Broadcasting Services (Technical Planning) Guidelines
SBS response to ACMA consultation
August 2017

Key Points

- The ACMA’s Broadcasting Services (Technical Planning) Guidelines continue to provide broadcasters with important information to assist in the planning, adjustment and operation of their transmission facilities.

- Therefore, SBS supports the ACMA’s proposal to revoke and remake the 2007 Guidelines before they automatically sunset on 1 October 2017.

- While supporting the ACMA’s intention to reduce the complexity and length of the Guidelines, SBS makes a number of suggested additions to ensure that they remain a useful ‘one stop shop’ resource for broadcasters.

- These suggestions include retaining certain diagrammatic representations, retaining certain technical appendices that appear in the current instrument and including notes with relevant cross references to the legislative framework.

- SBS also makes a number of comments about, and notes a number of questions on specific clauses in the draft replacement instrument, including suggestions about particular technical parameters.

Introduction

SBS welcomes the opportunity to respond to the ACMA’s July 2017 consultation paper *Automatic sunsetting of legislative instrument – Proposal to remake the Broadcasting Services (Technical Planning) Guidelines 2007* (the Consultation Paper).

SBS is unique in the Australian media environment. Its principal function is to provide multilingual, multicultural and Indigenous radio, television and digital media services that inform, educate and entertain all Australians and, in doing so, reflect Australia’s multicultural society.

As a national free-to-air broadcaster, SBS reaches almost 100 per cent of the population through its six free-to-air TV channels (SBS, SBS HD, SBS VICELAND, SBS VICELAND HD, Food Network and National Indigenous Television (*NITV*)), eight radio stations (SBS Radio 1, 2 and 3, SBS Radio 4, SBS Arabic24 (including PopAraby), SBS PopDesi, SBS Chill and SBS PopAsia) and World Movies, a subscription TV channel.

Importantly, this reach is being significantly extended through SBS’s digital services, including SBS On Demand and portals which make online audio programming and
information—including essential migrant settlement information—available in more than 70 languages other than English.

The Guidelines – a valued resource for broadcasters

The Consultation Paper notes the ACMA’s view that the Broadcasting Services (Technical Planning) Guidelines 2007 (the 2007 Guidelines) continue to form a necessary and useful part of the legislative framework.

SBS agrees and supports the ACMA’s proposal to revoke and remake the 2007 Guidelines before they automatically sunset on 1 October 2017. As noted in the Consultation Paper, the 2007 Guidelines have operated successfully to provide—in conjunction with other planning documents, such as television licence areas plans—a ‘technical envelope’ within which broadcasters can plan, adjust and operate their transmission facilities.

SBS supports the ACMA’s re-drafting approach of specifying requirements which, to the greatest extent possible, are service-neutral. We also support the ACMA’s aim of reducing the size and complexity of the instrument.

However, SBS notes that the proposed replacement guidelines, the draft Broadcasting Services (Technical Planning) Guidelines 2017 (the 2017 Guidelines), are significantly shorter and less detailed than the 2007 Guidelines. It is accepted that much of the reduction has been achieved by removing redundant provisions, such as those relating to analog terrestrial television services.

We also note that the ACMA has excluded from the draft 2017 Guidelines other material that it considers would be better provided in an explanatory statement or on the ACMA website. While SBS appreciates that legislative instruments should focus predominantly on specific regulatory requirements—rather than general explanatory material or aspirational statements—we caution against removing too much operational detail. Broadcasters’ staff are likely to continue to use the 2017 Guidelines as a ‘one stop shop’ and, as such, would benefit from the continued inclusion of key explanatory material such as diagrammatic representations of spectrum masks for AM and FM transmissions (as referred to in clause 22 of the 2017 Guidelines) within the instrument.

Where other important explanatory information is provided on the ACMA website we recommend that this be referred to in the 2017 Guidelines given that the instrument may be accessed directly from the Federal Register of Legislation rather than the ACMA website.

In particular, SBS submits that notes within the 2017 Guidelines should refer to the ACMA’s Broadcasting Planning Manual. It will also remain useful for notes to refer to relevant provisions in the Radiocommunications Act 1992 (for example, in the way that the forward to the 2007 Guidelines refers to the legislative provisions under which national broadcasting service transmitter licences are issued).

SBS also recommends that certain technical appendices that appear in the 2007 Guidelines be retained—see comments in relation to clause 22 below.
The 2017 Guidelines – comments on specific clauses

Clause 6 – Interpretation

A number of definitions that appear in the 2007 Guidelines have been omitted from the 2017 Guidelines—which we support as this contributes to the simplification of the revised Guidelines. However, SBS recommends reinstating the definition of ‘protection ratio’ and that the Guidelines are augmented with reference made to the appropriate protection ratio values in respect of the co-existence of broadcast services (for example, adjacent channel values, co-channel values by transmission mode).

In the definition of ‘planned minimum field strength’ it is noted at paragraph (e) that for a transmitter operated under a DRMT licence the relevant value is 64 dBμV/m, which we recommend be cross-checked with the minimum strength recommended by the Digital Radio Planning Committee convened by the ACMA. We recommend that for digital radio the published field strength values also cite the reference height (for example, 1.5 metres for ‘in-vehicle’ reception and 10 metres for general planning) so as to avoid any future ambiguity of understanding.

In the definition of ‘VHF television transmitter’ it is noted that for the purposes of calculating CMF (cymomotive force) for a transmitter a broadcaster should ‘disregard any CMF measured at a distance from the transmitter’s antenna where the reactive effects are not negligible’. While it is accepted the definition provides flexibility to assess effects on a case-by-case basis, the term ‘not negligible’ is open to significantly different interpretations. It is recommended that some further guidance be given, such as a list of factors that could be taken into account in determining whether an effect is more than negligible.

In relation to the tables set out under the definition of ‘VHF television transmitter’ (on page 7) of the 2017 Guidelines, we recommend that:

- for the table dealing with receiver characteristics, a note be added setting out the assumptions underpinning the values specified (including modulation parameters such as modulation mode/QAM, guard interval and code rate); and
- for the table dealing with antenna and feeder cable characteristics, it needs to be clarified what the column headings ‘R’, ‘S’ and ‘U’ represent.

Clause 11 – Minimum coverage criteria – transmitter located at the nominal location

Paragraph (4)(d) of this provision refers to a maximum CMF or ERP (effective radiated power) specified in the LAP or DRCP over at least 70 per cent of each arc. We note that the requirement has been increased from 60 per cent in the 2007 Guidelines and query this increase. We understand that the ACMA is considering retaining the 60 per cent level—SBS would support this. SBS is unable to warrant that existing antenna systems are capable of fulfilling the 70 per cent requirement and would require that any existing shortfall below this value where previously compliant with the 2007 Guidelines be appropriately ‘grandfathered’.
Clause 13 – Overspill criterion – transmitter not located at the nominal location

Where provisions, such as paragraph (2), will not apply, or not apply in the same way, to national broadcasting service (NBS) licensees as they do to other classes of licensee—because of the different nature of these NBS licences—it may be appropriate to include a note to the clause about applicability.

Clause 14 – Overspill criterion – SFN transmitters

Noting a minor typographical point, we recommend insertion of the word ‘be’ in paragraph (b) between ‘would’ and ‘achieved’ so that the sentence reads ‘field strength level that would be achieved for a transmitter operating within the nominal transmission parameters’.

Clause 16 – Interference to other services – broadcasting services and datacasting services

Clause 16 provides that where a licensee’s transmitter causes interference it will have responsibility to adjust or fit devices to either a transmitter or receiver to which the interference has been caused.

SBS agrees with this overarching requirement, however recommends the addition of a qualification so that this clause does not require rectification if the receiver in question is deficient because it suffers poor electromagnetic compatibility performance or overload protection from strong local signals. This could be achieved by adding a reasonableness requirement or threshold so that, for example, rectification is not required if the interference is only caused because of the low quality or non-compliant nature of the reception equipment.

Clause 17 – Interference to other services – radiocommunications

As with clause 16, we submit that consideration be given to adding a qualification to clause 17(2) such that the requirement to resolve interference is only activated where the system which is suffering interference is robust. For example, where the telecommunications receive system utilises equipment that suffers from overload in the presence of strong (for example, high power) broadcast signals, the requirement to rectify may not be reasonable—especially where the broadcast facility is technically compliant itself.

Clause 22 – Radiated signal characteristics

Paragraph (1) deals with AM radio service carriers and relates to modulation levels. It uses the expression ‘to a maximum of’ (for example, in paragraph (a) ‘...must be amplitude modulated to a maximum of 125 per cent...’). While this is most likely to be read as permitting levels up to but not exceeding the given value, we recommend the use of the term ‘must not exceed’ for clarity. We consider that this better conveys that values below the maximum are also permitted.

In paragraph (4)(a) we recommend the addition of the word ‘further’ between ‘be’ and ‘attenuated’ so that the sentence reads ‘must be further attenuated at the rate of 1 dB per kHz’.
In relation to paragraph (4)(b) we recommend inclusion of the statement ‘at a distance of 1 km from the transmitter/mast’ (or similar expression as per paragraph 9 of Appendix 1 of the 2007 Guidelines).

As noted above, we recommend retention of the graphical representations of modulation modes described in this clause—this may be most appropriately included in an appendix.

Carrying other provisions forward from the 2007 Guidelines

Finally, SBS recommends retaining the following provisions which appear in the 2007 Guidelines:

- **FM spacing at ± 800kHz**: the provisions in clause 34 of the 2007 Guidelines, which set out requirements for the achievement of an appropriate protection ratio in the case of transmissions that were licenced at / within ± 800 kHz and are not co-located.
- **Impact of antenna height**: provisions set out at clauses 41–43 of the 2007 Guidelines.