

27 May, 2016

Radio Spectrum Band III Consultation
Radio Spectrum Management Policy and Planning
Ministry of Business, Innovation and Employment
PO Box 2847
WELLINGTON 6140

Sear Sir/Madam,

Re: Radio Spectrum Band III Consultation

This is Powerco Limited's submission on the Ministry of Business, Innovation and Employment's (MBIE) consultation paper *Radio Spectrum Band III Consultation*.

We appreciate the opportunity to respond to the governments Consultation request.

Powerco's contact person for this submission is:

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3. Potential uses of 174-230 MHz

3.1 Radio Microphones

Q1. Should spectrum in Band III be allocated for radio microphones? If so, how much spectrum would satisfy demand in this area?

Considering the wide channel requirements per user channel, the already available spectrum for Radio Microphones and VHF propagation characteristics, Powerco believe that VHF Band III could be put to better use by future leaning technologies such as DAB and Internet of Things. Further, Powerco prefer typical VHF channel licensing rights for Land Mobile Radio and low bandwidth Data Telemetry systems such as SCADA.

3.2 Digital Audio Broadcasting

Q2. Should spectrum in Band III be allocated for DAB? If yes, why? If not, why not?

Yes.

Q3. Would an allocation of 14 MHz in the form of eight 1.536 MHz frequency blocks be an appropriate spectrum allocation for DAB in New Zealand? If not, how many multiplexes would be more appropriate for current demand?

Being that VHF Band III is 56 MHz of spectrum, Powerco considers 14 MHz (25%) a reasonable allocation for DAB purposes. Australia's use of 202-216 MHz with a considerably larger geographic

Q4. Should spectrum in Band III be allocated to LMR? If yes, how much spectrum would satisfy demand in this area?

Yes. Powerco believe that the EE-Band should be extended to at least 180 MHz. This would allow for the potential additional of 480, 12.5 kHz, channels for a band which is in need of additional channels.

Q5. If spectrum is allocated to LMR, should there be technological requirements around the use of this spectrum? If yes, why? If not, why not?

Powerco would prefer that any additional channels for LMR make use of newer digital systems such as DMR, P25, NXDN, or Tetra which require large investment and a more secure supply of available channels for implementation.

Q6. If spectrum is allocated to LMR, is it appropriate to charge a fee for this use or transfer the spectrum to the management rights regime? If yes, why? If not, why not?

Powerco would prefer use of spectrum for such things as LMR and/or Data Telemetry by way of Administration Rights rather than Spectrum Management Rights or General User Radio Licensing rights.

3.4 Internet of Things

Q7. Is there a demand for exclusive spectrum in Band III, either now or in the future, for IoT technologies? If yes, which IoT technologies are demanding this spectrum?

Powerco would like to see available licensed spectrum for specific applications such as SCADA, Telemetry and Internet of Things which could utilise meshed type radio architecture for large device counts over large geographic areas.

We require reliable communications from which security of licensing provides and that General User Radio Licensing does not allow for.

Q8. If spectrum is allocated to IoT, how much spectrum would satisfy demand in this area?

Considering that spectrum for Short Range Devices (SRDs) under the General User Radio License (GURL) which mesh radio systems can operate within is between 915 and 928 Mhz (13MHz), Powerco believe a similar spectrum plan should be made available for both licensed and GURL rights.

Q9. Which type of licensing framework is most appropriate for spectrum allocated to IoT?

In order for innovations such as the Internet of Things (IoT) to thrive, it must be able to operate for unlimited types of devices and be free of intrusive licensing regimes. However, for systems which Powerco would prefer to operate, there must also be security of communications which do not inhibit successful investments. Therefore, Powerco believes in both Spectrum Management Rights and General User Radio Licensing is appropriate in separate partitions.

4. Potential users of 174-230 MHz

4.1 Utilities

Q10. Is there demand for exclusive Band III spectrum for utility companies? If yes, what types of

Yes. Being a critical infrastructure business which provides for the socio-economic wellbeing of New Zealanders, it is essential that there is available spectrum for utilities and PPDR organisations that ensure continuity of services for New Zealand citizens.

Powerco would, in the very least, like to ensure that there is sufficient spectrum available for growing existing technologies such as SCADA, if not future technologies such as the Internet of Things and Big Data.

Q11. Is there demand for NZDF use of spectrum between 225–230 MHz?

N/A

4.2 New Zealand Defence Force

Q12. Should spectrum in Band III be allocated to NZDF? If yes, why? If not, why not?

Yes. Considering that NZDF allocations start at 225 MHz and adhere to the NATO Harmonised Band I allocation, Powerco believe that the NZDF should retain these rights.

4.3 Public Protection and Disaster Relief

Q13. Should New Zealand consider PPDR uses in Band III? If yes, why? If not, why not?

Yes. Powerco believe that the beneficial characteristics of VHF Band III are appropriate for the use of critical infrastructure and PPDR organisations that require security of Communications over a large and diverse geographic area such as New Zealand.

Q14. If there is demand for PPDR in Band III, how much spectrum would satisfy this demand?

N/A

5. General Questions

Q15. Are there any other uses of Band III that should be considered? If yes, please describe.

N/A

Electricity Utility Orion New Zealand Ltd has viewed this submission prepared by Power Co. and supports the matters raised.

The person to Contact at Orion New Zealand is Neville Digby neville.digby@oriongroup.co.nz

Regards

Neville Digby