



The Manager
Spectrum Licensing Policy Section
Australian Communications and Media Authority
PO Box 13112
Law Courts
Melbourne VIC 8010

C/o: spectrumworkprogram@acma.gov.au

17 April 2023

Dear Sir/Madam,

RE: Draft Five-year spectrum outlook 2023–28

EchoStar Global Australia Pty Ltd welcomes the opportunity to make a submission to ACMA on its Draft Five-year spectrum outlook 2023–28.

EchoStar Global Australia is an Australian mobile satellite service (MSS) low earth orbit satellite operator in the 1980-2010 MHz and 2170-2200 MHz band (2 GHz band).

We hold International Telecommunications Union (ITU) spectrum rights through our Australian Sirion-1 ITU filing. This filing is being bought into use for a non-geostationary orbit MSS S band satellite network named Lyra.

Lyra is currently in the manufacturing stage with plans for its deployment to begin in 2024. The network will bring global IoT including LoRa services to users across all of Australia.

EchoStar Global Australia's parent company, EchoStar Corporation, has extensive experience in MSS, including in the S band.

EchoStar Corporation's affiliate, Hughes Network Systems, develop, manufacture and supply satellite devices and ground system equipment in the S and L band including for Inmarsat, GlobalStar and its affiliate, EchoStar Mobile Ltd.

EchoStar Mobile Ltd operates EchoStar XXI, a geostationary-orbit satellite network that provides LoRa and other narrowband data services. It is also in the process of deploying the 3GPP-compliant Bullitt device which will provide two-way messaging to users across Europe.

EchoStar Corporation also has plans to begin deploying a global 3GPP-NTN LEO satellite network that will support wideband MSS services, including direct-to-device communications, from 2026.

Lyra will leverage the work done by EchoStar Mobile in Europe. It will also seek ACMA approval to provide 2 GHz band MSS, once the Authority's framework for the allocation of licenses is finalised.

EchoStar Global Australia Pty Ltd

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For this reason, EchoStar Global Australia is encouraged by ACMA proposed timeline for further industry consultation (by Q3 2023) so that a framework for the allocation of licenses is in place by late 2024 / early 2025.

This will ensure operators, such as EchoStar Global Australia can begin providing innovative MSS and connectivity to Australians, especially in rural and regional areas.

Framework for the allocation of licenses

As ACMA begins its analysis of a framework for the allocation of licenses in 1980– 2005/2170–2195 MHz, EchoStar Global Australia believes it is critical that a variety of licensing mechanisms are considered.

While auctions are often seen as a default spectrum exclusive assignment method, there are several issues involved in auction processes for satellite resources.

We have seen that in most situations where auctions have been used, they have failed. For example, in Brazil (a country with large unserved areas, like Australia), the regulator abandoned the use of its auction approach a few years ago. The failure of this method can be traced to the large economic outlays required by an auction, which was seen as negatively impacting the economic feasibility of deploying a satellite network.

Satellite networks are not economically feasible if operators must pay auction fees in every country where they plan to operate; it is not sustainable. Accordingly, ACMA must look at other mechanisms.

One such mechanism is setting certain criteria for licensing.

Firstly, a reasonable fee that considers the significant benefit to Australia through providing seamless services to all Australian's regardless of where they live, or work should be set. This fee could be set by looking at the reserve price used in other countries for similar licensing processes. For example, in Mexico, while MSS spectrum was not auctioned, the terrestrial component was. The minimum price was USD7.5 million. Similarly, in Saudi Arabia for its MSS auction with a terrestrial component, the minimum bid was USD3.4 million.

Secondly, ACMA should also consider a range of requirements that need to be met for an applicant to be considered as an operator. Some examples include:

- The applicant being an Australian legal entity.
- The applicant (or its affiliated companies) having experience as an MSS operator.
- The applicant being able to deploy its MSS service to cover all of Australia.
- The applicant having at least one device available for sale in Australia by a set date post deployment.



Spectrum

EchoStar Global Australia also urges ACMA to make sufficient spectrum available for each S band licensee.

Due to 3GPP requiring 5x5 MHz blocks, EchoStar Global Australia urges ACMA make available one 15x15 MHz block and one 10x10 MHz block of spectrum.

ACMA recognises in its Spectrum Outlook that S band is not sufficient to meet growth demands for MSS and has identified additional MSS spectrum. However, even that additional spectrum will not be sufficient. Demands for MSS, including direct-to-device, will require at least 15 MHz for uplink and 15 MHz for downlink of spectrum for initial deployment. Therefore, any future development will consequently need at least one or two more blocks of 5x5 MHz.

EchoStar Global Australia also urges ACMA to submit, or at least support, a future agenda item at the World Radiocommunication Conference 2023 (WRC-23) for more global MSS spectrum including in additional portions of the S band.

It should be noted that EchoStar Global Australia has concerns that some parties will advocate at WRC-23 for this future agenda item to limit such allocations to narrowband, low power and non-voice IoT services.

Full service MSS systems can meet the needs of the IoT market without denying voice and data services where they are needed most.

IoT only MSS (narrow band MSS) would create an extremely inefficient use of spectrum. Such an implementation issue should be left to national administrations. For example, digital inclusivity requires a variety of services to be delivered to all areas. This includes traditional voice and data services that can only be delivered by full-service MSS.

Australia is a large and diverse continent. Australian's living in rural, remote, and isolated areas deserve to have the same services available to them as Australia's living in cities. Only MSS can deliver this.

Should ACMA have any questions regarding this submission we would be more than happy to discuss.

Yours sincerely,

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EchoStar Global Australia Pty Ltd