

Your response

Question 1: Do you agree with our proposal to update the Earth Station Network Licence to include a new provision authorising NGSO maritime services in the territorial seas of the UK and the Crown Dependencies? If you do not agree, please explain your reasons.

SES welcomes Ofcom's proposal to update the ESN licence to include a new provision explicitly authorising NGSO maritime services in the territorial seas of the UK and the Crown Dependencies and on offshore installations within UK territorial waters. Recognising that maritime services are increasingly relying on satellites for applications such as broadband connectivity, and noting the rapidly expanding deployment of new Earth Stations in Motion (ESIMs) services onboard vessels, SES applauds Ofcom's proposal to explicitly allow access to Ku band (14.0-14.5 GHz) and Ka band (27.5–27.8185 GHz, 28.4545–28.8265 GHz, and 29.5–30 GHz) by NGSO satellite maritime terminals under the same licence conditions as for GSO systems.

In view of the growing number of satellite operators offering a range of NGSO services to UK consumers and businesses, this will clarify that NGSO maritime services are permitted within the UK and will ensure that terminals on both UKflagged vessels and visiting ships sailing in UK territorial waters and on offshore installations under UK's jurisdiction do not cause harmful interference to existing services.

However, we note that certain parts of the 28 GHz band (i.e. 27.8285-28.445 GHz and 28.2365-29.4525 GHz frequency bands) are licensed on an exclusive basis to four UK terrestrial mobile operators.

Due to the evidenced growing demand for satellite connectivity on the move and noting the recent developments with Arqiva's 28GHz spectrum access licence variation request, SES asks Ofcom to allow the reauthorization of the returned Ka-band spectrum in the geographic areas where Arqiva's rights have been rescinded. The aforesaid constitutes evidence that the strongest future demand for this spectrum is for satellite services rather than terrestrial links.

We thus encourage Ofcom to take advantage of the existing growing demand for satellite

	<p>connectivity on the move and extend current licence products into the returned spectrum blocks (27.8285-28.0525 GHz paired with 28.8365-29.0605 GHz).</p> <p>Furthermore, SES recommends a contiguous block of spectrum be made available for satellite services in the entire Ka band. Unimpeded access to spectrum will facilitate the provision of advanced satellite services to UK users and will provide opportunities for the development of new and innovative applications that will ultimately benefit UK consumers and businesses.</p> <p>SES therefore fully supports Ofcom's intention, pending the outcome of WRC-23 deliberations, to consider enabling maritime services operating to GSO and NGSO in Ku band (13 GHz) and to NGSO using Ka band terminals (27.5-30 GHz) in the future.</p>
<p>Question 2: Do you agree with our proposal to introduce a licence condition in relation to NGSO downlinks to protect GSO satellites, and earth stations communicating with GSO satellites? If you do not agree, please explain your reasons.</p>	<p>SES agrees with Ofcom's proposal to add into the ESN licence a new condition in respect of the NGSO satellite downlinks to gateways and terminals located within the UK in accordance with existing equivalent power-flux density (epfd) limits set in Article 22 of the ITU Radio Regulations.</p> <p>NGSO satellite operators are already expected under international regulations to comply with those epfd limits to protect GSO networks. Noting that the ESN licence already contains limitations in relation to uplink transmissions from earth stations situated within the UK to protect GSO satellites, we believe that the proposed amendments will allow Ofcom to intervene and resolve issues of harmful interference in a more efficient and coherent way.</p>
<p>Question 3: Do you agree with our proposal to introduce a licence condition setting out requirements for the protection of radio astronomy from harmful interference in relation to NGSO downlinks? If you do not agree, please explain your reasons.</p>	<p>SES agrees with the proposed amendments to ensure appropriate protection of radio astronomy services in the 10.6-10.7 GHz band from potential interference caused by space-to-Earth downlinks of NGSO systems operating in adjacent frequency bands.</p>

Question 4: Do you agree with our proposal to introduce licence conditions setting out requirements for the protection of fixed links from harmful interference in relation to NGSO downlinks? If you do not agree, please explain your reasons.

Similarly, SES agrees with Ofcom's proposal to introduce licence conditions for the protection of fixed links against harmful interference in relation to NGSO downlinks. SES notes that the proposed conditions are in line with Article 21 of the ITU Radio Regulations which sets the pfd limits at the Earth's surface to facilitate sharing with terrestrial services.

Noting the existence of fixed wireless links operating in the 17.7-19.7 GHz frequencies within the UK, SES supports the amendment which will allow Ofcom to ease enforcement and ensure consistency with existing spectrum uses, by introducing these requirements as clear conditions in the individual ESN licences.

Question 5: Do you have any additional comments regarding any of our proposals?

SES wishes to raise an additional comment concerning the geographical boundaries of the ESN licence (para 3.43).

We note that the proposed amendment concerning the extension of the licence to offshore installations which are inside the UK territorial sea or outside UK territorial sea but in waters which are to be treated as if they were situated in such part of the United Kingdom under Section 120(2) of the Wireless Telegraphy Act 2006 (WTA), is drafted in a way that could be interpreted to apply to ESIMs installed on non-UK flagged vessels sailing in waters around energy and oil platforms outside the UK territorial sea.

SES therefore respectfully asks Ofcom to clarify that ESIMs installed on non-UK flagged vessels/aircraft only need an ESN licence when operating within UK territorial waters (parts a and c) and that part b) only refers to equipment and apparatuses located on offshore installations (and surrounding waters within 500m of such installations) to which UK jurisdiction has been extended by means of an order as authorized under Section 11 of the Petroleum Act or Section 87 of the Energy Act.