**EXPLANATORY STATEMENT**

Approved by the Australian Communications and Media Authority

*Broadcasting Services Act 1992*

***Broadcasting Services (Technical Planning) Guidelines 2017***

**Authority**

The Australian Communications and Media Authority (**the ACMA**) has made the *Broadcasting Services (Technical Planning) Guidelines 2017* (**the instrument**) under section 33 of the *Broadcasting Services Act 1992* (**the Act**) and subsection 33(3) of the *Acts Interpretation Act 1901* (**the AIA**).

Section 33 of the Act requires the ACMA to develop written guidelines for the technical planning of individual services that use the broadcasting services bands as a means of delivery.

The instrument repeals and replaces the *Broadcasting Services (Technical Planning) Guidelines 2007* (**the 2007 TPGs**).

Subsection 33(3) of the AIA provides that where an Act confers a power to make a legislative instrument, the power shall be construed to include a power exercisable in the like manner and subject to the like conditions (if any) to repeal, rescind, revoke, amend or vary any such instrument.

**Purpose and operation of the instrument**

Part 3 of the Act provides for the planning and management of that part of the radiofrequency spectrum which is used principally for broadcasting services using terrestrial transmitters in Australia. This part of the radiofrequency spectrum is known as the broadcasting services bands.

The instrument sets out technical and other requirements for certain broadcasting and datacasting licensees in respect of the planning and operating of transmission facilities. These licensees use the broadcasting services bands as a means of delivery.

The technical requirements specified in the instrument deal with:

* establishing transmission facilities;
* site tolerances;
* minimum and maximum radiated power;
* maximum permitted field strength;
* interference to other services; and
* radiated signal characteristics.

The instrument is one of a number of legislative instruments made under Part 3 of the Act. Other legislative instruments made under Part 3 and mentioned in the instrument include licence area plans (made under subsection 26(1)) and television licence area plans (made under subsection 26(1B)). The instrument also refers to digital radio channel plans which are made under subsection 44A(1) of the *Radiocommunications Act 1992* (the Radiocommunications Act). The instrument, in conjunction with a relevant plan, provides a ‘technical envelope’ within which broadcasting and datacasting licensees can plan, make changes to, and operate, their transmission facilities.

Paragraphs 108A(1)(d) and 109(1)(e), of the Radiocommunications Act, make compliance with guidelines developed under section 33 of the Act, a condition of transmitter licences that authorise the operation of:

* temporary community broadcasting services licensed under Part 6A of the Act;
* commercial radio broadcasting services licensed under Part 4 of the Act;
* commercial television broadcasting services licensed under Part 4 of the Act;
* community radio broadcasting services licensed under Part 6 of the Act and
* community television broadcasting services licensed under Part 6 of the Act.

Additionally, pursuant to paragraphs 109A(1)(f) and 109B(1)(n) of the Radiocommunications Act, compliance with guidelines developed under section 33 of the Act is a condition of datacasting transmitter licences and digital radio multiplex transmitter (DRMT) licences issued under Part 3.3 of the Radiocommunications Act.

A provision-by-provision description of the instrument is set out in the notes at **Attachment A**.

The instrument is a legislative instrument for the purposes of the *Legislation Act 2003* (**the LA**).

**Documents incorporated by reference**

The instrument incorporates, by reference, the Acts, legislative instruments, industry standards and other documents listed below.

Acts:

* *Census and Statistics Act 1905*
* *Radiocommunications Act 1992*

Legislative instruments:

* *Radiocommunications (Interpretation) Determination 2015*

The Acts and legislative instruments listed above can be accessed, free of charge, on the Federal Register of Legislation ([www.legislation.gov.au](http://www.legislation.gov.au)).

The instrument also incorporates references to licence area plans made by the ACMA under section 26 of the Act and digital radio channel plans made by the ACMA under section 44A of the Radiocommunications Act. Licence area plans and digital radio channel plans are legislative instruments, which can be accessed, free of charge, on the Federal Register of Legislation ([www.legislation.gov.au](http://www.legislation.gov.au)).

Industry standards:

* *AS 4599.1-2015 Digital television – Terrestrial broadcasting – Part 1: Characteristics of digital terrestrial television transmissions*

The standard is available, at a cost, from SAI Global’s website ([www.saiglobal.com](http://www.saiglobal.com/)). The standard can also be made available for public viewing on request in an ACMA office, subject to licensing conditions.

* *ETSI EN 300 401 V2.1.1 Radio Broadcasting Systems; Digital Audio Broadcasting (DAB) to mobile, portable and fixed receivers*

This standard is available, free of charge, from the European Telecommunications Standards Institute’s website ([www.etsi.org](http://www.etsi.org)).

Other documents:

* 2011 Census data published by the Australian Bureau of Statistics.

Census data is available, free of charge, from the Australia Bureau of Statistics’ website ([www.abs.gov.au](http://www.abs.gov.au)).

The instrument also incorporates references to certain terms within transmitter licences issued by the ACMA under Part 3.3 of Chapter 2 of the Radiocommunications Act. Such licences are available for access, free of charge, on the Register of Radiocommunications Licences (<https://web.acma.gov.au/rrl/register_search.main_page>) established and maintained by the ACMA pursuant to Part 3.5 of Chapter 3 of the Radiocommunications Act.

**Consultation**

Before the instrument was made, the ACMA was satisfied that consultation was undertaken to the extent appropriate and reasonably practicable, in accordance with section 17 of the LA.

The ACMA released a preliminary exposure draft of the instrument to certain industry stakeholders on 19 July 2017. Thereafter, a revised draft of the instrument together with an accompanying consultation paper were published on the ACMA website on 27 July 2017. Comments were sought by close of business on 14 August 2017.

The ACMA received three submissions from industry stakeholders on the draft instrument. Each submission asked questions about, or offered drafting suggestions on, the draft instrument. All the submissions supported the ACMA’s proposal to make the instrument. All submissions were taken into account by the ACMA before making the instrument.

**Regulatory impact assessment**

A preliminary assessment of the proposal to make the instrument was conducted by the Office of Best Practice Regulation (**OBPR**), based on information provided by the ACMA, for the purposes of determining whether a Regulation Impact Statement (**RIS**) would be required. OBPR determined that the remaking of the 2007 TPGs (which the instrument repealed) would have more than a minor regulatory impact. However, if the 2007 TPGs were assessed as operating effectively and efficiently, informed by a public consultation process, the ACMA could certify to this effect in lieu of a RIS (OBPR reference ID 22477). Informed by the public consultation process, the ACMA assessed the 2007 TPGs as operating effectively and efficiently.

**Statement of compatibility with human rights**

Subsection 9(1) of the *Human Rights (Parliamentary Scrutiny) Act 2011* requires the rule-maker in relation to a legislative instrument to which section 42 (disallowance) of the LA applies to cause a statement of compatibility to be prepared in respect of that legislative instrument.

The statement of compatibility set out below has been prepared to meet that requirement.

***Overview of the instrument***

The instrument is made under section 33 of the Act. Section 33 requires the ACMA to develop written guidelines for the technical planning of individual services that use the broadcasting services bands as a means of delivery. The instrument contains technical and other requirements for broadcasting and datacasting licensees in respect of the planning and operating of transmission facilities. The instrument repeals and replaces the *Broadcasting Services (Technical Planning) Guidelines 2007.*

The instrument forms part of a wider group of legislative instruments that deal with the planning and operating of services using the broadcasting services bands. These instruments include: licence area plans; television licence area plans and digital radio channel plans. The instrument (when read in conjunction with the relevant plan) provides a ‘technical envelope’ within which relevant licensees can plan, make changes to, and operate, their transmission facilities.

***Human rights implications***

The ACMA has assessed whether the instrument is compatible with human rights, being the rights and freedoms recognised or declared by the international instruments listed in subsection 3(1) of the *Human Rights (Parliamentary Scrutiny) Act 2011* as they apply to Australia.

Having considered the likely impact of the instrument and the nature of the applicable rights and freedoms, the ACMA has formed the view that the instrument does not engage any of those rights or freedoms.

***Conclusion***

The instrument is compatible with human rights as it does not raise any human rights issues.

**Attachment A**

**Notes to the *Broadcasting Services (Technical Planning) Guidelines 2017***

**Part 1––Preliminary**

**Guideline 1 Name**

This guideline provides for the instrument to be cited as the *Broadcasting Services (Technical Planning) Guidelines 2017*.

**Guideline 2 Commencement**

This guideline provides for the instrument to commence on 30 September 2017.

**Guideline 3 Authority**

This guideline identifies the provision of the Act that authorises the making of the instrument, namely section 33 of the *Broadcasting Services Act 1992* (**the Act**).

**Guideline 4 Repeal of the *Broadcasting Services (Technical Planning) Guidelines 2007***

This guideline provides that the *Broadcasting Services (Technical Planning) Guidelines 2007* are repealed.

**Guideline 5 Application**

This guideline provides that, unless specified otherwise, the guidelines apply to licensees. The term ‘licensees’ is defined in guideline 6.

**Guideline 6 Interpretation**

Subguideline (1) defines expressions used throughout the instrument. This includes a definition of ‘cymomotive force or CMF’. Note 1 to the definition of ‘cymomotive force or CMF’ refers to subguideline (2), which specifies how cymomotive force must be calculated.

The note below the definition of ‘VHF television transmitter’ explains that a number of other expressions used in the instrument are defined in the Act. These include ‘licence area’ and ‘licence area plan’ which are expressions used throughout the instrument.

**Guideline 7 References to other instruments**

This guideline provides that in the instrument, unless the contrary intention appears:

* a reference to any other legislative instrument is a reference to that other legislative instrument as in force from time to time; and
* a reference to any other kind of instrument is a reference to that other instrument as in force at the commencement of the instrument.

**Guideline 8 Site tolerance**

The site tolerance for a transmitter is referred to in certain licence area plans made under subsection 26(1) of the Act.

Subguideline (1) provides that where the site tolerance specified in a licence area plan refers to the instrument, then subguideline (2) applies.

Subguideline (2) provides that where a person operates a transmitter in accordance with the instrument, they will be taken to be operating in accordance with the technical specification in the relevant licence area plan. This is where the instrument modifies the technical specification or allows the person to operate the transmitter otherwise than in accordance with the technical specification.

**Part 2––Start up procedures**

**Guideline 9 Application of Part 2**

The guideline specifies the persons to whom, and the circumstances in which, Part 2 of the instrument applies. The persons are licensees and persons authorised by licensees under section 114 of the *Radiocommunications Act 1992*.

**Guideline 10 Start up procedures**

Guideline 10 specifies the procedures that must be followed when a licensee or an authorised person commences test transmissions. The requirements include the content and duration of test transmissions, and notifying potentially affected persons that test transmissions will be commencing. Paragraph (c) imposes a requirement to place a notice on the licensee’s website or an industry website about commencing test transmissions and specifies the information that the notice must contain.

The guideline also specifies that test transmissions must be conducted in accordance with the technical operating specifications (defined in the interpretation section) that are specified in the relevant licence area plan or digital radio channel plan. In the event that test transmissions cause interference to other services, the guideline specifies the steps the licensee or authorised person must take in order to eliminate or minimise the interference. Different requirements apply depending on whether the interference is caused to broadcasting or datacasting services on the one hand or radiocommunications services on the other. This is because where a broadcasting or datacasting licensee causes interference to another broadcasting or datacasting service, the instrument is more prescriptive in the steps the licensee or authorised person must take to address the interference.

**Part 3––Coverage and interference**

**Guideline 11 Minimum coverage criterion – transmitter located at the nominal location**

This guideline specifies the minimum coverage criterion (known as the ‘minimum level of service requirements’ in the 2007 TPGs) that a broadcasting service or DRMT licensee must provide within a licence area, when a transmitter is located at the nominal location. The nominal location of a transmitter is specified in the relevant licence area plan or digital radio channel plan.

Subguideline (2) provides that guideline 11 applies unless otherwise specified in the relevant plan that relates to the transmitter licence that authorises the operation of the transmitter, or in the transmitter licence itself.

Subguideline (3) specifies the required cymomotive force or effective radiated power for a transmitter where an omnidirectional output radiation pattern for the transmitter is specified in the relevant plan.

Subguideline (4) is similar to subguideline (3). It specifies the required cymomotive force or effective radiated power where a directional output radiation pattern for the transmitter is specified in the relevant plan.

**Guideline 12 Minimum coverage – transmitter not located at the nominal location**

Guideline 12 specifies the minimum coverage criterion where the transmitter is not located at the nominal location specified in the relevant licence area plan or digital radio channel plan. The requirement to provide a service to certain urban centres is not intended to override the maximum effective radiated power specified in the LAP or digital radio channel plan. Guideline 12 does not apply where the transmitter is being used to provide a datacasting service.

The note below guideline 12 explains that the minimum coverage criterion does not apply to datacasting services. The note also explains that where a datacasting service is not providing a median field strength that is equal to, or greater than, the planned minimum field strength, it will not be protected against interference from other services.

**Guideline 13 Overspill criterion – transmitter not located at the nominal location**

Guideline 13 provides that if a transmitter is not situated at the nominal location, the licensee must ensure that the estimated population that is able to receive a broadcasting service outside a licence area or designated BSA radio area, does not exceed the estimated population that would have received the service had the transmitter been located at the nominal location.

For the purpose of calculating the estimated population, the licensee should use the same methodology in both instances.

**Guideline 14 Overspill criterion – transmitter with no nominal location specified**

Some operators of broadcasting television services, digital radio broadcasting services or datacasting services may wish to deploy additional transmitters on the same channel as an existing channel allotment. Such transmitters are sometimes referred to as “co channel transmitters” and are part of a network of transmitters sometimes referred to as “single frequency networks”. In many cases, the nominal location of such transmitters are not specified in the relevant licence area plan or digital radio channel plan. Guideline 14 specifies the signal overspill criterion in relation to transmitters for which there is no nominal location specified in a relevant licence area plan or digital radio channel plan.

**Guideline 15 Overspill criterion – datacasting services**

The guideline applies to datacasting services only. To prevent signal overspill into an adjacent area, the guideline requires that a transmitter used to provide a datacasting service must be located within the relevant datacasting service area.

**Guideline 16 Interference to other services – broadcasting services and datacasting services**

Where the operation of a transmitter causes interference to a broadcasting service or datacasting service, subguideline (1) specifies the steps that the licensee must take (at its own expense) to minimise or eliminate the interference caused.

Subguideline (2) qualifies the obligation imposed on the licensee by subguideline (1). It provides that a broadcasting service or datacasting service will only be afforded protection if the service itself meets the criteria specified in subguideline (2).

**Guideline 17 Interference to other services – radiocommunications**

The guideline applies where a transmitter operated by a licensee (the first party) causes interference to a service provided by another radiocommunications licensee.

Subguideline (1) imposes an obligation on the first party to consult with affected persons in order to resolve the interference complaint.

Subguideline (2) qualifies the obligation imposed by subguideline (1). It provides that the obligation imposed on the first party only applies where the radiocommunications devices affected by the interference, are installed, operated and maintained in good order, and are appropriate for the electromagnetic environment of the site at which they are located.

**Part 4––Change of transmitter site and technical operating specifications procedure**

**Guideline 18 Application of Part 4**

This guideline specifies the persons to whom, and the circumstances in which, Part 4 applies.

**Guideline 19 Change of transmitter site and technical operating specifications procedure**

Where a licensee or an authorised person changes the location of a transmitter or makes changes to its technical operating specifications, the licensee or authorised person must ensure that the change will not cause interference to the other services provided by radiocommunications licensees.

Where a licensee or authorised person does make a change, subguideline (1) requires the licensee or authorised person to undertake electromagnetic compatibility (EMC) calculations for the purpose of ascertaining the potential to cause interference to services provided by radiocommunications licensees. The calculations must take into account possible interference occurrences due to intermodulation, harmonic products, local oscillator radiation and co-channel and adjacent channel services. The subguideline provides that the calculations must be performed by a person competent to carry out EMC calculations.

Subguideline (2) provides that where the relevant service was planned in a licence area plan or a digital radio channel plan, the EMC calculations must be performed assuming a maximum effective radiated power that is specified in the relevant plan.

Subguideline (3) provides that interference assessment reports and any relevant EMC calculations must be made available to the ACMA upon request.

**Part 5––Requirements for broadcasting and datacasting services**

**Guideline 20 Application of Part 5**

This guideline specifies the persons to whom Part 5 of the instrument applies.

**Guideline 21 Maximum field strength within the licence area**

Guideline 21 places a prohibition on the location of a transmitter where the field strength of the transmitter would exceed the maximum specified. This is in order to avoid excessive signal levels that may interfere with, or degrade the performance of, receivers.

Subguideline (1) applies to AM radio services. The guideline places a maximum on the permissible field strength of a transmitter by reference to the percentage of the population that is able to receive an AM radio service within the licence area.

Similar to subguideline (1), subguideline (2) places a maximum on the permissible field strength of transmitters used to provide FM radio services, digital radio services, television and datacasting services.

As with subguideline (2), subguideline (3) does not apply to AM radio services. Subguideline (3) provides that a transmitter must not be located at a site where to do so would result in the lesser of 0.1 percent of the population, or 100 persons, within the transmitter’s coverage area, which is located within the licence area, receiving a field strength greater than that specified.

Subguideline (4) defines expressions used in the guideline. For the purposes of performing the population calculations required by subguidelines (1), (2) and (3), guideline (4) specifies the relevant Census data which the licensee should use.

**Guideline 22 Radiated signal characteristics**

Guideline 22 specifies the radiated signal characteristics that are applicable to transmitters that operate in the broadcasting services bands.

Subguidelines (1)-(5) specify the radiated signal characteristics for transmitters that are used to provide AM radio services.

Subguidelines (6)-(10) specify the radiated signal characteristics for transmitters that are used to provide FM radio services.

Subguideline (11) specifies the radiated signal characteristics for television and datacasting services. The subguideline provides that the characteristics must comply with the relevant clauses and appendix of the Australian Standard *AS 4599.1-2015 Digital television – Terrestrial broadcasting – Part 1: Characteristics of digital terrestrial television transmissions*.

Subguidelines (12) and (13) specify the radiated signal characteristics for transmitters that are used to provide digital radio broadcasting services.

Subguideline (12) provides that the radiated signal characteristics of a transmitter used to provide the service, must comply with the spectrum mask for VHF transmitters specified in the relevant clause of the European Telecommunications Standards Institute *ETSI EN 300 401 V2.1.1 Radio Broadcasting Systems; Digital Audio Broadcasting (DAB) to mobile, portable and fixed receivers*.

Subguideline (13) provides that where a transmitter is being used to provide a digital radio broadcasting service and the relevant digital radio channel plan that relates to the transmitter, or the digital radio multiplex transmitter licence that authorises the operation of the transmitter, specifies a spectrum mask, then the radiated signal characteristics of the transmitter must comply with the spectrum mask specified in the plan or on the licence, rather than the spectrum mask referred to in subguideline (12).