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Radio Spectrum Management Policy and Planning
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TRUSTPOWER SUBMISSION: 5 YEAR SPECTRUM OUTLOOK

1.1. Overview

- 1.1.1 Trustpower Limited (**Trustpower**) is a multiproduct retailer that offers a bundle of electricity, gas and telecommunications products to its customers. We welcome the opportunity to provide our views on the Ministry of Innovation Business and Enterprise (**MBIE**)'s Radio Spectrum Management Policy and Planning (**RSM**) *Five Year Spectrum Outlook 2022-2026 of December 2021* draft paper (**the Draft Outlook**).
- 1.1.2 We acknowledge the RSM needs to balance the importance of both mass market wireless services that are used by virtually everyone (like Wi-Fi and cellular mobile services)¹, and more specialised uses of spectrum which are critical to many businesses, public sector and other organisations. Specialised uses include, for example, climate monitoring, defence, and air traffic control.
- 1.1.3 In our view, the development of policies that guide the move towards innovative spectrum uses should be focused on supporting opportunities and competition in mass market wireless services, particularly the mobile market, so that there can be long-term benefits for New Zealanders. Accordingly, it is pivotal to ensure consistency between RSM workstreams over the next five years and the issues that were considered by the Commerce Commission (**the Commission**) in their 2019 Mobile Market Review (**MMR**), such as the impact of spectrum on the structure and competitiveness of the mobile market.²
- 1.1.4 The RSM may wish to prioritise the following matters during the next five years:
- acquisition limits on spectrum holdings;
 - regulatory conditions which require MNOs to offer access to third-parties;
 - spectrum sharing and regional licences which free up spectrum for other uses; and
 - modernisation of the Radiocommunications Act 1989 (**the Act**).
- 1.1.5 We expand on these matters below.

¹ We would include satellite technologies in this observation, which are likely to have an increasing importance in providing high speed broadband services in rural and underserved areas in New Zealand.

² Commerce Commission, 2019, Mobile Market Study Findings. Available from https://comcom.govt.nz/_data/assets/pdf_file/0022/177331/Mobile-Market-Study-Findings-report-26-September-2019.PDF

1.2. Consideration of the impact spectrum allocation has on competition

1.2.1 New technologies facilitated by new spectrum allocations have the potential to create a more dynamic retail and wholesale market for mobile telecommunications services.

1.2.2 This means that spectrum should be allocated and regulated in a manner that enables these new technologies to facilitate transformative change for businesses and consumers instead of cementing existing market structures.

1.2.3 In our 2018 submission to MBIE's "Preparing for 5G in New Zealand" Consultation paper, we included a report from Analysys Mason.³ One of their conclusions was that:

".. competition should be encouraged at both the infrastructure and retail levels. The increased capacity, scalability and flexibility of 5G networks can be expected to drive innovation in retail services and has the potential to create new markets.

The ability to build standalone networks with 5G to support different use cases and alternative business models, as well as virtualisation in radio access and core networks... raises the possibility of alternative players and/or new entrants deploying 5G networks and/or offering 5G services, in addition to the existing MNOs.

*Effective wholesale access could also be a key regulatory component in the licensing of spectrum for 5G networks. From an infrastructure perspective, the high costs involved in rolling out new radio and core infrastructure may mean that current trends towards use of radio access network (RAN) sharing and enablement of wider coverage through wholesale access will continue to be relevant in 5G."*⁴

1.2.4 We note and agree with the Commission's observations regarding radio spectrum in the MMR:

*"In allocating spectrum, it is important that consideration is given to the likely competitive effects of any allocation."*⁵

1.2.5 Trustpower believes it is essential for RSM to work closely with the Commission in relation to the Draft Outlook and the spectrum issues that RSM will be considering in the next five years.

1.3. Acquisition limits on spectrum holdings

1.3.1 Spectrum caps may be necessary to promote competition between existing operators and new market entrants. The Commission explained in the MMR that "the use of mechanisms such as spectrum caps as part of an auction for new spectrum allocations may seek to further promote competitive conditions".⁶

1.3.2 Additionally, many licence terms include "use it or lose it" obligations that require spectrum to be used before a certain date to ensure effective use of the spectrum and prohibit spectrum hoarding.⁷ We also agree with the Commission's support for "... the inclusion of 'use it or lose it' obligations on parties acquiring spectrum".⁸

³ Trustpower, 2018, *Preparing for 5G*. Available from <https://www.rsm.govt.nz/assets/Uploads/documents/consultations/2018-preparing-for-5g/08ade7d162/236.2-trustpower-submission-preparing-for-5g.pdf>

⁴ Analysys Mason, Review of 5G policy objectives, report for Trustpower. Available from:

<https://www.rsm.govt.nz/assets/Uploads/documents/consultations/2018-preparing-for-5g/08ade7d162/236.2-trustpower-submission-preparing-for-5g.pdf> Paragraph 1.3, page 3

⁵ Commerce Commission, 2019, Mobile Market Study Findings. para 4.15

⁶ Ibid. para 4.18.

⁷ Further details available from <https://digitalregulation.org/spectrum-management-key-applications-and-regulatory-considerations-driving-the-future-use-of-spectrum>

⁸ Commerce Commission, 2019, Mobile Market Study Findings. para 4.43.

1.4. Regulatory conditions which require MNOs to offer access to third-parties

- 1.4.1 Non-MNO retail providers, such as mobile virtual network operators (**MVNOs**), have an important role to play in delivering better outcomes for consumers through enhancing the competitive dynamic of the mobile market and ensuring vibrant retail competition. We continue to consider that commercially agreed solutions for MVNO access arrangements are the best outcome as they provide access seekers and providers with the opportunity to tailor the access arrangements to suit their requirements.
- 1.4.2 However, we do believe RSM should, in consultation with the Commission, consider the inclusion of conditions in relation to certain spectrum allocations which require MNOs that acquire spectrum to offer access to third parties, particularly for high demand spectrum bands. We believe this is warranted with such highly concentrated wholesale and retail markets for mobile telecommunications services in New Zealand.
- 1.4.3 MVNO access has been introduced in some countries via conditions on the award of spectrum over the last two years in the context of 5G spectrum auctions and assignments.

Singapore 2020	In Singapore’s 5G spectrum licensing, spectrum right holders were required to provide 5G wholesale services to other mobile service providers, specifically to any MNO and/or MVNO, upon request. ⁹
France 2019	In November 2019, the French regulator announced that blocks of 50MHz would be available in the 3.4 – 3.8 GHz band auctions if (optional) commitments were made to host MVNOs on operator’s 5G networks. ¹⁰ This access was to be granted under reasonable commercial conditions. The operators had to provide at least one full-MVNO offer and allow MVNOs to benefit from active infrastructure sharing agreements with other operators (if they exist).
Portugal 2020	The Portuguese regulator imposed a spectrum licence condition for successful bidders for spectrum in the 700 MHz band (2 x 10 MHz), or at least 50 MHz in the 3.6 GHz band, to provide access to MVNOs, from full MVNO to light MVNO, on a non-discriminatory basis. ¹¹
Czech Republic 2020	In its draft Invitation to Tender for frequencies in the 700MHz and 3.5GHz bands, the Czech Republic regulator required that holders in the 700MHz band provide wholesale access on non-discriminatory terms, with wholesale prices subject to a prohibition on margin squeeze. Reference offers had to be provided for both full MVNO and light MNVO. ¹²

1.5. Spectrum sharing and regional licences

- 1.5.1 With a growing diversity of spectrum users and applications, achieving an appropriate balance between supporting existing benefits from wireless services and providing conditions for future investment will be essential.
- 1.5.2 National and sub-national allocations will be even more important in the future to support growth in innovative uses. More localised allocations can suit a range of businesses needing specialised services at a specific site (e.g. wireless control of robots in a warehouse, tracking livestock on a remote farm).

⁹ Available from <https://www.imda.gov.sg/-/media/Imda/Files/Regulation-Licensing-and-Consultations/Consultations/Consultation-Papers/Second-Public-Consultation-on-5G-Mobile-Services-and-Networks/5G-Second-Consultation-Decision.pdf>; see also <https://www.imda.gov.sg/-/media/Imda/Files/Regulations-and-Licensing/Licensing/Telecommunication/Services-Based-Operations-Licence/Wholesale-Framework.pdf?la=en>

¹⁰ Available from <https://en.arcep.fr/news/press-releases/view/n/5g-20.html>

¹¹ Available from <https://www.anacom.pt/render.jsp?contentId=1574207>

¹² Available from <https://www.ctu.eu/sites/default/files/obsah/ctu/vyzva-k-uplatneni-pripominek-k-navrhu-textu-vyhlaseni-vyberoveho-rizeni-za-ucelem-udeleni-prav-k-obrazky/20200316-vyhlasenienvk.pdf>

- 1.5.3 In addition, the longer-term implications from COVID-19 might not only include greater flexibility between home and office, placing greater demands on connectivity within the home, but may also over time lead to population dispersal if people opt to move from cities to towns, which would place even more importance on rural connectivity. We believe there are a variety of innovative ways to deliver telecommunications services to these rural and underserved areas.
- 1.5.4 Other regulators are also considering local allocations to support different models. Ofcom notes in their 2020 Spectrum Strategy that “local licences in bands supporting mobile technology can also support innovation in the mobile supply chain. For example, new suppliers of enterprise mobile equipment have emerged using bands available on a local basis and a 5G test bed has been launched using local licences.”¹³
- 1.5.5 Spectrum sharing can also support greater efficiencies. Spectrum can be shared by separating users in one or more of frequency, geography, or time. By allowing different users to offer wireless services, spectrum sharing can bring benefits to people and businesses and ensure that spectrum is used as efficiently as possible.¹⁴ Ofcom identified as far back as 2014 that spectrum sharing would be increasingly important to serve the growing demand for spectrum.
- 1.5.6 In its report that was attached to our 2018 submission, Analysys Mason also identified different spectrum allocation models:

“We note that the wide bandwidth, and the limited propagation range of 5G millimetre wave spectrum, combined with new 5G network technology, could facilitate alternative methods for allocating some of the spectrum in this range, compared to exclusive-use nationwide licensing. For example, the greater geographical re-use possibilities for spectrum in millimetre wave bands could unlock additional sharing opportunities, and/or make sub national licensing approaches more viable (either regional licences, or licences to deploy 5G in localised areas). The wide bandwidth available in the millimetre wave bands will reduce the scarcity of spectrum which, combined with new sharing possibilities, might mean that alternative authorisation approaches for 5G spectrum are possible. ...”¹⁵

1.6. Modernisation of the Radiocommunications Act 1989

- 1.6.1 We are cognisant that many of these changes, particularly the more nuanced ones, may require a review of the Act to enable the changes contemplated by the Draft Outlook. This may include express provision of having regard for competition in retail and wholesale markets for mobile and wireless services as an objective in regulating radio spectrum.
- 1.6.2 We are strongly supportive of MBIE considering a review of the Act.

For any questions relating to the material in this submission, please contact me via email on claudia.vianello@trustpower.co.nz



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¹³ Ofcom, 2020, Spectrum Strategy Consultation. Available from https://www.ofcom.org.uk/data/assets/pdf_file/0027/208773/spectrum-strategy-consultation.pdf

¹⁴ Ofcom, 2020, Spectrum Strategy Consultation. Available from https://www.ofcom.org.uk/data/assets/pdf_file/0027/208773/spectrum-strategy-consultation.pdf

¹⁵ Analysys Mason, Review of 5G policy objectives, report for Trustpower. Available from: <https://www.rsm.govt.nz/assets/Uploads/documents/consultations/2018-preparing-for-5g/08ade7d162/236.2-trustpower-submission-preparing-for-5g.pdf> Paragraph 1.6