



Submission in response to
ACMA consultation

**Our approach to
radiocommunications
licensing and allocation
2024**

**Revised Draft Information
Paper**

Public Version

September 2024

EXECUTIVE SUMMARY

1. Optus welcomes the opportunity to provide feedback on the Australian Communications and Media Authority's (ACMA) consultation on its revised Information Paper "*Our approach to radiocommunications licensing and allocation 2024*" (the Information Paper).
2. The technological flexibility of Australia's spectrum licensing framework has enabled mobile network operators (MNOs) to rapidly deploy multiple generations of mobile technology. The certainty and exclusivity of spectrum access afforded to spectrum licensees has facilitated the billions of dollars of private sector investment needed to do so. This investment has delivered competitive national critical infrastructure networks enabling the supply of essential communications services to Australians. The public benefit derived from mobile spectrum is unrivalled.
3. The ACMA's management of spectrum must always be informed by the overarching legislative objectives of the Radiocommunications Act 1992 (the Act) namely, to promote the long-term public interest derived from use of spectrum.¹ The reforms of the Modernisation Act have provided the ACMA with broader discretion to adjust spectrum arrangements in response to market changes and ultimately to promote the long-term public interest. However, this increased flexibility creates uncertainty for licensees and has the potential to undermine network investment over the long term.
4. The Information Paper can serve a valuable function of clarifying the ACMA's general approach to licensing and allocation decisions, with a view to limiting the degree of uncertainty inherent to a more flexible legislative regime. While Optus welcomes the intent of the Information Paper to provide ex-ante transparency, we consider that it falls short of this and in fact introduces an unnecessary degree of uncertainty into the mobile network investment environment. This is not in the long-term public interest.
5. In Optus' view, the revised Information Paper does not clarify the general circumstances and factors relevant to the ACMA's discretion to intervene in spectrum arrangements. Rather than provide clarity upfront, the Information Paper indicates that the ACMA will rely on the incremental transparency of a case-by-case approach. The result is that the Information Paper provides little certainty or predictability about the ACMA's decision-making and appears inconsistent with a "long-term" approach to the public interest. To address this, Optus submits that the revised Information Paper should be amended to
 - (a) Strike a more investment friendly balance between transparency and certainty (or predictability) for licensees and the flexibility the ACMA needs to effectively manage spectrum – for example, by providing more fulsome descriptions of the factors that the ACMA may have regard to;
 - (b) More clearly articulate how the ACMA will employ a "balanced application of market and regulatory mechanisms" – in Optus' view, the revised Information Paper should make clear that the ACMA will, other than in exceptional circumstances, only intervene where it is established that the market is not facilitating and cannot facilitate public interest outcomes;
 - (c) Avoid any unnecessary "dilution" of spectrum licence rights that may undermine the terms of spectrum access that have supported billions in network investment over the last 30 years;

¹ Section 3, the Act

- (d) Provide greater assurance that a spectrum licence that has been used to supply essential services to the public and will almost certainly continue to be used to supply those services to the public will be renewed. In this way, the Information Paper should afford greater weight to the long-term public benefits derived from use of spectrum for public mobile networks and services.
- 6. Optus considers that the degree of uncertainty the Information Paper creates is not justifiable in the context of its potentially adverse impact on the deployment of national critical infrastructure and essential communications services. It also appears counter to the Government's communications policy objectives to improve regional and remote connectivity.
- 7. Optus urges the ACMA to reflect on whether it is in the public interest to introduce further uncertainty into the investment climate of an industry critical to Australia's future and experiencing long-term declines in returns on invested capital (ROIC). Rather than preserve an unnecessarily broad discretion to adjust spectrum access under spectrum licences, Optus urges the ACMA to adopt a default assumption that the use of spectrum licences for mobile services promotes the long-term public interest.
- 8. Optus considers that, if the Information Paper is published without further amendment to address the above concerns, it will constitute a missed opportunity to provide critical ex-ante transparency to stakeholders to help promote network investment. Optus provides further explanation for its concerns below and also refers the ACMA to the submission from the Australian Mobile Telecommunications Association (AMTA).

CLEAR AND TRANSPARENT DECISION-MAKING CRITERIA

9. Optus recognises that the reforms to the Act provide the ACMA with greater flexibility and independence in its spectrum management functions. The reforms were introduced in part to address perceived “inflexibilities” in the previous legislative framework.² The Spectrum Review also recommended legislative amendments require “the ACMA to improve and maintain the range, availability and quality of information available to the market, supported by appropriate powers to collect information from industry”³
10. It is well understood that uncertainty creates risk, which in turn can chill investment. Uncertainty in access to a critical input such as spectrum, including that created by regulation that is too broad or unclear, will undermine investment in radio networks and services. Any dilution of the spectrum licence rights that have supported mobile network investment to date changes the investment equation, with potentially adverse effects on the quality and reliability of downstream services.
11. To limit the uncertainty arising from the new legislative framework and the ACMA’s new powers, the ACMA should provide clear, concise and transparent information over the matters it will consider in its licensing and allocation decision-making. Transparency assists stakeholders and the ACMA to understand the boundaries of the regulatory framework and limits the risk of regulatory failure and/or disputation by delivering greater understanding and acceptance of decision-making.
12. Many licensing and allocation related decisions made by the ACMA under the Act are decisions that, upon application, may be subject to reconsideration by the ACMA or subsequently for review by the Administrative Appeals Tribunal (AAT, soon to be the Administrative Review Tribunal or ART).⁴ It is therefore important that the regulatory framework is comprehensive and transparent so that affected stakeholders can predict the ACMA’s approach to an issue with sufficient certainty to manage risk and plan accordingly.
13. In Optus’ view, the revised Information Paper preserves a broad and relatively unqualified discretion for the ACMA, and this is compounded by reference to other regulatory materials that may inform the ACMA’s decision-making.⁵ While the Act grants the ACMA broad discretion, this does not mean that the criteria to be applied cannot be clearly articulated and the ACMA’s discretion appropriately qualified. In fact, a broad discretion requires greater qualification to avoid a perception of arbitrariness and promote consistency in decision-making.
14. In Optus’ view this requires that the Information Paper provide sufficient detail as to how the ACMA will apply its licensing and allocation powers in the general case. In other words, what are the general considerations that will inform these decisions. Rather than listing the legislative provisions that provide the ACMA with its licensing and allocation powers, Optus suggest that the Information Paper should describe the considerations that will inform its decision-making in detail sufficient to enable an affected stakeholder to understand the process and the nature and scope of the matters to which the ACMA will have regard when performing its licensing and allocation functions.

² The licensing system – supporting material for the Exposure Draft of the Radiocommunications Bill 2017; May 2017; p.2 citing the findings of the Spectrum Review

³ [Spectrum-Review-report-FINAL - for publishing.pdf \(infrastructure.gov.au\)](#); p.7

⁴ See sections 285 and 287 of the Act

⁵ including the FYSO, Govt communications policy, Ministerial Policy Statements (MPS), the Government’s Statement of Expectations, and the ACMA’s Statement of Intent as well as the ACMA’s broader spectrum planning and decision-making processes and consultation obligations

15. By way of example, the ACCC has issued “A guideline to the declaration provisions for telecommunications services under Part XIC of the *Competition and Consumer Act 2010*” (the CCA).⁶ The stated purpose of the guideline is to “provide clear guidance about both the processes associated with declaration and the issues which the ACCC will generally consider in declaration decisions. It is also intended to assist those making submissions to the ACCC in the context of public inquiries considering declaration”.⁷ To this end, the guidelines explore how the ACCC examines whether the long-term interest of end-users (LTIE) will be promoted by declaration and the three objectives that the ACCC must have regard to in establishing whether the LTIE will be promoted.

The long-term public interest – further exploration of the concepts

16. The Explanatory Memorandum to the Modernisation Act provides that the public interest is at the discretion of the ACMA though needs to be “consistent with considerations that the ACMA currently applies to its spectrum licensing and management decisions”.⁸ In Optus view, it follows that the ACMA’s approach to spectrum licensing and management decision-making must be clear and transparent to provide affected stakeholders with a sufficient understanding of the processes and issues the ACMA will generally consider in assessing the public interest in order to make informed submissions to consultations about licensing and allocation decisions that may affect their business interests.
17. We acknowledge the list of factors in the Information Paper that the ACMA has indicated it will consider in assessing the impact that a regulatory (licensing or allocation) proposal will have on the public interest.⁹ However, this list, which captures a broad range of “interests” is not accompanied by any explanatory information or examples as to how these interests may be considered in specified circumstances. While we accept that the ACMA may not apply “measurements” or weightings to its public interest criteria, it can provide a general qualitative description of these criteria to help guide the reader.
18. We also note the statement in the Information Paper that the broad approach to the public interest the ACMA has outlined aligns with the Australian Government’s Policy Impact Analysis Framework.¹⁰ While it is not immediately clear how the ACMA’s approach to assessing the impact of a regulatory proposal aligns with the Framework, we agree that the Framework itself sets out a number of useful questions to be answered as a pre-requisite to any Government intervention.
19. In particular, we support the need for establishing a clear evidence base for intervention as well as consideration of its impacts and any viable alternatives.¹¹ We also strongly support the general statement in the Framework document that “Impact Analysis is required for all policy proposals of government that would be expected to drive a change in behaviour such as changes to rights, powers, obligations or responsibilities where those changes would have major impacts on our community”.¹²
20. However, we note that this Framework is principally intended to “inform Australian Public Service policy making” for the purpose of providing advice to government, rather than regulation. We consider that a clearer explanation of how these policy-oriented

⁶ ACCC; August 2016; available here: <https://www.accc.gov.au/about-us/publications/guideline-for-part-xic-declaration-provisions-for-telecommunication-services>

⁷ ACCC Part XIC Guidelines; p.4

⁸ Explanatory Memorandum to the Modernisation Act, p.38

⁹ Information Paper, p.4

¹⁰ [Australian Government Guide to Policy Impact Analysis \(pmc.gov.au\)](https://www.pmc.gov.au/guides-to-policy-impact-analysis)

¹¹ E.g questions 1 (what is the policy problem you are trying to solve and what data is available?), 2 (what are the objectives, why is government intervention needed to achieve them, and how will success be measured? and 4 (what is the likely net benefit of each option?)

¹² [Australian Government Guide to Policy Impact Analysis \(pmc.gov.au\)](https://www.pmc.gov.au/guides-to-policy-impact-analysis);p.5

questions may be applied to spectrum management decision-making is warranted. For example, an explanation of the triggers for any intervention into existing licensing arrangements would help stakeholders better understand how the ACMA promotes “the object of the Act and relevant government policy through a balanced application of market and regulatory mechanisms”.¹³

21. In this context, we note that the previous 2021 draft of the Information Paper stated that “there is significant alignment between the long-term interests of end-users, which guides the ACCC’s decision-making under the Competition and Consumer Act 2010, and the object of the Act”.¹⁴ We agree with this statement and are disappointed that the ACMA has removed it from the revised Information Paper. We refer back to the ACCC’s Part XIC guidelines, which highlight the importance of the impact on investment as a factor in the ACCC’s approach to the applying the LTIE, explaining that:

“To evaluate the consequences of declaration on the interests of end-users, the ACCC will be concerned with the effect on access seekers in terms of rivalrous behaviour and investment decisions. This should enable the ACCC to form a view about the economic benefits likely to flow to end-users in terms of price, quality and diversity of services as a result of declaration...

in determining whether declaration will promote the LTIE the ACCC must have regard to the extent to which declaration is likely to result in the achievement of the following three objectives: promoting competition; achieving any-to-any connectivity; and encouraging the economically efficient use of, and investment in, infrastructure. In practice, the ACCC must balance each of these objectives when deciding whether a particular course of action would promote the LTIE.”¹⁵

22. The Guidelines also highlight the importance of clarifying what is meant by a “long-term” approach to the public interest.¹⁶ Optus encourages the ACMA to consider whether there are aspects of the approach taken by the ACCC in its Part XIC Guidelines or the guidance materials of other spectrum regulators in finalising the Information Paper.

SUFFICIENT CERTAINTY AND EXCLUSIVITY OF SPECTRUM ACCESS FOR MOBILE SERVICES IS IN THE PUBLIC INTEREST

23. Telecommunications is recognised as an essential service and telecommunications infrastructure as critical infrastructure.¹⁷ Mobile networks supply essential communications services to Australians across the country, providing access to emergency, education, banking, health, social, commercial and government services. Mobile services keep us connected with work, family and friends, providing convenience and improving productivity.
24. Mobile networks are a critical component of Australia’s digital infrastructure, connecting government, businesses and consumers, enabling new vertical industries and supporting the realisation of key Government policy objectives for an inclusive, secure

¹³ Information Paper, p.4

¹⁴ 2021 draft of the ACMA Information Paper, p.33

¹⁵ ACCC Part XIC Guidelines, p.29

¹⁶ noting that it interprets this expression from an economic perspective as “the time within which suppliers can vary all factors of production (e.g in response to an increase in consumer demand)”.

¹⁷ See for example the “National principles to support streamlined telecommunications planning arrangements”; 4 July 2024; p.17

and prosperous Australia.¹⁸ Australia is a leader in 5G and the ever-increasing demand for mobile services is set to continue with the increasing take-up of 5G services.

Use of spectrum for mobile services is a “high-value” use of spectrum

25. The wider public benefits of mobile services are well documented, including by Optus in our submission to the ACMA’s Stage 2 Expiring Spectrum Licences (ESL) process. As has been demonstrated in that context, there is little or no alternative use or users for ESL spectrum currently held by MNOs that will deliver a higher value use to the public.
26. The ACMA has adjusted its description of spectrum licences from being “broadly used to authorise the use of *high-value* spectrum” to “*high-demand*” spectrum.¹⁹ Optus is concerned that the use of “high-demand” remains unclear and is not necessarily determinative of the “public interest” to be derived from the spectrum. This is compared to a “high-value” use of the spectrum which Optus submits can be more readily linked to the degree to which that use case is “valued” by the public over the long term.²⁰
27. While related to apparatus licensing arrangements, we note in the ACMA’s 1800MHz and 2GHz band Options Paper, that the ACMA proposes to define “high-demand areas” as “any level 3 HCIS cell with more than 10 PTS base stations” at “a point in time”.²¹ As is set out in our submission to that consultation process, the assumption underpinning the ACMA’s approach is that current registrations represent the total demand in the apparatus licenced areas and that a prescriptive approach to allocation in the 1800MHz band guarantees access for Optus. However, this demand analysis does not reflect the reality that we have been unable to deploy in many locations due to failing coordination.
28. The ACMA should provide further clarification as to how the notion of “high demand” relates to its decision-making for spectrum licensing. In Optus’ view, whether spectrum is in “high demand” should reflect the extent to which a particular use case has or will deliver public benefit. Optus submits that spectrum that is used by or identified for public mobile services will be in “high demand” meaning that the ACMA can, by default, “have a high degree of confidence that the use of the spectrum [for mobile services] will promote the long-term public interest throughout the licences duration”.²²

Long-term capital-intensive network investment requires certainty of spectrum access

29. Mobile is a high fixed cost industry. Mobile networks require significant large upfront capital investment to deploy physical infrastructure and network equipment followed by low variable costs to extend those networks and add new users. Mobile markets are also characterised by cycles of technological improvement and investment (4G to 5G, to 6G etc). The eventual obsolescence of older technology means that consumers will lose existing coverage, capacity, and capability if a mobile operator does not continually invest in the requisite infrastructure upgrades. Optus has invested over \$45 billion into its networks over the last 30 years of market competition in Australia.
30. The role of spectrum in a network is to connect user devices and network equipment to network equipment and enable data transmission. Therefore, spectrum is essential to

¹⁸ The broader socio-economic benefits of mobile networks and services are well documented. GSMA research “Mobile technology: two decades driving economic growth”, 2020, shows that the baseline economic impact of mobile services increases when upgrading from one generation of mobile technology to the next (15% from 2G to 3G and 25% from 2G to 4G)

¹⁹ See page 6 of 2021 version of the Information Paper and p.8 of the revised draft Information Paper

²⁰ For example, by reference to the price paid for the spectrum and the downstream public benefit delivered.

²¹ 1800 MHz and 2 GHz bands – Review of planning arrangements outside of spectrum licensed areas – Options Paper – June 2024; p.3

²² Information paper, p.9

the function of a mobile network and the supply of essential mobile services to end-users. GSMA has observed “approaches which undermine mobile operators’ certainty of access to spectrum...risk jeopardising planned long-term, wide area 5G network investment” and in this context “mobile operators need certainty of access to significant amounts of licensed spectrum for a sufficient duration (e.g 20-year licences)”.²³

31. Optus also submits that how spectrum is used in a particular use case, including how it is relevant to network deployment decisions, should be a factor in the ACMA’s approach to licensing and allocation decision making.²⁴ For example, MNOs deploy their spectrum assets in line with their customers’ needs and their network deployment strategy to provide capacity and coverage to their customers. “Unused” spectrum is important to the cost-effective deployment of mobile network infrastructure – the availability of spectrum enables the spectrum licensees to respond effectively to a change in demand in a particular area by upgrading or building out their network. An absence of current use (whether by geography or bandwidth) cannot be taken as an absence of need to access spectrum in the future.
32. Therefore, assessing the efficiency of spectrum use at a specified point in time does not necessarily reflect how spectrum is utilised in mobile network deployment decision-making. Adequately capturing plans for use will be critical in determining spectrum utilisation and the licence type that may be suited to the use case – Optus submits that the ACMA should consider how to reflect this in its Information Paper. To this end, Optus strongly endorses the ACMA’s comment in the context of its ESL Process, that:

“holding unused spectrum can also potentially provide licensees utility by providing greater flexibility to deploy or adjust services on a needs basis in the future, particularly in bands where significant new releases of spectrum are not expected over the term of a licence. In such cases, the length of time that the spectrum has not been used, or underused, would need to be considered in connection with technology and investment cycles, and anticipated future use of the spectrum”²⁵

A dilution of spectrum access under spectrum licences is not in the long term public interest

33. Optus could not have invested the billions of dollars in our network or in acquiring spectrum without the technological flexibility and certainty of access to spectrum that the Act affords to spectrum licence holders. Indeed, a statement to this effect was included in the 2021 draft of the Information Paper where it said that

“Spectrum licences have broadly been used to authorise the use of high value spectrum over large geographic areas to support services such as wireless broadband. This stems from the Act providing spectrum licensees with a high degree of exclusivity and certainty, making the licence type suited to supporting scenarios where licensees have long-term investment requirements.”²⁶

34. Optus is disappointed to observe that the above reference to the “Act providing spectrum licensees with a high degree of exclusivity and certainty” has been removed from the revised Information Paper.²⁷ We also note the subtle change in tone in the description of the “conditions of use” for spectrum licences under Appendix A of the Information Paper,

²³ 5G Spectrum; GSMA Public Policy Position; June 2022; p.8 available at [5G-Spectrum-Positions.pdf \(gsma.com\)](https://www.gsma.com/5G-Spectrum-Positions.pdf)

²⁴ Optus June 2024 submission to ACMA’s Stage 2 ESL consultation paper; p.87-88

²⁵ ACMA ESL Stage 1 Consultation paper, p.20

²⁶ Our approach to radiocommunications licensing and allocation Implementing the *Radiocommunications Legislation Amendment (Reform and Modernisation) Act 2020*; March 2021, p.6

²⁷ Information Paper, p.8

which suggests to Optus that spectrum licensees cannot expect the same degree of exclusivity or protection from interference that they may have in the past.²⁸

35. A key objective of the Spectrum Review was to maximise the public benefit derived from spectrum “so that new and existing users of spectrum benefit from more certain and efficient allocation and re-allocation of spectrum and have greater opportunities for technological and services innovation.”²⁹ The reforms were also guided by the principles of “certainty – providing confidence about regulatory arrangements and spectrum access terms and conditions and promote international harmonisation in Australia’s interests”.³⁰
36. Optus considers that the revised draft Information Paper indicates that the ACMA intends to further expand its discretion to intervene in spectrum licensed spectrum. The result is a “dilution” of the exclusivity and certainty of spectrum access that has underpinned billions in mobile network investment to date. This is not in the long-term public interest. It is also contrary to the stated purpose of spectrum licences to “support long term investment certainty to licensees”.³¹ Any dilution of spectrum licence rights is particularly concerning in an industry climate of long-term declines in returns on invested capital (ROIC).³²
37. We acknowledge that a stated intention of the amendments to the Act was to provide the ACMA with flexibility in re-allocation processes to prevent “spectrum becoming “locked” into spectrum licensing” and enable new spectrum use cases and licensing approaches to be adopted as they emerge.³³ However, we do not consider that such flexibility should be left open ended, given the public interest to be served in supporting efficient network investment and deployment of critical infrastructure and essential connectivity services.
38. In the context of high-cost investments and low and uncertain incremental revenue, the ACMA must ensure that spectrum licensees continue to be afforded sufficient protections to support ongoing investment in network deployment and upgrades to deliver the high quality, high-capacity services the market demands. In order to better reflect these circumstances, the ACMA should amend the Information Paper to state that:
 - (a) Spectrum licences will continue to be afforded a high degree of certainty and exclusivity of access to spectrum;
 - (b) The impact on licensees and downstream services is a key consideration in the ACMA’s decisions concerning any changes to existing licence arrangements, including the introduction of any overlapping licences or co-existence arrangements – and we note is consistent with the content of the 2021 version of the Information Paper;

²⁸ For example, page 36 of the 2021 draft of the Information Paper states spectrum licences enjoy “Exclusive use within defined area and frequency range, however class and apparatus licences may be authorised to co-exist under specified circumstances. Interference protection in accordance with ACMA policies” while page 35 of the 2024 Information Paper states “Generally, exclusive use within defined area and frequency range, however class and apparatus licences may be authorised to co-exist under specified circumstances. Interference management in accordance with legislative instruments and ACMA policies”.

²⁹ [Spectrum-Review-report-FINAL - for publishing.pdf \(infrastructure.gov.au\)](#); p.10

³⁰ [Spectrum-Review-report-FINAL - for publishing.pdf \(infrastructure.gov.au\)](#); p.13

³¹ Information Paper, p.8

³² Venture Insights; State of the Telecommunications Industry; June 2023

³³ Explanatory Memorandum to the Modernisation Act 2020, p.26

- (c) The ACMA will consider the nature of technology deployment and the relevance of spectrum to deployment decision-making when considering whether competing use cases better promote the long term public interest;
 - (d) Analysing demand based on a specific point in time is only reasonable to the extent that new access or licensing arrangements are supported by evidence of a viable business case. In other words, it must be clearly established that demand is not being met, including via existing market-based mechanisms of spectrum access and that prospective licensees have a viable business case.
39. Optus also notes that the reforms sought ensure that “the rights of existing licence holders are not diminished in the transition to the new framework.”³⁴ Optus considers it reasonable to expect that existing spectrum licences remain unaffected unless agreed between the ACMA and spectrum licensees.

MARKET DRIVEN SPECTRUM OUTCOMES ARE MOST EFFICIENT

40. In Optus’ view, Information Paper indicates an intention on the part of the ACMA to adopt a more interventionist approach to spectrum management. Optus cautions against the ACMA using the increased regulatory flexibility afforded to it under the Act to adopt a “command-and-control” style approach to decision-making. There is broad consensus among economists that, “where they operate effectively, no human institution is better able to deliver economic welfare in the long run than well-regulated competitive markets”.³⁵ It is notable that the Spectrum Review identified that an objective of reform was to “provide for greater market-based activity” highlighting that;
- “given the inherent costs and inefficiencies in both governments and markets trying to jointly coordinate economic activity, the reforms provide a greater opportunity for Government to establish and promote the necessary conditions for market-based activity up-front with a view to limiting the extent to which further direct interventions are necessary. Noting that the Government would retain the right to intervene in specific spectrum management matters to achieve policy priorities”.³⁶
41. Market mechanisms remain the most efficient means of promoting the efficient use of spectrum. Regulatory intervention should only be contemplated where it is clearly established that the market is failing to deliver the desired policy outcomes. Even then, regulatory intervention should be approached cautiously so as not to undermine nascent innovation or chill investment in new technologies and solutions. While the ACMA must have the power to intervene to prevent underutilisation of spectrum, we consider that it should be made abundantly clear that such intervention will be the (rare) exception rather than the rule, and then only based on clear evidence that existing mechanisms of spectrum access have failed.
42. The revised Information Paper states that the ACMA intends “to promote the objective of the Act and relevant Government policy through a balanced application of market and regulatory mechanisms”.³⁷ Optus strongly urge the ACMA to confirm that market-based mechanisms remain the most effective means of promoting efficient spectrum use and

³⁴ Explanatory Memorandum to the Modernisation Act 2020

³⁵ Biggar, Dr Darryl; Public policy for regulators: Is “market failure” passe? Network; Issue 85 December 2022; p.1 accessible here: [Network \(accc.gov.au\)](https://www.accc.gov.au/publications/network/issue-85-december-2022)

³⁶ [*Spectrum-Review-report-FINAL - for publishing.pdf \(infrastructure.gov.au\)](#); p.14

³⁷ Information Paper, p.4

that ACMA intervention will be limited to situations where market competition are not operating effectively to deliver identified public policy outcomes.

Establishing market failure before intervening to promote the public interest

43. A spectrum regulator's spectrum management decisions inevitably impact the economics of mobile networks – and flow through to the affordability of essential mobile communications services for consumers and the broader economy. Increased regulation means an increase in regulatory costs – more resilient and secure networks will require increased investment. Delivering essential mobile services across Australia in a cost-effective and sustainable manner means avoiding inefficient costs on industry.
44. Optus suggests that the Information Paper include express confirmation that the ACMA will test whether market-based solutions are in fact failing to deliver the desired public policy outcomes before considering regulatory intervention. Such analysis would involve interrogating claims from prospective entrants that existing market mechanisms of spectrum access, such as trading and third-party authorisations, have not and will not deliver desired outcomes.
45. In Optus' view, the availability of a secondary market for spectrum access means that incentives to maintain and improve efficient spectrum use already exist.³⁸ Market driven spectrum arrangements, including for spectrum sharing such as via our MOCN agreement with TPG, also better facilitate fit for purpose interference management due to the better information available to commercial operators about the performance characteristics and objectives of their networks. We also note that the relative flexibility afforded to spectrum licensees within the spectrum space is central to enabling innovation such as satellite direct to mobile services. In other words, the long-term public interest to be derived from the use of spectrum can be delivered via market mechanisms rather than regulatory intervention.³⁹
46. Rather than presenting the ACMA's powers to intervene as an unqualified power to change arrangements to better promote the public interest, itself a very broad concept, Optus submits that the decision to intervene in spectrum licence arrangements should be clearly contingent on very sound and considered evidence that
 - (a) there is a problem to be addressed;
 - (b) existing market mechanisms are not fit for purpose and;
 - (c) any benefit of facilitating entry or co-existence outweighs any public detriment.
47. Optus also submits that the notion of dedicated "spectrum licence bands" is not necessarily problematic as long as the use of that spectrum continues to deliver for the long-term public interest.⁴⁰ As Optus has highlighted in numerous submissions, MNOs use of spectrum to supply public mobile services and deploy public mobile networks promotes the long-term public interest derived from that spectrum.
48. There are of course circumstances in which Optus considers that ACMA involvement is crucial – such as where the market is unable to effectively deliver defragmentation of spectrum holdings. For example, the 3.4 GHz band is highly fragmented, and not

³⁸ Cambridge Economic Policy Associates (CEPA), Renewing expiring spectrum licences: By Dr. Chris Doyle for SingTel Optus Pty Limited, 24 May 2024

³⁹ Under section 86 and 68A of the Act respectively

⁴⁰ As highlighted at page 25 of the 2021 version of the Information Paper, which states that "public interest test is designed to ensure that spectrum is used efficiently, by preventing it from being locked up in uses that no longer offer the highest value or the maximum public benefit"

conducive to efficient trading. An ACMA led defragmentation of the band will be the most expeditious means of overcoming fragmentation and the promotion of more efficient use of this spectrum. The ACMA could indicate the factors that might trigger intervention to assist the market to address the spectrum inefficiencies arising from fragmentation.

OPTIMISING SPECTRUM BANDS FOR SPECIFIC USE CASES

49. The GSMA has observed that “the core objective of spectrum management is...to enable spectrum to be used in a manner that will bring the greatest benefits to society”.⁴¹ GSMA also highlights that keeping Australia’s spectrum allocation aligned with international standards will be important for harmonisation with global networks.⁴²
50. The International Telecommunications Union (ITU) provides guidance on the use of spectrum for IMT and publishes recommendations on how it expects future technology, such as 6G, to develop and what spectrum is appropriate to support the delivery of new mobile services.⁴³ Given the influence that these and international standard-making bodies such as 3GPP have on the device ecosystem and supply chain, there are clear benefits to aligning Australia’s approach to spectrum with international frameworks.
51. The ACMA’s new powers to intervene enable it to change spectrum arrangements that might not otherwise be promoting the Australian public interest. However, overlapping licence arrangements or new co-existence frameworks must reflect careful consideration of the interference risks and consequent loss of spectrum efficiency that this can entail.
52. Optus wish to highlight concerns about the inefficiencies that may arise from allocation and licensing decisions that seek to accommodate too wide an array of use cases in a spectrum band as well as decisions to facilitate co-existence in spectrum licence space. Given the potential impact on existing and future use of spectrum licences, we consider that these matters should be better examined in the revised Information Paper.

Catering to too wide an array of use cases can undermine the public interest

53. Optus generally supports the factors that the ACMA has set out as informing how it will “identify appropriate licensing arrangements”.⁴⁴ However, the Information Paper also states “In some bands, it may be appropriate to use a mixture of spectrum, apparatus and class licensing to support multiple uses by a range of different users and optimise the use of the spectrum access the band and in different geographical regions”.⁴⁵
54. Optus notes that the use of too wide an array of licensing arrangements, which entail various levels of interference protection and differing degrees of accountability and experience in interference management, raises the risk of sub-optimal spectrum outcomes for a band. The clear example is the ACMA’s approach to allocation of the “C-band” and in particular, band n78, or the 500MHz between 3300 and 3800MHz, which has been recognised as a pioneer band for 5G.
55. 3GPP standards recommend minimum contiguous bandwidths of 100MHz to deliver the spectral efficiency enhancements of 5G cost effectively. The wider the band in which 5G

⁴¹ Maximising the socio-economic value of spectrum – a best practice guide for the cost-benefit analysis of 5G spectrum assignments; January 2022; p.4

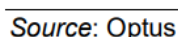
⁴² GSMA, 2022 accessible at [5G-Spectrum-Positions.pdf \(gsma.com\)](https://www.gsma.com/5G-Spectrum-Positions.pdf)

⁴³ ITU-R Recommendation M.2083 for 5G and ITU-R Recommendation M.2160 for 6G (IMT-2030)

⁴⁴ Information Paper, p.7

⁴⁵ Information Paper, p.8

56. However, the ACMA has implemented multiple different allocation processes and issued diverse licence types and conditions to cater to a wide range of different WBB use cases and scenarios.⁴⁸ In Optus view, the result of the ACMA's approach to 3.4GHz to 4.0GHz spectrum has been to create a complex and highly fragmented spectrum landscape that ultimately undermines the potential utility and efficiency of the band.
57. In particular, the channel sizes for 5G mid-band deployment are generally limited to between 30 and 60MHz and the geographic areas covered by 3.4GHz and 3.6GHz and 3.7GHz licences do not align (depicted below). There is no restriction in the band that causes this; rather it is a result of allocation decisions by the ACMA.⁴⁹



⁴⁹ See Optus submission to ACMA's ESL Stage 2 consultation paper for further information

boundaries, so the spectrum can be fully harmonised and optimised for the highest value and most efficient use.

Greater clarity about the ACMA's approach to co-existence in spectrum licence space

59. As Australia's only dual mobile and satellite network operator, Optus is well placed to understand the importance of well-designed co-existence arrangements to deliver Australia's communications needs. No licensee is entitled to operate in a completely interference free environment. Carefully designed technical frameworks along with traditional and modern interference resolution techniques are all necessary to support co-existence, minimise interference potential and ensure efficient spectrum utilisation.
60. However, increased spectrum use means heightened risks of interference which imposes costs and resourcing constraints on operators. Increased interference also undermines investment certainty and ultimately the value of spectrum licences. While operators can often be relied on to cooperate to resolve interference, disputes can arise, particularly between operators in different sectors. Co-existence is only as effective as the availability of recourse to the regulator in the event of an unresolved dispute.
61. Optus notes that the public benefits of co-existence arrangements must be carefully and transparently weighed against the potential negative impact on investment in well-established and proven business cases. As has been outlined above and highlighted in Optus as well as industry submissions to the ACMA,⁵⁰ MNOs are concerned about a "dilution" of spectrum licence rights. Some of this concern arises from the reference in the 2021 Information Paper, which remains in the revised Information Paper, that "class and apparatus licences may be authorised to co-exist under specified circumstances".⁵¹
62. Given the potential impact of co-existence on a spectrum licensee's use of spectrum, Optus is disappointed that the ACMA has not taken the opportunity to more clearly define the specified circumstances in which the ACMA may seek to authorise co-existence. In Optus' view, the Act clearly limits the instances in which the ACMA may re-allocate or issue overlapping licences in spectrum licence space.
63. However, while there are references to the relevant sections of the Act included in the footnotes to the Information Paper,⁵² there is insufficient discussion of the policy issues or market factors that may give rise to the ACMA seeking to accommodate new apparatus or class licensed services within, or adjacent to, spectrum licensed bands. Optus encourages the ACMA to address this in a revised Information Paper.

Licence duration

64. The ACMA has identified licence duration as "a key tool" in its "ability to balance the provision of investment and service predictability to licensees, with our ability to efficiently manage the spectrum through replanning, allocation and re-allocation to promote the long-term public interest". Optus agrees with this view and also supports the ACMA's view that licence terms may be adjusted (shortened) to support planning objectives, such as aligning expiry dates or to support defragmentation.⁵³

⁵⁰ For example, AMTA's submission; 700 MHz Technical Liaison Group (TLG) dated 11 August 2023, p.9

⁵¹ Information Paper, p.35

⁵² Footnote 5 of page 8 of the Information Paper

⁵³ Information Paper, p.14-15 where the ACMA state that "However, we may issue licences with shorter terms when shorter durations provide planning and policy utility by aligning expiry dates of multiple licences across a band or adjacent bands, or otherwise facilitating processes such as re-allocation or restacking."

65. It follows that adjusting licence terms should therefore be done only where suits the broader policy context. For example, Optus considers that the 7-year re-allocation period for incumbent WISPs in the 3.6 GHz band was excessive and has resulted in delays to Optus deployment in some regional towns and ultimately the underutilisation of important mid-band spectrum.
66. Optus also strongly support the need for public consultation on any proposal to renew apparatus licences with a long licence duration and suggest that any proposal to do so in spectrum bands that are also subject to spectrum licensing should not undermine the potential for the wider spectrum licensing in the future.

THE ACMA MUST CONSIDER INDUSTRY SUSTAINABILITY AND THE IMPACT ON INCUMBENT NETWORKS AND SERVICES

67. The Australian mobile industry is at an inflection point with declining revenue and the increasing levels of investment required to meet demand creating a digital investment gap. The capacity for operators to invest is further limited by the rising costs of capital. This investment gap threatens the ability of industry to invest sustainability in the networks and services that are critical to Australia's long-term prosperity.
68. Venture Insights warns that "these issues must be addressed to create the investment environment that will attract the capital Australia needs. In a global economy where capital is mobile, private capital investment cannot be sustained unless returns meet industry benchmarks."⁵⁴ Discussions around the essential nature of mobile service should also include discussions on how revenue can grow to support their sustainable provision over the long term.
69. The Information Paper represents an opportunity for the ACMA to alleviate some of the uncertainty faced by industry and to promote long term network investment in a difficult investment environment. For example, the Information Paper could highlight that a factor to be considered in the ACMA's licensing and allocation decision-making will be the degree to which existing uses of the spectrum continue to promote the public interest and what impact a change in spectrum arrangements would have on incumbent services. We also consider that the ACMA can provide greater investment certainty in relation to its proposed approach to "renewal statements" and "payment arrangements".

Renewal statements

70. Optus considers that long public interest to be derived from the use of spectrum will be better served by the ACMA providing greater certainty of renewal for licenses used by MNOs to supply public mobile services. A key issue is that the renewal arrangements set out under the Act create a significant degree of uncertainty about future access to spectrum that is crucial to the supply of essential services. For example, what are the matters to which the ACMA "may have regard" and "must consider" when deciding to renew a spectrum licence and more importantly what do they mean?⁵⁵
71. Optus does not consider that the revised Information Paper provides sufficient certainty of renewal for licences used to provide public mobile services. For example, in regard to a "specified circumstances" renewal statement, we are concerned that achieving the "specified circumstances" is merely a trigger for the ACMA to then exercise its discretion

⁵⁴ Venture Insights Report, p.5

⁵⁵ Section 77C of the Act

as to whether or not to renew the licence.⁵⁶ This approach does not enable a licensee to “assess the likelihood of future renewal” as suggested by the ACMA.⁵⁷ It also seems unsatisfactory, and unnecessarily uncertain, that the satisfaction of the “specified circumstances” should not in itself be the reason for renewal (assuming compliance with other licence conditions).⁵⁸ In Optus view, satisfaction of specified circumstances should at least weigh heavily in favour of renewal.

72. Without further explanation or context, it is also concerning that the ACMA may unilaterally vary the circumstances in which a spectrum licence may be renewed or omit or replace a renewal statement (i.e without the licensee’s consent). To promote certainty, it should be made abundantly clear that such an approach will be reserved for highly exceptional circumstances and will also be applied to remove a “specified circumstances” renewal statement where that specified circumstance has been met or are no longer applicable.
73. As Optus has highlighted in our submission to the ACMA’s Stage 2 ESL consultation paper, the increased levels of certainty and predictability created by a strong expectation of renewal will, among other public interest benefits, promote network investment, innovation and deliver service continuity for end-users that will outweigh any potential short-term gains from regularly re-allocating/auctioning the spectrum.
74. The GSMA has identified certainty and long licence tenure as critical to long term network investment decision-making.⁵⁹ In the UK, after an initial term of typically 20 years, licences become effectively perpetual, with the licence renewed annually on application. There are provisions for clawing back spectrum for spectrum management reasons with a five-year notice period. This is perceived as a sufficient period in the unlikely event intervention is required. Spectrum management reasons include major replanning due to changing use cases, international frequency harmonisation and coordination and interference management.⁶⁰
75. In the interests of certainty, Optus suggests that the Information Paper also provide that the ACMA will insert a renewal statement into new and renewed mobile spectrum licences to the effect that; “provided spectrum has been in continuous use and absent overriding policy needs, existing holders should have a strong expectation of renewal upon the expiry of the licence.”
76. Optus is particularly concerned that the ACMA has removed the list of “matters we might consider when assessing the public interest” in the context of having to assess the public interest due to a public interest statement or where licences are to be renewed for 10 years or longer.⁶¹ While we acknowledge that the Explanatory Memorandum to the Modernisation Act provides useful instruction on the scope of the ACMA’s discretion in this regard, we consider that for transparency purposes it would be helpful to reinsert these and any other relevant matters within the Information Paper.⁶²

⁵⁶ Information Paper, p.24

⁵⁷ Information Paper, p.24

⁵⁸ If for example a renewal statement in a spectrum licence provides that “Optus must realise X by Y” and Optus has met X then there is reasonable expectation that licence renewal should be guaranteed.

⁵⁹ GSMA; 5G Spectrum 2022; p.7

⁶⁰ [Review of Ofcom’s market-based approach to mobile spectrum management](#); we also refer to the regulatory approaches of leading jurisdictions such as Japan and Finland which in effect, provide unlimited licences

⁶¹ 2021 version of the Information Paper

⁶² Explanatory Memorandum to the Modernisation Act; p.34 states that the public interest is “a tool for ACMA to analyse the potential benefits that renewal of a spectrum licence may offer to the long-term public interest, consistent with the object of the Act. As such, some of the matters that ACMA may consider in making a decision

Payment arrangements

77. The revised Information Paper states that the ACMA have a “strong preference for upfront payment of spectrum access charges for spectrum licences”.⁶³ Optus submits that a rigid approach to payment for spectrum access charges for spectrum licences does not sufficiently take into account industry sustainability and the adverse impact of a potentially significant financial burden of upfront payment on MNO finances.
78. Optus seeks further information from the ACMA about why there is a preference for upfront payments apart from historical practice, to enable Optus and other spectrum holders an opportunity to address any concerns the ACMA may have regarding instalment payments. We note the unsold 700 spectrum licences were successfully paid in 3 instalments and this was completed in 2019, the last 26GHz instalment payment is in 2025 and apparatus licences are usually paid annually, all without event or non-payment.
79. Optus submits that the Information Paper clarify that while the ACMA has such a preference, spectrum licensees will be given the option to pay by instalments. The ACMA should also confirm that it may determine, by legislative instrument, whether a spectrum licensee may pay by instalments to support equalisation of payment arrangements (and thereby diminish the distortionary effects of ‘aligned maximum durations’).⁶⁴

regarding the public interest of renewing a spectrum licence include: *if the licence is used to supply essential public services and there is the potential that a change in licensees may put at risk delivery of services to a significant number of people, whether the incumbent can demonstrate substantial investment and past long-term use of the licensed spectrum, and considerations of the highest value use of the spectrum*”

⁶³ Information Paper, p.18

⁶⁴ Information Paper, p.18