

Wireless Internet Service Provider Association
of Australia Inc

**Response to : Consultation Paper Spectrum
Pricing Review IFC-07-2020**



The Manager

Economics and Market Analysis
Australian Communications and Media Authority

PO Box 13112 Law Courts,
Melbourne Vic 8010

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Thank you for the opportunity to provide a response to Consultation Paper Spectrum Pricing Review, the Association represents a wide variety of carriers in Metropolitan and Regional areas, typically smaller operators who have limited access to spectrum.

Issues for comment

The ACMA invites comments on the issues set out in this consultation paper:

Question 1

Do stakeholders have any views about the status of the ACMA's role in implementing the recommendations of the Spectrum Pricing Review?

Market-based allocations

5. In setting reserve prices, the ACMA and the Government should consider the influence of the reserve price on competitive behaviour, and the scope for price discovery through upward movement toward the market value of the spectrum.

WISPAU : True market pricing can only be determined without a reserve price and without other artificial barriers to entry like minimum bandwidth side or geographic area.

A reserve price above the market price will lead to reduced demand, over supply and inefficient allocation of scarce resources, those that wish to provide services will be unable to as the price is prohibitive.

A reserve price below the market price may go some way to negate the negative effects of price control, however it may be impossible to determine this in advance.

Market equilibrium - Supply and demand curves intersect at the equilibrium price. This is the price at which we would predict the market will operate.

Price controls of any sort will distort this process and result in the market price being obscured, the ACMA is unable to attain what market prices would be without market interference.

Status—recommendations 5 and 6: The ACMA accepts this recommendation. The ACMA is mindful that each auction should consider the circumstances of the market.

WISPAU : Spectrum is increasingly being used to deliver both fixed and mobile broadband service, either using terrestrial or satellite services, most broadband services are charged to customers on a monthly basis so service providers revenues associated with the use of spectrum services are typically monthly.

The effect of ACMA collecting large sums of money on spectrum sales up front may be beneficial for treasury however this does not seem to be a stated goal of the ACMA's policy framework.

Instead the ACMA should come up with a more flexible framework that allows for a user pays system, whereby tax revenue collected through the use of the spectrum can be proportionally collected and remitted, similar to how the Goods and Services Tax (GST) operates.

This would remove an enormous barrier to entry for smaller operators, thereby promoting efficiency and competitiveness within the market.

Legislative and cost recovery framework

10. The apparatus licence taxes and spectrum access charges for spectrum licences should be combined into a single spectrum access charge. This existing apparatus licence tax formula should become the administered incentive pricing formula and should dictate the price paid for administered prices under the spectrum access charge. This formula would be adjusted to remove the minimum tax constraint.

WISPAU : As mentioned above a minimum price on any good or service, if that price is above market equilibrium will result in underutilised resources.

Question 2

Do stakeholders have any views on the legislative and policy environment that may be relevant to the pricing issues outlined in this paper?

Managing spectrum efficiently and effectively for the benefit of all Australians is a key priority for the ACMA, as outlined in our corporate plan . The ACMA draws on a range of legislative and administrative tools in executing these functions.

WISPAU : Given this is the stated objective of the ACMA, how does it justify the fact that in many regional and remote areas spectrum that has been auctioned off via spectrum licenses sits idle and access by carriers that are willing to supply services in that area is denied.

It would be hard to argue that spectrum in this context is put to its highest value use, to the contrary it may very well be the exact opposite outcome and could be classed as the Lowest Value Use, being no use whatsoever.

- ***maximise, by ensuring the efficient allocation and use of the spectrum, the overall public benefit derived from using the radiofrequency spectrum***
- ***provide a responsive and flexible approach to meeting the needs of users of the spectrum***
- ***encourage the use of efficient radiocommunication technologies so that a wide range of services of an adequate quality can be provided***
- ***provide an efficient, equitable and transparent system of charging for the use of spectrum, taking account of the value of both commercial and non commercial use of spectrum***

WISPAU : As above the stated goals of ACMA and the practical outcomes of the policies chosen and implemented are unfortunately at odds, given the stated goal is maximising the public benefit through efficient use, why has the ACMA not taken a stronger leadership role in the implications of a Dynamic Spectrum Licensing Management System ?

This system as the US has demonstrated directly links the utilisation of spectrum to allocation and revenue, those that wish to use spectrum both carriers and consumers do so on a tiered and competitive basis, we fail to see how the current policies are in any way superior to a market based pricing and spectrum allocation mechanism like DSLM.

Principles for spectrum management

The ACMA is also guided by the Principles for Spectrum Management (the Principles), which are:

- 1. Allocate spectrum to the highest value use (HVV) or uses.**
- 2. Enable and encourage spectrum to move to its HVV.**
- 3. Use the least cost and least restrictive approach to achieving policy objectives.**
- 4. To the extent possible, promote both certainty and flexibility.**
- 5. Balance the cost of interference and the benefits of greater spectrum utilisation.**

WISPAU : We do not agree the above principles are being adhered to, the status quo serves to preserve the current oligopoly and we see only minor change in the current approach.

We would recommend the implementation of a Dynamic Spectrum Licensing Management System to allow true price discovery through market forces, and efficient allocation of scarce resources which may have alternative uses.

There is no single method to determine the appropriate tool or combination of tools that provide the most benefits when managing spectrum.

WISPAU : Precisely, we do not believe such a tool exists, centralised bureaucracies are unable to determine supply and demand accurately and therefore unable to determine true market prices, this fact was evident throughout history and remains the case today.

Static Pricing in a Dynamic World

However, there was an even bigger problem with the Soviet Union's abandonment of the price mechanism. A central planning board simply could not account for the day-to-day preferences of millions of individuals, nor could it respond to fluctuations in demand.

The ACMA is attempting to succeed where all communist countries have repeatedly failed.

If the ACMA is truly dedicated to putting spectrum resources to their highest value use there is no better way than implementing a Dynamic Spectrum Licensing system and allowing market forces to coordinate supply and demand and resulting prices for resources.

Question 3

Do stakeholders have comments on the ACMA's draft spectrum pricing guidelines including the relevant spectrum pricing decisions, guiding principles and process for changing prices?

The tax formula uses the following factors to determine an amount of apparatus licence tax for a licence:

- ***the geographic location of the service via the use of density areas (Australia-wide and high, medium, low and remote density areas)***

WISPAU : Spectrum Density is a very blunt instrument, we would advocate for the abolition of spectrum density entirely and replacement with preferably a market based approach, or at a minimum having it based on population density per HCIS area.

Spectrum pricing decisions

Apparatus licences: An apparatus licence provides authorisation to operate individual transmitters and receivers.

WISPAU : Consideration must be also given to reuse of the spectrum by the same licensee, for example:

- Typical point to multipoint sector installations typically have a 90 degree or less beam angle, this would technically allow the same spectrum to be used in the opposite direction, however when using apparatus licenses there no pricing incentive for an operator to configure the network in this way, instead it is preferable to attain a separate frequency on adjacent panels as the price is the same.
- This is also the case with point to point radio links, new technologies allow for increased bandwidth through cross polarization and or space diversity, however the current framework provides no price incentives to efficiently use spectrum in this manner.

We would recommend that discounted prices be available for access to spectrum that is practically only able to be used by the incumbent carrier.

Spectrum licences: A spectrum licence authorises the use of frequency ranges within a defined geographic location. Most spectrum licences are allocated via competitive

allocation processes (for example, an auction) with prices determined by the market and not the ACMA.

WISPAU : This is untrue, the defined geographic areas are incredibly large and reserve pricing artificially restricts market participation. It could easily be argued that the current domination by only a handful of Tier 1 mobile carriers is a direct result of the anti-competitive nature of the current spectrum licensing allocation framework.

Question 4

Does the tax formula generally provide a solid base for incentivising the efficient use of spectrum?

WISPAU : No, as mentioned above, the pricing must be determined by the free market and not the ACMA or it will be inefficiently allocated.

Guiding principles

The primary economic objective for managing public resources is to maximise the benefit that resource provides to society. This occurs when spectrum is allocated and used efficiently. This is achieved where spectrum is allocated to the highest value use or uses; that is, the use or uses that maximise the value derived from the spectrum by licensees, consumers and the wider community. This is most likely to occur when prices are set in a way that reflect the opportunity cost associated with spectrum denial.

WISPAU : Again, if this is indeed the goal of the ACMA why not adopt a more flexible approach?

It may be that this is only the stated goal of the ACMA as opposed to a guiding principle, it is hard to believe otherwise based on past performance.

How does the ACMA justify idle spectrum in areas inadequately served by existing operators ?
The ACMA must implement a policy of "Use it or Share it" across all bands, this would remove one major barrier to delivering services where they are needed.

Recovery of the costs of spectrum management

The ACMA incurs costs for spectrum regulatory activities such as planning, interference management and coordination, and these costs should be recovered from those using spectrum.

WISPAU : The significant revenue generated by spectrum auctions and apparatus licensing fees dramatically exceed any operational costs for the ACMA, so unless these revenues are being intentionally excluded so there may be a further justification for imposing additional costs we do not see this as a credible issue.

However, industry stakeholders have noted developments in spectral efficiency techniques and network and device deployment models, which mean that some current taxes may not promote the efficient use of spectrum.

WISPAU : Reasons mentioned above in the comment titled “Consideration must be also given to reuse of the spectrum by the same licensee”, explains exactly this.

We are encouraged by ACMA’s consideration of this issue, it is clear that they have been listening to stakeholders and considering the comments.

Question 5

Do stakeholders have views on:

- > prioritising the features of the tax formula and other taxes by considering different focus areas***
- > the criteria for prioritising the focus areas***
- > other matters or focus areas that should be considered as part of the ACMA’s work program.***

WISPAU : The ACMA should focus on reducing spectrum costs and increasing availability in areas where spectrum is underutilised.

This can be achieved by removing barriers to entry like ;

- Large Geographic areas when allocating spectrum, we note the recent very positive implementation by the ACMA of the Area Wide Apparatus licensing framework.
- Reclassification or complete elimination of density boundaries and replacement with a more granular approach like utilisation of HCIS data to determine pricing.
- Reinstatement of the ACMA apparatus licensing calculator and possible implementation of API endpoint to allow automated tax quotations.

Question 6

What are the relevant price points to undertake an opportunity cost analysis of taxes for services above 5 GHz? Examples of relevant information may include:

- > how prices for products and services have changed over time***
- > how prices of radiocommunications equipment have changed over time relative to spectrum prices***
- > comparisons with international auctions results or administrative spectrum prices.***

WISPAU : The ACMA considering opportunity cost is definitely a step in the right direction.

If taxes were directly proportional to customer revenue then the most efficient operator would be able to outbid the less efficient competitors thereby putting the resources to the most efficient and highest value use.

To better illustrate this point let us make an example of a piece of land in a sought after area, this piece of land is up for sale and there are two potential buyers.

Buyer A - is a wealthy individual that wishes to use the land to build a single large and luxurious house, he makes one offer of \$1 million dollars.

Buyer B - is a group of ten middle income families looking to build a unit complex of ten individual and more modest dwellings, each member of this group offers \$200,000.

As you can clearly see Buyer B is able to outbid Buyer A by a factor of 2:1

Furthermore ACMA is attempting to micro manage the spectrum market, we do not believe this is either efficient or possible.

Rather than trying to forecast or react to market forces, a far more efficient approach would be to develop a licensing framework that would be flexible enough to allow markets to react without any need for the ACMA to change it's approach.

This could be achieved by implementing a more free market approach to spectrum licensing in general, it's imperative that the ACMA implements a more Dynamic approach that allows free markets to regulate the demand and resulting prices.

Given the supply is relatively fixed the only way to encourage the most efficient use is to allow rival competitors out bid each other in areas where demand exceeds supply.

In areas where supply exceeds demand the spectrum should be virtually free, allowing it to be put to use at the lowest possible cost and provide services at the lowest possible cost to consumers in that area.

Question 7

How can taxes be designed to account for multiple devices? Under what circumstances do stakeholders believe that one tax should relate to many devices and/or there should be 'discounts' for multiple devices authorised under one licence?

WISPAU : As mentioned above, the comment titled "Consideration must be also given to reuse of the spectrum by the same licensee", explains exactly this.

We would suggest the ACMA authorises at no additional cost where the spectrum can be more efficiently used by the existing licenses and where this efficient use does not result in spectrum denial.

Question 8

While the current low power discount provides for a significant reduction in taxes of 90 per cent, the ACMA is interested in considering further incentives to promote the greater sharing of spectrum.

Do the lower potential denial areas of different services provide a case for considering different or additional low power discounts? In responding, please provide:

- > examples of these services and the denial characteristics of these services**
- > the information that may be required for the ACMA to be able to apply a discount**
- > views on whether such approaches can be applied across different licence types and bands.:**

ACMA : It was suggested that these price reductions would create an incentive for existing users in certain situations to move and operate within the constraints of these small area models, making available more spectrum in the congested CBD areas.

WISPAU : Precisely, this would be even more efficient if the pricing was market driven, those existing users would have a price incentive to use only what they need and leave the remaining amount for others.

This is the reason why at a retail level consumer goods such as milk are sold in very small units, or why hotel rooms are per night, allowing the market to decide what geographical areas, what

bands, what bandwidths are in demand and at what price will lead to the most efficient allocation of scarce resources that have alternative uses.

Question 9

Do stakeholders have comments on:

> the proposal to monitor bands for potential changes in taxes and the balance and precision required in monitoring and pricing spectrum?

WISPAU : It seems as though the ACMA is attempting to compensate for the lack of market knowledge, in an attempt to "Mimic the market price", we suggest that instead of designing an inherently flawed framework then attempting to compensate for the flaws, why not work towards implementing a genuine market based approach to pricing ?

> the use of inflation to keep apparatus licence taxes contemporary and whether there are alternative approaches?

Yes, there is an alternative approach, the implementation of a Dynamic Spectrum Licensing management system that allows competitive bidding on resources in geographic areas of any size, in any band or with any bandwidth.

We know the ACMA is familiar with similar approaches taken in other countries and would encourage the implementation of a similar system in Australia.

Question 10

Do current spectrum locations or frequency ranges remain appropriate? If not, what changes should be made and why?

WISPAU : The concept of spectrum locations and frequency ranges should be completely abolished, instead prospective users should identify which frequency, bandwidth and geographic areas they wish to purchase spectrum, this bid should then be made public and competitive bids invited, if no competitive bids are forthcoming the tax charges should be only to recover costs. In the event there is a competitive bid then the outcome will be the market price.

Question 11

What factors should the ACMA consider in determining new spectrum locations or frequency ranges?

WISPAU : Supply and demand as dictated by free market forces.

Question 12

Do the different tax rates associated with different spectrum locations or frequency ranges influence decisions about deploying radiocommunications equipment?

WISPAU : Yes, for example in high density areas it is often not cost effective to deploy radio equipment at all leading to no revenue and potentially service not being provided at all.

Excluding spectrum costs the price vs performance proposition for customers in a high density areas would be quite suitable, it would be technically possible to deliver a 400Mbps service to a customer at a competitive price however when taking into account spectrum, this price becomes cost prohibitive.

The result of this hypothetical scenario is Carrier is unable to make a sale, the customer is unable to obtain suitable services and the ACMA receives no tax revenue.

As this example clearly illustrates when the price is set higher than the market would be willing to pay it leads to inefficient allocation of resources or no allocation at all.

Question 13

How does the value of spectrum change across geographic locations?

Question 14

The ACMA also seeks views from stakeholders about:

> should density areas be refined for different services/bands? Yes

> rather than having density areas, do models of congestion (like that used in the 400 MHz work) potentially better reflect demand for services and the value of spectrum? If so, what features would such a model have?

WISPAU : As mentioned above the concept of spectrum density areas should be abolished, instead prospective users should identify which frequency, bandwidth and geographic areas they wish to purchase spectrum, this bid should then be made public and competitive bids invited, if no competitive bids are forthcoming the tax charges should be only to recover costs.

In the event there is a competitive bid then the outcome will be the market price.

> *whether different pricing constructs, such as \$/MHz/Pop for different licence types should be considered?*

WISPAU : This presupposes that the population density is a relevant factor, the only way this could be the case is if all members of the population were prospective users of the spectrum, as this is not the case it can only be seen as an attempt to overcome the shortcoming of the method used to calculate the price. A far more efficient method would be to adopt a free market approach as mentioned above.

> *whether there should be parity in pricing arrangements between services like commercial broadcasting taxes and open narrowcasting taxes?*

WISPAU : Prices should not be predetermined in any way, if broadcasting can make more efficient use of the spectrum then let them outbid the operators that wish to narrow cast or vice versa.

> *whether there are other services where the ACMA should be considering providing greater parity in pricing?*

WISPAU : No, the ACMA lacks the knowledge to accurately set prices at all, they should be set by free market mechanisms such as a Dynamic Spectrum Licensing Management System.

Question 15

Do stakeholders have views on:

> *the current pricing arrangements for scientific-assigned licences for new technologies?*

> *the proposal for new short-term scientific-assigned licence trials and alternative pricing proposals?*

Research and Development licenses should be granted on a costless basis providing they do not prevent use by commercial operators wishing to gain access to the same spectrum.

Question 16

Do these proposals promote transparency and ease in calculating taxes?

Yes, the proposals do seem very transparent but logically flawed, more attention needs to be paid to the underlying economics of the interactions between stakeholders.

Regards,
Dainen Keogh

Wireless Internet Service Provider Association of Australia Inc
president@wispau.org