

Public Sector Spectrum Release (PSSR) Award of the 2.3 GHz and 3.4 GHz bands

About Arqiva

Arqiva is a communications infrastructure and media services company operating at the heart of the broadcast and mobile communications industry and at the forefront of network solutions and services in an increasingly digital world. Arqiva provides much of the infrastructure behind television, radio and wireless communications in the UK and has a growing presence in Europe, Asia and the USA.

We offer cellular, wireless broadband, video, voice and data solutions for public and private sector customers.

Arqiva operates shared radio sites throughout the UK, including masts from under 30 to over 300 metres tall. We have worked with the mobile industry over two decades to deliver mobile services to consumers with a significant presence in suburban and rural areas. Our success can be demonstrated through high levels of sharing on our infrastructure. In Arqiva WiFi we own one of the UK's largest Wi-Fi hotspot providers that enables us to build a unique proposition for public Wi-Fi and small cell mobile network solutions in the UK.

Arqiva is a founder member and shareholder of Freeview. We broadcast all six Freeview multiplexes, are the licensed operator of two of them and we own Connect TV, the first company to launch a live IP streaming channel on Freeview. Arqiva was also a key launch technology partner for Freesat and is the licensed operator of the Digital One – the national commercial DAB digital radio multiplex.

We are building and running a national Internet of Things ("IoT") network, starting with 10 of the UK's largest cities. In addition our smart metering communications service, connecting 10 million homes using long-range radio technology, will be one of the UK's largest machine-to-machine deployments.

Our major customers include EE, H3G/Three, Telefonica/O₂, Vodafone, BBC, ITV, Channel 4, Five, BSkyB, Classic FM, the Metropolitan Police, Airwave and the RNLI.

Arqiva is owned by a consortium of long-term investors and has its headquarters in Hampshire, with major UK offices in London, Buckinghamshire and Yorkshire.

Variation of the Spectrum Access Licence for 1452-1492 MHz and changes for fixed link use in the paired bands 1350-1375 MHz and 1492-1517 MHz

1. Detailed answers

Question 8.3: *Do you have any views on the merits of the proposed approach to information provision; in particular concerning the type of information that may be helpful and any impacts that publication of information might have both on licence holders and the wider spectrum market?*

Arqiva is happy with the information provision and would expect when there is a specific interference issue that a licenced or unlicensed user could request from Ofcom for specific geographical locations access to this data to allow the analysis of any inter network interference to be made.

Question 9.8: *Do you agree with our position to adopt the new power limits above 2403 MHz?*

Yes we agree this is the right approach.

Question 9.10: *Do you have any other comments on the proposed technical licence conditions and the draft licences attached at annexes 8 and 9?*

We include as an Annex to our submission the report of the work that Arqiva has carried out on the co-existence of LTE in 2.3 GHz and Wi-Fi in 2.4 GHz. In light of this analysis Arqiva is concerned about the minimum separation distance that Ofcom is suggesting.

The work shows that for a range of Wi-Fi access points and a range of traffic profiles on the LTE user equipment that there is a range of minimum separations with values from less than 1m to 3.7m. Ofcom has concluded that a 1m separation is acceptable, however the analysis in the Annex suggests that this will lead to the degradation of Wi-Fi performance in the 2.4 GHz band across public and private Wi-Fi deployments. This will cause harm to consumers and business who depend on reliable Wi-Fi services.

In light of the impact on consumers suggested by our analysis Ofcom should consider whether there are changes that it should make in line with its statutory duties. These could take the form of change to the technical, or other, licence conditions or other mitigations that it, or government, could put in place to ensure that consumers continue to receive the same quality of Wi-Fi service that they enjoy today.