free tv
AUSTRALIA

Submission by Free TV Australia

Implementation of the Spectrum Pricing Review

Australian Communications and Media Authority

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1. Executive Summary

- Free TV welcomes the opportunity to provide a submission to the Australian Communications and Media Authority (ACMA) on its proposed guidelines and focus areas for change as it implements the spectrum pricing review.
- Free-to-air television is delivered across Australia to 97% of households using the terrestrial network.
- This complex network relies heavily on the use of fixed point-to-point links to enable broadcasters to deliver content not only into metropolitan areas, but into regional and remote locations.
- In addition, broadcasters also hold licences that enable the use of spectrum for the purposes of electronic news gathering and TV outside broadcasting. The recent events of the 2019/2020 summer bushfires and the COVID-19 pandemic have demonstrated the continued importance of the use of this spectrum for broadcast services to the community.
- As it stands today, the inputs to the tax formula that determine the charges for these licences are outdated and no longer reflect how services are delivered across a modern broadcast network.
- Free TV sets out in this submission the need for pricing coherence across the suite of spectrum that is allocated to broadcast services. The continued delivery of commercial free-to-air broadcasting services is vital in the delivery of the social and cultural policy objectives enshrined in the Broadcasting Services Act.
- To achieve this aim, the tax formula should be reviewed and amended to ensure that it is supporting the Government's communications policy objectives. In addition, the commercial broadcasting tax should be abolished as part of the statutory review to be commenced shortly.
- As an example of the outdated nature of the inputs to the formula, the 'emissions designators' that are used to determine the bandwidth input into the tax formula have not been updated since the transition from analogue to digital transmission.
- This may mean that some licensees are paying for bandwidth that is not currently used to deliver a broadcast service.
- Similarly, the application of the location weighting does not take into consideration whether the link is being used to provide a primary service to customers or whether it is being used essentially as backhaul to other networks. For example, there are links that are used in metropolitan areas that would attract the high-density weighting that are used to serve customers in low and remote density areas.
- Accordingly, Free TV proposes a tiered approach to the forward work program. We suggest that a working group be established to review the relevant licences to ensure that factors such as the emissions designators accurately reflect their current usage. This is a necessary first step as these are the key inputs into the tax formula.
- Secondly, Free TV recommends that the tax formula review workstream focus on updating the density maps and, in the case of fixed links, introducing a new weighting based on the ultimate customers served by the link.
- Free TV looks forward to working with the ACMA to undertake a review of the formula to ensure that the approach to pricing licences for fixed links and TV outside broadcast licences is updated, consistent with the need to ensure that these services can be sustainably provided for the benefit of all Australians.

2. Introduction

Free TV Australia is the peak industry body for Australia's commercial free-to-air broadcasters. We advance the interests of our members in national policy debates, position the industry for the future in technology and innovation and highlight the important contribution commercial free-to-air television makes to Australia's culture and economy. We proudly represent all of Australia's commercial free-to-air television broadcasters in metropolitan, regional and remote licence areas.

Free TV welcomes the opportunity to provide a submission to the Australian Communications and Media Authority (ACMA) on the proposed guidelines and focus areas for Implementation of the Government's Spectrum Pricing Review.

2.1 Commercial broadcasters' use of spectrum

Television broadcasting, like many other industries, uses radiofrequency spectrum beyond what is immediately apparent to the public. While the television transmissions to antennas on residential premises are clearly the primary application there are a wide range of other applications such as:

- Terrestrial feeder links for contribution of television program material from other sources
- Terrestrial feeder links as relays from television centres to outlying transmitters
- Wireless cameras used in electronic news gathering
- Sports and special event program content from outdoor venues
- Wireless microphones for sound recording
- Contribution of television program material from overseas sources via satellite
- Two-way radiocommunication.

More information on broadcaster's use of spectrum can be found in our recent submission to the 2020-2024 Five-Year Spectrum Outlook (FYSO).

Relevant to this review, broadcaster's apparatus licences fall within the following categories in the ACMA's technical and regulatory framework:

- Earth receive – receiver on a large satellite antenna used for incoming television program content from overseas sources
- Land mobile ambulatory – two-way communications on a wide area basis
- Land mobile systems in bands above 30MHz – wireless microphones to operate in the television services bands at powers greater than the class licence limit but not greater than 250mW.
- Point-to-point fixed links – feeder links as relays from television centres to outlying transmitters, studio to transmitter links and feeder links for contribution of television program material from other sources
- Television outside broadcast fixed links – Australia wide fixed links for sports and special event program content from outdoor venues.

The largest proportion of apparatus licences and taxes for Australian commercial television broadcasters are fixed point-to-point links feeding television signals across metropolitan, rural and remote areas. Commercial television broadcasting accounts for more than 1,000 point-to-point links across Australia.

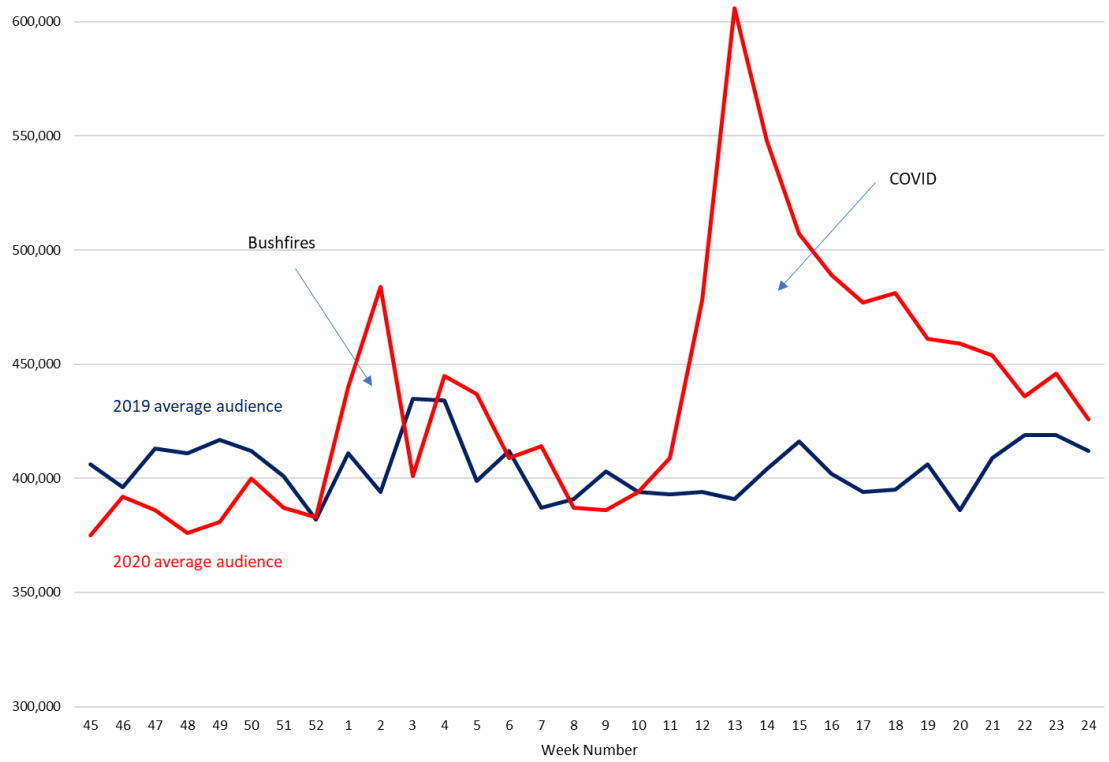
Therefore, for the purpose of gaining a perspective of the application of apparatus licences and taxes on commercial television broadcasting, this submission focuses on fixed point-to-point links.

2.2 This spectrum is used to provide a vital community service

As we set out in our recent submission to the draft 2020-2024 FYSO, broadcasting services remain a highly valuable public service. Of particular relevance to this review process is the pricing of apparatus licences for fixed links and TV outside broadcast. Not only are these uses vital in order to provide broadcasting services across Australia, they also allow us to broadcast direct to the public during events of national significance.

As the graph below shows the response of the public to both our reporting during the bushfire crisis in 2019/2020 and during the COVID-19 pandemic demonstrates the significant value that the community places on commercial television services.

Average national audience in news programming on commercial primary channels



Source: OzTAM and Regional TAM | Overnight | Combined Aggregate Markets and 5CM | Typology: News/Current Affairs | S-s 0600-2400 | Audience 000s

2.3 Background to the current review process

In 2004 the then Australian Communications Authority (ACA) undertook a review where a fee formula was used that reflected the bandwidth authorised by a licence, the spectrum range, the geographic location and the power of the transmitter.

The 2004 review concluded that the then current spectrum location bands and congestion weightings were inappropriate and no longer reflected usage patterns. Free TV considers that the same can be said for the current Apparatus Licence Fee Schedule.

Since that time, significant changes have taken place in spectrum use, allocations and the radio regulations applied to spectrum management. In particular the accelerated sharing of frequency ranges as a result of decisions made since 2004 at World Radio Conferences in 2007, 2012, 2015 and 2019 has brought about significant changes in spectrum use.

This submission sets out a recommended tiered focus approach that would allow the ACMA to analyse and understand the implications of changes to spectrum allocations, where it is likely the current pricing arrangements do not reflect existing spectrum use or sharing capabilities. Following this, the ACMA could move to the assessment and implementation of the remaining proposed focus areas.

3. Broader policy environment

Relevant ACMA questions:

- Do stakeholders have any views about the status of the ACMA's role in implementing the recommendations of the Spectrum Pricing Review?
- Do stakeholders have any views on the legislative and policy environment that may be relevant to the pricing issues outlined in this paper?

3.1 ACMA is well placed to lead this review

Free TV considers that the ACMA should be well placed to undertake the role in implementing the 3 recommendations of the Spectrum Pricing Review. Over the last decade the ACMA has undertaken a diverse range of consultations with stakeholders on licensing and pricing.

The tiered approach to the forward work program that we outline below will draw on the extensive resources available to the ACMA such as the Register of Radiocommunications Licences (RRL). We consider that the ACMA has considerable data at hand from which a detailed review of the trends in the application of the administrative pricing formula parameters including density areas, the number of pricing models within bands and the number of power categories could be obtained.

It is important to note that another significant related reference is the Australian Radiofrequency Spectrum Plan (ARSP), a legal instrument that specifies the general purpose and use for each band. We refer to the importance of the ARSP later in this submission as it has implications for the stated policy intention to use pricing mechanisms to drive efficient spectrum allocation.

3.2 Need for coherence in spectrum pricing across broadcast delivery

Relevant ACMA questions:
The ACMA seeks views from stakeholders about:

- whether there should be parity in pricing arrangements between services like commercial broadcasting taxes and open narrowcasting taxes?
- whether there are other services where the ACMA should be considering providing greater parity in pricing?

Free-to-air television services are provided using a complex infrastructure array, with an equally complex licensing framework enabling services to be provided across Australia. In turn, the broadcast network supports the delivery of the Government's social and cultural objectives as set out in the Broadcasting Services Act.

It is therefore important that the tax formula and its inputs are designed to support rather than detract from the achievement of those objectives. As we explain below, applying a strict opportunity cost pricing model for any licence required by broadcasters would not achieve the productive or dynamic efficiency gains that are often cited as the benefits of such pricing approaches.

Free-to-air broadcasting by its very nature is a public good. In the free-to-air model, commercial TV broadcasters can only capture the value of providing the platform to advertisers. They cannot capture the value of the broadcast to viewers (as they, by definition, receive the content free of charge).

While taxing for spectrum and apparatus licences can be useful in driving efficiencies where users are able to respond effectively to that signal, in the case of broadcasting services this can result in a wealth transfer from networks to the Government. Broadcasters are generally constrained in how they can use spectrum allocated for broadcast services and the technology they can employ to support broadcast services. As the ACMA is also aware, there are also complex technical restrictions in how the spectrum can be used to protect against interference.

Given these restrictions, spectrum charges and taxes in excess of the cost of managing the spectrum only results in wealth transfers, with no increase in spectral efficiency. Such a wealth transfer harms free-to-air broadcasters at a time when the costs of meeting our obligations are continuing to increase and advertising revenues are declining.

Accordingly, the ACMA should include as one of its principles, consistency with and support for the achievement of the legislated communications policy objectives. We note that the exposure draft of the Radiocommunications Reform and Modernisation Bill includes, amongst others, a refined objective to support the communications policy objectives of the Commonwealth Government.

3.3 Commercial broadcasting tax

Free TV notes that the ACMA will begin its review of the commercial broadcasting tax formula in the next quarter. In our view, the temporary 2020 rebate that is being applied to the commercial broadcasting tax should be extended until 2022, at which time the commercial broadcasting tax legislation should be repealed.

While we understand that the ACMA commercial broadcasting tax review will likely focus on the composition of the formula and the charging framework, the ACMA should note that international best practice for pricing spectrum does not exceed the regulatory costs of managing spectrum allocated to broadcast services.

The current tax replaced the revenue-based broadcasting licence fee in 2017 with an interim spectrum tax, locked in for five-years. The aggregate level of the spectrum charge of $43.5 million per annum was determined by Cabinet and then levied via a tax on broadcast transmitters.

As set out in our FYSO submission, Free TV has previously expressed concerns with this approach, on the basis that the pricing does not properly reflect economic value of the spectrum, taking into account its use for free-to-air broadcasting. The amount of the spectrum charge is also high by international standards.

In addition, to offset the disproportionate impact on regional broadcasters who have many more transmitters than their metro counterparts and serve much smaller populations, the charging method requires a complex system based on the power and population density of the transmitters. In some cases, regional broadcasters have received an additional rebate to ensure that they were not worse-off as a result of the 2017 removal of the broadcast licence fee and the imposition of a spectrum charge.

4. Issues pricing implementation process needs to address

Free TV considers that the first order priority for the ACMA should be to ensure that the existing licences accurately reflect their modern use. Further, a review is necessary to ensure that there is consistency between the spectrum band allocations in the ARSP and each licence type.

4.1 Factors not reflective of modern broadcast network link use

Relevant ACMA questions:

- Does the tax formula generally provide a solid base for incentivising the efficient use of spectrum?
- 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?
  - the use of inflation to keep apparatus licence taxes contemporary and whether there are alternative approaches?
- What factors should the ACMA consider in determining new spectrum locations or frequency ranges?

In preparation for this submission, Free TV undertook a review of a sample of fixed point-to-point licences held by its members. We thank the ACMA for its facilitation of this review process. This sample review found that the factors from the licences that are used as an input into the tax formula are likely out-of-date and do not reflect how a modern broadcast network uses fixed links.

Since 2004 Australian television broadcasters have undertaken significant infrastructure changes in their spectrum and network assets, in particular digital television broadcasting and television outside broadcasting. Prior to 2001, single program transmissions applied analogue modulation technology on fixed point-to-point links. Today, high efficiency video coding, with four or more high definition services being multiplexed within the same channel spacing are being terrestrially provided to 97% of the population. These currently applied infrastructure investments indicate increased spectral efficiency being achieved by Australian television broadcasters.

From our review of the sample of apparatus licences, it is apparently that some 'emission designators' are based largely on the analogue transmission era and require updating. When applied accurately and consistently, emission designators are a method of concisely describing the characteristics of the radiofrequency emissions, including bandwidth usage.[1]

Given the bandwidth required for broadcasting services has changed markedly since the emissions designators were drafted, Free TV is concerned that its members may be paying more than is required for the given service.

We consider the ACMA should undertake a review of the licensing options for each sector, particularly in regard to the emission designators applied to apparatus licensing. As we suggest in a later section,

[1] They are defined by the ITU in Appendix 1 of the Radio Regulations and a method for determining bandwidths of emissions for various types of signals found in Recommendation ITU-R SM.1138 [5].

the most efficient process to complete this exercise may be for the formation of a working group to review the licences.

Free TV suggests that the ACMA review process also include the benchmarking of international approaches and pricing outcomes. Free TV has considered the application of fixed point-to-point licence fees in other countries, including the 2019 consultation by the Canadian Department of Innovation, Science and Economic Development (ISED). The ISED proposed in its consultation a "consumption factor", where fees would be calculated based on the amount of spectrum used (bandwidth) per link. The stated intent was to create mechanism that was straight forward and easily understood.[2]

4.2 Use of location weighting needs updating

Relevant ACMA questions:

- Do current spectrum locations or frequency ranges remain appropriate? If not, what changes should be made and why?
- How does the value of spectrum changes across geographic locations?
- Should density areas be refined for different services/bands?
- 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?
- Whether different pricing constructs such as $/MHz/Pop for different licence types should be considered?

Similarly, to the emissions designators that are now likely out of date, the location weighting for fixed point-to-point links should be amended and updated.

Broadcaster's fixed links and networks in metro, regional and remotes areas are used to provide carriage as "feeder links" of the broadcast signals to the transmission sites. They do not serve the local population within the interim network and should therefore be classed as an enabling service. Examples are the network structures from regional broadcasters "play out" centres (point of origination) where feeder links traverse long distances to transmission sites e.g. to a Gold Coast transmission site - 30 fixed link sites, and the Mildura transmission site - over 20 fixed link sites.

Free TV considers that the ACMA review of the formula should include consideration of whether there is sufficient granularity in the licensing divisions in the apparatus licence tax formulas to address current usage of many bands (ie. the radiocommunication services, licence types and licensing options).

In the Canadian regulatory approach, previously referenced, Free TV's attention was drawn to the arrangements established for rural and remotes areas where tiers of services were based on clear and consistent delineation of urban, rural and remote areas for the purposes of calculating fees for fixed point-to-point links.

[2] https://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf11445.html

In the case of long haul point to point links in rural Australia, Free TV considers for this class of link, the location weighting factor should be amended to reflect the price of spectrum where the service is provided to the end-user.

Currently, the application of the location weighting does not take into consideration whether the link is being used to provide a primary service to customers or whether it is being used essentially as backhaul to other networks, even in regional and remote locations.

The current approach results in higher than appropriate location weightings being applied to links that are ultimately serving regional and remote geographic areas. The pricing formula should correctly reflect the spectrum value in these areas.

4.2.1 Density maps should be updated

As noted in the consultation paper, the density areas were set in the 1990s and last updated in 2004.

Free TV considers that it is appropriate that the boundaries of the high, medium, low and remote density areas be reviewed. In particular, Free TV members consider that the construction of the current polygons around metropolitan areas may inflate the fees for broadcast licensees in some regional areas.

Free TV notes the ACMA's interest in whether different pricing constructs such as $/MHz/Pop for different licence types should be considered. While this model has been applied in some jurisdictions and consideration should be given to its use in Australia, Free TV cautions that such approaches lend themselves to application for networks where the network directly serves the population where the transmitter is located. As noted above, that is often not the case where broadcaster's fixed link networks serve the population at the end point of the network.

5. Other principles included for consultation

Relevant ACMA questions:

- 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?

5.1 Efficient allocation and use of the radiofrequency spectrum

As noted above, the allocation of spectrum is defined in the ARSP. The ARSP is published following World Radio Conferences which are held by the International Telecommunications Union every three to four years to revise the Radio Regulations. This international treaty governs the use of the radio-frequency spectrum and the geostationary-satellite and non-geostationary-satellite orbits. Australia is a signatory to the Radio Regulations. Australia has limited ability to make changes to these allocations through the use of footnotes within the ARSP and the ITU Radio Regulations.

As a result, the ability of pricing mechanisms to drive productive efficiency is limited as spectrum is allocated by international agreement. Pricing signals are therefore only useful as a means to allocate scarce spectrum between parties with similar business models with use cases for the spectrum consistent with the internationally agreed allocation. However, even in these cases, competition issues generally lead to the imposition of spectrum limits in auction processes to ensure that spectrum allocations do not cause a substantial lessening of competition in downstream markets.

If the ACMA were to include a notion of efficiency in its guiding principles, Free TV notes that this should only relate to the use of spectrum, rather than allocation. Further, the ACMA should note that there are uses, such as in the provision of broadcasting services, where service providers are unable to respond to pricing signals owing to technical constraints and the need to manage interference. In these cases, pricing is a straight wealth transfer from the service provider to Government, with no increase in spectral efficiency.

5.2 Consistency and simplicity

Consistency and simplicity are admirable guiding principles. For many Australian spectrum stakeholders, they equate to having certainty when they translate their spectrum requirements to a common understanding of the licence tax regime administered by the ACMA.

However, the construct of the current Apparatus Licence Fee Schedule does not appear to be simple and does not reflect current practice of technological application of the individual spectrum bands e.g. particularly where band use has changed due to spectrum re allocations or changes in modulation technologies.

As explained in the previous section, we consider the ACMA should undertake a review of the licensing options for each sector, particularly in regard to the emission designators applied to apparatus licensing.

5.3 Flexibility and adaptability to technology change

Highest value use of spectrum will change over time and not necessarily at the same pace for each service in each band for each country.

Changes in the value of spectrum as described above are not necessarily evident to a licensee. As a result, when imposed they do not provide confidence of tenure to spectrum users who have based investment decisions on the Apparatus Licence Fee formula. The Apparatus Licence Fee Schedule should provide certainty with respect to the investment made to the application of the licence by the individual spectrum licensees, organisation or government entity. If the ACMA had undefined discretion to update apparatus licence taxes or introduce new taxes; individual spectrum licensees, organisation or government entity would not have that certainty of spectrum tenure.

5.4 Transparency in process

Spectrum licence taxes can be a significant operational cost for each individual spectrum stakeholder, organisation and government entity. To determine if use of spectrum in Australia is an effective cost to an individual spectrum stakeholder, organisation and government entity, the factors which determine spectrum pricing, over time, need to be clearly defined.

Free TV supports the inclusion of this principle.

5.5 Recovery of the costs of spectrum management

We fully recognise the role undertaken by the ACMA's spectrum regulatory activities such as planning, interference management and coordination. The costs the ACMA incurs for spectrum regulatory activities such as planning, interference management and coordination, should be recovered from within the spectrum pricing and subsequently reflected in the spectrum licence taxes. For some spectrum licence types, particularly the Commercial Broadcasting Tax, the recovery of these costs should be the only basis for spectrum pricing.

However, the recovery of these costs also needs to take into account the increasing role that licensees themselves are playing in spectrum management and interference protection, where the outcomes are often spectrum sharing and coordination.

Australian television broadcasters have a history of engaging with ACMA, government organisations and stakeholders in a range of frequency bands towards the objective of sharing spectrum. From the application of wireless microphones in UHF Bands IV and V to sharing with Government agencies in the 7.2Ghz band. RALI FX 21 indicates the wide range of sharing undertaken.

Since the establishment of the technical framework for TOB in the 2 and 2.2GHz bands licensees have maintained existing and developed spectrum sharing and frequency coordination arrangements at a material cost in human resources and studies. In recent times there have been many spectrum access requests for earth station sharing with TOB in rural and remotes areas where the ACMA has relied on TOB licensees to coordinate.

In addition are the range of special global events which frequently take place in Australia where overseas broadcasting organisations seek short term access to spectrum e.g. Formula 1 and other

major sporting events, tours to Australia of world dignitaries and major Australian news events for international distribution.

Increasingly the ACMA calls upon Australian TOB licensees to support these spectrum access requests. These are a financial overhead for TOB licensees and should be reflected as an offset against the cost of licences.

5.5.1 Costs for trialling new technology should be limited to ACMA costs

Relevant ACMA questions:

- 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?

It is appropriate for short-term scientific licences to be priced at the administrative cost of the ACMA of planning and issuing the licence.

Within the process of application for a spectrum licence each applicant may also apply or encounter costs in preparing for a licence application e.g. testing a technology by way of a Scientific Licence. These costs should be reflected in the cost of a scientific licence by way of a discount to the fee.

6. Forward work program

Relevant ACMA questions:

- 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.

6.1 Suggested tiered approach to focus areas

We recommend a tiered focus approach that would allow the ACMA to analyse and understand the changes to spectrum allocations, prior to focusing on the assessment and implementation secondary focus areas.

First, we consider that the ACMA should focus on the analysing whether the current factors within the tax formula are fit for purpose. We suggest that a key input into this process would be the formation of a working group between broadcasters (and potentially other sectors) and the ACMA (see next section).

Second tier focus issues should be those spectrum bands where there have been significant changes in the allocation of services as a result of decisions made at WRCs and reflected in the current ARSP.

Focussing on ensuring that the descriptors in licences are up to date will ensure that the inputs to the other proposed focus areas are relevant and accurate. At that point the ACMA could move to consideration of the other focus areas:

- large bandwidth and multiple (networked devices) requirements
- sharing and low interference potential devices
- new technologies and trials, and
- transparency and ease of calculating taxes.

6.2 Proposed working group with broadcasters

To maintain utility within the Licence Type and Options within the Apparatus Licence Fee Schedule, the model requires frequent review of the spectrum and geographic location within the tables for each Division of the formula. We consider that there is merit in the ACMA establishing a working group to review the current tables within each Division to ensure that the:

- licensing options accurately reflect the current use of the spectrum bands listed in each table (especially for emission designators),
- frequency ranges within each division reflect accurately the bands allocated to each licence type i.e. band allocations in the ARSP.

Free TV members are willing to participate in a working group to review the current tables within each Division.