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Submissions
Electricity Authority
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Submission – Removal of in-band frequency keeping constrained on and off compensation

We welcome the opportunity to submit on the Authority's removal of in-band frequency keeping constrained on and off compensation consultation.

The proposed change will require a relatively small change to the clearing manager's IT system.

We are concerned that the Authority's proposed Code amendment may conflict with existing provisions in the Code. We have proposed an alternative amendment to remove this conflict whilst still meeting the proposal's objectives.

Our answers to the consultation questions are attached.

Yours sincerely,

Steve Torrens

Energy Operations Manager

Answers to Submission Questions

Q1	Are there any interdependencies between the timing of the introduction of MFK in the North and South Islands and the date when the Code amendment proposal should be brought into effect?	No comment.
Q2	Do you have any comments on the Objective of this Code change proposal?	No comment.
Q3	Do you think there is a reduced incentive for the generators to participate in the frequency keeping market after the proposed amendment?	No comment.
Q4	Do you have any comments on the assessment presented?	See Q5.
Q5	Are there any additional costs or benefits that need to be considered?	The clearing manager is currently responsible for calculating constrained amounts under Part 13 of the Code, including those constrained situations arising from frequency keeping. As the proposed amendment will alter the way that frequency keeping constrained amounts are calculated changes to the clearing manager's IT system will be required. Our preliminary estimate of the changes required is $30,000. This estimate is subject to detailed design and finalisation of the Code amendment following consultation.
Q6	Are there any other alternatives the Authority should consider apart from the status quo?	No comment
Q7	Do you have any comments on the Authority's assessment of	No comment.

	the proposed amendment against the requirements of section 32(1) of the Act?	
Q8	Do you have any comments on the Authority's assessment of the proposed amendment against the Code amendment principles?	No comment
Q9	Do you have any comments on the Authority's proposed code amendment	The proposed code amendment may conflict with Clauses 13.194 and 13.204. We recommend that sub-clauses 13.194(2)(c) and 13.204(1)(b)(iii) are deleted as an alternative to the proposed Code amendment. Sub-clause 13.194(2)(c) and 13.204(1)(b)(iii) require that dispatch quantities include plus or minus the MW bandwidth for frequency keeping generators. If this requirement is removed then frequency keeping generators will not receive in-band frequency keeping[1]. Consider a constrained on situation. Under the existing code, constrained quantities (in MW) are calculated as: Constrained quantity = minimum of (DQ + FK – SQ or MQ – SQ) Where DQ = dispatch quantity FK = the MW band width for the frequency keeping generator, which must be included as per Sub-clause 13.204(1)(b)(iii) MQ = metered price SQ = scheduled price If SQ = 500 MW, DQ = 520 MW, FK = 50 MW and MQ = 560 MW then constrained quantity = min (520 + 50 - 500, 560 - 500) = 60 MW. This includes 40 MW (MQ – DQ) of in- band frequency keeping. If FK is not included (sub-clause 13.204(1)(b)(iii) is

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[1] Another consequence is that constrained amounts will be calculated in the same manner for frequency keeping generators as they are currently calculated for other generators.

| | | removed from the Code), then the constrained quantity = min (520 - 500, 560 – 500) = 20 MW. All in- band frequency keeping has been removed.

Consider a constrained off situation. Under the existing code constrained quantities (in MW) are calculated as:

Constrained quantity = minimum of (SQ - DQ - FK or SQ - MQ)

Where terms are defined as above.

If SQ = 500 MW, DQ = 450 MW, FK = 50 MW and MQ = 420 MW then constrained quantity = min (500 – 450 - 50, 500 - 420) = 80 MW. This includes 30 MW (DQ – MQ) of in- band frequency keeping.

If FK is not included (if sub-clause 13.194(2)(c) is removed from the Code), then the constrained quantity = min (500 - 450, 500 – 420) = 50 MW. All in-band frequency keeping has been removed. |