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Electricity Authority
Level 7, Harbour Tower
2 Hunter Street
Wellington

6 May 2021

Attention: Electricity Authority

Dear EA

Re: Consultation Paper – Battery energy storage systems offering instantaneous reserve

Beca Ltd (Beca) welcomes the opportunity to provide feedback on the Consultation Paper – Battery energy storage systems offering instantaneous reserve.

Beca is one of Asia Pacific's largest independent advisory, design, and engineering consultancies. After a century of operation, we have grown from a family-owned business to one of the most progressive, client-centric professional services consultancies in our region. We have more than 3,300 employees in 21 offices around the world and have delivered projects in more than 70 countries.

Our feedback to the three questions is presented below. Our comments and any examples provided are for the purpose of this feedback request only with no intention to comment on the performance or actions of any party or project.

If any further clarification is required on the feedback provided as part of this submission, please contact the undersigned.

Yours sincerely

Harshal Patel
ANZ Future Energy Leader

on behalf of Beca Ltd

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Question	Comment
Q1. Do you agree the issue identified by the Authority is worthy of attention?	We agree the issues identified by the Authority is worthy of attention. The Code is currently “hardwired” to a specific type of technology namely rotating machines to provide reserves in the form of spinning reserves and tail water depressed reserves. This currently presents a barrier for new technologies to enter the market to provide instantaneous reserve via ancillary service contracts.
Q2. Do you agree with the objectives of the proposed Code amendment? If not, why not?	<p>We support the objectives of the proposed Code amendment, in particular a definition for generation reserve.</p> <p>This definition in parity with the other proposed amendments will allow the System Operator to procure all forms of ‘injectable’ reserves to maintain a technology agnostic approach for current and future technologies.</p>
Q3. Do you agree the benefits of the proposed amendment outweigh its costs?	<p>We agree that the benefits of the proposed amendments to the Code outweigh the costs of implementation. The proposed amendments to the Code do not appear to be wholesale changes and we support the approach of generalising and updating definitions to provide better consistency for new technologies to enter the market.</p> <p>The falling costs of batteries as technology matures means there is greater opportunities for delivering greater net positive benefits over time as replacement costs are likely to be lower than present value cost of supply.</p> <p>There are also other benefits that extend beyond the instantaneous reserve market based on the proposed amendments to the Code.</p> <p>For example, addition of new technologies will allow existing technologies that are currently providing instantaneous reserve services such as partially loaded spinning reserves from hydro generation to be able to generate to its full nameplate rating to support the transition to 100% renewable electricity generation by 2030 and accelerate the electrification of the transport and industrial sectors.</p> <p>This will allow the exit of large coal/gas base load generation, such as Huntly Power Station and continue to provide net economic benefits by delivering affordable electricity for New Zealanders.</p>
Q4. Do you agree the proposed amendment is preferable to the other options? If you disagree, please explain your preferred option in terms	We agreed the proposed amendments to the Code are preferable to the other options identified in the Consultation Paper, primarily

consistent with the Authority's statutory objective in section 15 of the Electricity Industry Act 2010	<p>from a cost and time perspective to advance the participation of BESS in the instantaneous reserve market within the next 12 months.</p> <p>This option will enable EA to use the framework as a basis to fast track the development of other ancillary services that can be offered by current (BESS) and future 'injectable' technologies supported by the proposed updates to the Transmission Pricing Methodology.</p>
Q5. Do you agree the Authority's proposed amendment complies with 32(1) of the Act?	<p>We agree that the proposed amendments comply with section 32(1) of the Act to promote namely:</p> <ul style="list-style-type: none"> a) Competition in the electricity industry; b) The reliable supply of electricity to consumers; c) The efficient operation of the electricity industry.
Q6. Do you have any comments on the drafting of the proposed Code amendment?	No
Q7. Do you have any comments on the drafting of the proposed procurement plan amendment?	No