Radio spectrum fees review 2025

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Executive Summary

Thank you for the opportunity to provide feedback on RSM's draft 2025 spectrum fees review.

We support the Ministry recovering the efficient costs to assure spectrum licences, responding to the needs of Manage Rights and licence holders, technical planning and ensuring spectrum can be used without interference. These are all valuable services we are happy to contribute to. Licence holders who are funding RSM activities such as spectrum assurance and international engagement should have a say in the level of effort and how this occurs.

Similarly, we are also sympathetic to the Ministry's view that the costs of providing these services have increased and therefore absolute charges must as well. That said, the Ministry proposal to increase licence fees by 36% represents a substantial increase for operators.

We suggest that an increase at that level necessitates that the Ministry also consider whether the structure of these fees continues to be appropriate given significant changes in technology usage and competition in the markets to which these fees relate. We believe these changes require a shift towards a fee system that better reflects the commercial value of different licence types – measured by the population-coverage each licence provides. This will provide for a fairer allocation of spectrum system costs across terrestrial and non-terrestrial operators.

A fair allocation of spectrum assurance costs

The market has changed since the fees were last reviewed. Satellite and ground station operators now derive significant benefit from the spectrum system overseen by RSM, offering direct to customer broadband and mobile services.

Yet while satellite and ground station operators benefit from RSM assurance of spectrum rights and engagement in international standard setting, these operators contribute little to the funding of these services with current funding approach. Allocating these costs based on the number of licences held by operators leaves terrestrial licence holders bearing a disproportionate share of these costs, subsidising the operations of their satellite competitors.

The Treasury and Auditor General recommend that agencies consider the outcomes achieved by the activity and the beneficiaries of the activity when setting fees. While a portion of RSM costs such as are directly related to licence volumes, substantive RSM costs relate to technical support for spectrum planning and allocations, the initial provision of a register itself, and international engagement. The satellite sector benefits from these activities and should make a fair contribution to recovering these costs.

Accordingly, we recommend that the Ministry set separate satellite licence fees that include a fair allocation of these system costs. For example, this could be based on the relative weighting of spectrum allocated by average population covered by the licence. This is because the footprint of a gateway could cover many jurisdictions besides New Zealand. Therefore, spectrum valuation must reflect this.

Proposals to add a new and modified licence fee

The Ministry is further considering the option[1] of a higher ~$400 for new and modified licences, with an annual renewal fee of ~$160. While we support the objective of making fees more cost reflective, we don't support the proposed alternative approach. The proposed differentiation (option B) is unlikely to reflect actual cost differences to process applications and make licensing more complex.

[1] The alternative is to maintain the current approach whereby there is a single annual fee.

More concerningly, the differentiated approach could discourage parties from updating licences (through either issuing a new licence or modification) or technologies, resulting in less reliable information being available to AREs for planning purposes or delaying technology deployments. If the Ministry wished to signal resource costs for some activities it could implement a technical time-based charge.

The Ministry may also wish to take the opportunity – while amendments to the regulations are anticipated – to review and consider its approach to small cell, in building deployments. The Ministry consulted on its approach in April 2021 and indicated it may come back to the issue when future regulatory changes were anticipated.

Introduction

1. Thank you for the opportunity to provide feedback on RSM's draft 2025 spectrum fees review. The Ministry proposes to increase the fee for the licences we use by 36%.

2. We agree that radio spectrum is a valuable resource used for wireless communication, enabling the use of technologies that connect communities, increase productivity and improve resilience. Spark has made significant investments in acquiring spectrum and in the critical infrastructure that relies on spectrum to provider service to our customers.

3. We support the Ministry recovering the efficient costs to assure spectrum licences, responding to the needs of Management Rights and licence holders, technical planning and ensuring spectrum can be used without interference. The Ministry has a key role providing certainty for spectrum holders so that they can invest in critical infrastructure and services that rely on this spectrum. This has significant value for rights holders and the public.

4. However, the market has changed since the fees were last reviewed in 2017. Many new forms of satellite systems and uses have emerged, providing national broadband and mobile services directly to consumers in competition with terrestrial providers. While satellite and ground station operators derive significant benefit from RSM efforts, they have few licences and make little contribution to funding of RSM services.

5. These issues are developed further below, with a summary of our views in the RSM template. Confidential information is in the attachment and marked accordingly.

The emergence of satellite-based services

6. The Ministry proposes to roll over current funding where costs are – in effect - recovered equally from each licence. However, this approach means that the bulk of RSM costs are born by terrestrial providers with large licence numbers rather than the firms that drive or benefit from RSM activities.

7. The Satellite transmission has been traditionally used for intercountry linking and broadcasting and have an "international" flavour. Therefore, satellite systems operate in satellite specific bands.

8. However, in recent times many new forms of satellite systems use have emerged and is emerging. This now includes:

    a. Providing wireless communication as an alternative to terrestrial wireless systems.
    b. Providing wireless communications to people on the move in aeroplanes, in ships etc
    c. Monitoring of the climate parameters, earth, sea etc

9. There are also multiple types of satellite systems:

    a. Low earth orbit
    b. Medium earth orbit
    c. Geo Synchronous orbit

10. The Ministry's spectrum outlook sets out the growth of the space sector and new use cases that satellites can support, such as more ubiquitous connectivity and consumer broadband, particularly to locations not currently well served by traditional service providers (e.g. rural and remote areas).

11. Satellite and satellite ground station operators benefit from the RSM overseen spectrum allocation framework. While operators are providing services to NZ consumers in competition to mobile and WISP services, in case of the gateway links their sphere of influence may exceed the boundary of NZ. We are aware that Inmarsat gateway in Warkworth also has a standby provision for Hawaii and in addition its sphere of commercial influence includes many Pacific island countries.

12. Gateway stations are typically located in relatively radio quiet areas. There is a higher likelihood of finding these areas in NZ than in dense urban cities. Besides accessing spectrum free of charge, this makes NZ an even more attractive location.

13. However, while satellite and ground station operation providers derive significant benefits from secure spectrum tenure, current arrangements mean they contribute little to the Crown costs to assure the system, i.e.,

    a. Satellite operators do not contribute through a market-based price or resource rental for spectrum used.
    b. The nature of the technology and service means few licences - for which a per annum licence fee – is required:

        i. Every satellite link has two radio links, an access link and a feeder link or a gateway link. The gateway link may serve multiple countries. Alternatively, the gateway may be physically located in another country. Satellite Communication is in direct competition to terrestrial MNOs.
        ii. Depending upon the satellite constellation height and the application type, there may be multiple satellites. For example, LEO satellites have a diameter of 50 km and will provide a cellular type of coverage to all the country. Therefore, up to 150 satellite transmitters or more may be needed to provide coverage to all the country.

14. Additionally, satellite operators enjoy an almost permanent incumbency as was evident with Inmarsat and C band protection requirements at Albany/Warkworth. In practice, this provides a satellite operator spectrum free of charge and giving them radio protection via incumbency. The footprint of a satellite network element (say gateway) may also exceed the shores of NZ.

15. Spectrum arrangements for terrestrial users and MNOs are quite different than that for satellite network providers. MNOs must acquire management rights at substantial cost, renew rights periodically and have to pay a pa fee for licensing the transmitters.

Proposed approach

16. Clearly the present arrangements do not reflect the changing market.

17. To date, the Minister has allocated RSM all licensing, investigations and planning function costs to parties based on the number of licences held by parties. While this approach may have been suitable for a market where the number of licences held by parties fairly reflected the relative benefits Ministry spectrum assurance activities, this is no longer the case.

18. While satellite and ground station operators are significant beneficiaries of RSM spectrum assurance activities, they hold relatively few licences now and contribute little to RSM costs. Yet their domain of influence could exceed the shores of NZ and in NZ they are emerging as competitors to the terrestrial MNOs. The proposed approach would – for example - see a regional WISP contributing three times more for RSM assurance of spectrum allocations than

major satellite providers[2]. Terrestrial providers are in effect subsidising the operations of their satellite competitors.

19. The Treasury guidelines used by the Ministry also recommend that agencies consider the outcomes achieved and the beneficiaries of those outcomes. Given the significant changes we're seeing in the market, we recommend that the Ministry apply this approach, i.e., consider:

    a. The outcomes the RSM activities support. As set out in the consultation paper, RSM is in effect seeking to assure spectrum for rights holders. While some RSM costs relate to the number of licences held, there are substantive costs that better relate to overall spectrum assurance. For example, the initial RFF establishment costs, RSM's general planning and interference mitigating activities, and participation in international bodies.
    b. The beneficiaries of these outcomes. All spectrum users benefit from RSM planning and assurance of spectrum allocations, including satellite and ground station operators.
    c. A fair and efficient means to recover costs from beneficiaries.

20. The effect of the proposed approach on the recovery of current approach based solely based on licences in effect loads the costs on to terrestrial spectrum license holders. The nature of the technologies and licencing system means that there are few satellite licences, but operators fully benefit from spectrum assurance provided by the RSM interference management framework activities.

21. We recommend that the Ministry establish a separate satellite licence fee that recovers a fair share of RSMs planning and assurance costs, recognising that while satellite and ground station operators are significant beneficiaries of the system they hold few licences in practice. Providers who are funding RSM activities such as spectrum assurance and international engagement should have a say in how this occurs.

Proposed fee options

22. MBIE has also requested feedback on two options:

    a. An annual licence fee of ~$180 for all licences, or
    b. An annual licence fee of ~$160 for existing licences and ~$400 for each new or modified licence (and then ~$160 in subsequent years for these new or modified licences). Spectrum licences issued under a renewed MR would be considered new licences subject to the higher fee.

23. We recommend that the Ministry retain the current single licence fee structure.

24. While we appreciate that the Ministry may wish to better signal the cost of different activities, as all RSM costs are averaged across standard licences, differentiated licence fees are unlikely to provide any material allocative or efficiency benefits. In practice, the differentiated approach simply recovers costs from a different group of licence holders, i.e., those who more often add, replace or modify licences. The approach is more likely to add unnecessary complexity to licence arrangements.

25. More concerningly, a higher fee to replace or modify existing licences may discourage licensees from updating important licence parameters that we rely on for our spectrum, resulting in less useful information being to AREs. The increased fee is likely to result in less useful planning information being available from licences.

[2] Based on a simple comparison of Inspirenet (676 licences) to Starlink (196).

26. We believe the risk of licences becoming less helpful is real and outweighs any potential benefits of differentiated fees, particularly where these are only loosely cost reflective at best. For example, the Ministry's 2021 small cell licencing clarification (discussed below) highlights that licence holders modify their behaviour to minimise licence costs. In that case, the Ministry was concerned that national licences were being created for small cell deployment.

27. If the Ministry wanted to signal cost differences, it could consider charging for the time technical resources are applied to review specific licences over a certain level.

Small cell licences

28. The Ministry may also wish to consider further its approach to indoor small cell networks and licencing. The Ministry consulted in April 2021 on draft guidance setting out how operators should licence indoor small cell networks, tidying up some issues that had previously been managed by informal arrangements.

29. MBIE considered that indoor small cell networks should not be licenced on a Form 7 with an area defined as 'All of NZ' (rather, it should be tied to the actual location) but acknowledged that individually licensing every transmitter may not be suitable for this situation. Rather MBIE indicated that it would accept indoor small cell networks within a single building on one Type B spectrum licence per building, rather than requiring an individual spectrum licence for each transmitting base station. The Ministry was concerned that insisting on a single licence per transmitter may unfairly burden MNOs.

30. The proposal was an attempt to reach a middle ground between full protection (which would require every individual transmitter to be licenced) and no protection at all (i.e. a GUL). While there will be no receive protection on the licence, the proposal would establish the sites in the register that subsequent new transmitters will need to plan around (first in time order) which provides a middle ground between full protection and no protection. The Ministry would look to clarify how Form 7 and Form 8 address these types of networks when it has the chance to amend the Radiocommunications Regulations.

31. It's unclear whether rights holders are taking a consistent approach to small cell licencing. Further, in principle there is little - if any - difference between a small cell located in a building and located in any other location. We support the Ministry tidying up this aspect of framework, ensuring useful information is provided in licences to facilitate ARE planning.

[end]

Attachment: Ministry template

General questions

Questions for organisations and businesses

1	
	Mobile and wireless network provider.
2	
	~8,000
3	
	We will be increasing the number of licences as we add more cell sites and bands to existing sites. We expect to add around **[ ]SPKCI** more licence per year.
4	What proportion of your licences do you expect will need to be modified in the next five years?
	[ ]SPKCI

Questions about the proposals in the discussion document

Options for annual licence fee changes

1	

	• Less complex licencing system.
	• Does not discourage licence holders from:
	  ○ updating licences or replacing with a new licence to capture new or better planning information
	  ○ new technology deployment where this might require updating of a licence.
	• The increased fee is likely to result in less useful planning information being available from licences.

2	What do you see as the advantages and disadvantages of option two?
	• We don't see any real advantages. We doubt that the approach better reflects the efficient incremental costs of adding or modifying a licence. RSM costs are averaged across standard licences and are there's unlikely to be cost reflective in any case. • A higher fee is more likely to discourage licensees from replacing an existing licence or modifying a licence to better reflect deployments. This would result in less reliable information being available to AREs. Access to reliable licence information is key

	benefit of the current system and this is likely to undermine the provision of that information. We don't support this option.
3	Which option do you prefer? Why?
	Option one for the reasons above.
4	Is there any other option that has not been considered in this document? If yes, please explain this option in detail, including why it is preferable to option one and two.
	The Ministry should establish a satellite licence category which includes a fair allocation of RSMs costs to provide and assure spectrum allocations. A straight allocation of these costs to standard licences unfairly loads these system costs on to terrestrial licence holders that – due solely to the characteristics of their deployments – require many licences. Government guidance is that agencies should consider the outcomes of the activity (assuring a spectrum allocation system that provides confidence for users) and the beneficiaries of that outcome. The Ministry should review these system cost with a view to a fair allocation between satellite and terrestrial spectrum users.
5	What impact will the fee increase have on your business or entity?
	A material 36% increase in our costs.
6	How would fee option two impact the licensing decisions of your organisation or entity over the next five years?
	Option two will likely discourage licence holders from replacing or modifying existing licences as they evolve their networks.

Closing comments

7	Are there any other comments you wish to make?
	The Ministry could take the opportunity to review its approach to small cell licencing. The Ministry consulted on its approach in April 2021 and indicated it would come back to the issue when changes to regulations were anticipated.