generators were required to produce electricity in a manner that does not degrade the system security of the grid.
CHAPTER 8 – FREQUENCY CONTROL	
Question 17: Section 8.1 – Reforms related to the provision of synchronous inertia	
1) Do stakeholders consider that the issues relating to declining levels of synchronous inertia	

have been adequately and accurately described?



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#### **CHAPTER 9** – INTERACTIONS BETWEEN SYSTEM SERVICES

Question 20: Section 9.1 Technological and temporal issues for system service provision	
1) What are stakeholders' views on how the arrangements for system services can be developed, to best utilise the capability of both established, as well as new and emerging technologies?	
2) Do stakeholders have any initial thoughts on how the arrangements for system services can be best coordinated over dispatch, commitment and investment time frames?	
Question 21: Section 9.2 – Aheadness and commitment	
Do stakeholders agree with the characterisation of arrangements for aheadness and commitment, including the potential benefits?	
2) What are stakeholders' views on the potential downsides of introducing arrangements for commitment of capability ahead of dispatch?	
3) Are there alternative arrangements that can reduce the increasing uncertainty associated with power system operation in the NEM?	
Question 22: Section 9.3 – Cost recovery arrangements	
1) What are stakeholders' views on the appropriate approach to cost recovery for each of the system services discussed in this paper?	AEMC should consider how any additional costs will be passed through to electricity consumers in addition to providing a least cost solution.
2) In each case, how can the cost recovery arrangements be developed to lower the overall costs of the NEM?	Brickworks supports imposing additional obligations on generators to ensure they provide electricity on a fit for service basis that does not degrade the system security and reliability of the grid.
Question 23: Section 9.4 – Implementation considerations	
What are the challenges or implications associated with implementing proposed arrangements discussed in this paper?	Brickworks is concerned that new markets will simply create higher costs that will be passed through to large electricity consumers, as and when they are incurred by the market, and that electricity consumers will have no ability to control or manage these additional costs.
2) What are stakeholders' views on the prioritisation or staging of the reforms to address the issues discussed in this paper?	