

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of

ES 172 LLC

For Authority to Operate the Replacement Payloads of the EUTELSAT 172B Satellite in the 3700-4200 MHz, 5925-6425 MHz, 10.95-11.20 GHz, 11.45-11.7 GHz, 12.2-12.75 GHz and 14.0-14.5 GHz Bands at 172.0° E.L.

File No.: SAT-RPL-20170927-00136

Call Sign: S3021

**PETITION FOR CLARIFICATION OR
RECONSIDERATION OF LICENSE CONDITIONS,
AND REQUEST FOR STAY**

ES 172 LLC, the licensee of the EUTELSAT 172B satellite, hereby requests clarification or reconsideration of – and an interim stay in applying – certain conditions on use of the 12.7-12.75 GHz band included in the license granted in the above-captioned application proceeding.¹ EUTELSAT 172B is optimized to communicate with Ku-band earth stations aboard aircraft (“ESAAs”) and earth stations onboard vessels (“ESVs”), satellite mobility terminals that the Commission has included in an umbrella category of earth stations in motion (“ESIMs”).²

The International Bureau (“Bureau”) previously granted ES 172 LLC authority to use the 12.7-12.75 GHz band for services outside the United States, but deferred the issue of access to the

¹ *ES 172 LLC*, Call Sign S3021, File No. SAT-RPL-20170927-00136 (granted April 25, 2018) (“EUTELSAT 172B License”).

² *Amendment of Parts 2 and 25 of the Commission’s Rules to Facilitate the Use of Earth Stations in Motion Communicating with Geostationary Orbit Space Stations in Frequency Bands Allocated to the Fixed Satellite Service*, IB Docket No. 17-95, Notice of Proposed Rulemaking, FCC 17-56, 32 FCC Rcd 4239 (2017), at ¶ 1.

band by earth stations located within the United States.³ Since the Original EUTELSAT 172B License was granted, ES 172 LLC has been using the band for service provided outside the United States and the EUTELSAT 172B has been operating satellite downlinks throughout its coverage area, including in beams that cover U.S. territory.

In its recent decision to add U.S. service authority for the 12.7-12.75 GHz band, however, it seems that the Bureau has inadvertently extended conditions intended for new domestic services to previously authorized operations outside the United States. In addition, it appears the Bureau contemplated more traditional fixed earth station operations in developing the condition governing FSS services provided in this band in the United States rather than the core ESIM operations supported by EUTELSAT 172B. Thus, as applied to EUTELSAT 172B, it appears that Condition 4,⁴ may be ambiguous, inapplicable, and/or overbroad in the following respects:

³ *ES 172 LLC*, Call Sign S3021, File No. SAT-RPL-20170927-00136 (granted in part, deferred in part Dec. 7, 2017) at Scope of Grant, Frequencies, and Condition 3 (the “Original EUTELSAT 172B License”).

⁴ In full, Condition 4 states as follows:

Eutelsat’s [*sic*] request for a waiver of 47 CFR § 2.106 of the Commission’s rules to permit the provision of FSS within Region 2 and the United States in the 12.7-12.75 GHz frequency band (space-to-Earth) IS GRANTED, subject to the following conditions:

- a. Eutelsat shall not cause any harmful interference to existing and future authorized users operating in accordance with the U.S. Table of Frequency Allocations and shall accept any interference from authorized users, including CARS operators, BAS operators, Private Operational Fixed Point-to-Point Service (OFS) operators and Common Carrier Local TV Transmission Service (LTTS) operators;
- b. In the event of harmful interference to any authorized services operating in accordance with the ITU Table of Frequency Allocations resulting from Eutelsat’s use of the 12.7-12.75 GHz band in Region 2, Eutelsat shall immediately cease operations in that band;
- c. Before operating in the 12.7-12.75 GHz frequency band in the space-to-Earth direction, Eutelsat shall coordinate with any potentially affected terrestrial users in the United States, its Possessions and Territories;
- d. Eutelsat is required to inform its customers in writing, including end-users receiving service from resellers accessing capacity on EUTELSAT 172B, that service;
 - i.) shall be discontinued should a report of harmful interference resulting from this service occur;
 - ii.) is being provided pursuant to authority subject to a non-harmful interference basis, and that the customers therefore are not protected from harmful interference resulting from services that are allocated to this frequency band;

- Condition 4 is intended to add authority for the EUTELSAT 172B satellite to provide FSS services in the United States using the 12.7-12.75 GHz band, but the introductory language of Condition 4 could be interpreted to require application of its provisions to services provided both within and outside the United States.
- Condition 4.c requires ES 172 LLC to coordinate EUTELSAT 172B’s satellite downlinks with “potentially affected” terrestrial users, but identifies no interference objectives or coordination criteria applicable to the 12.7-12.75 GHz band;
- Condition 4.d requires ES 172 LLC to notify all customers that, among other things, their service may be discontinued based on a report of harmful interference caused by EUTELSAT 172B’s use of the 12.7-12.75 GHz band, even though this may be inaccurate because other spectrum may be available to support such services; and
- Condition 4.f appears to cite Commission rules and ITU Radio Regulations that do not include PFD limits that apply to the 12.7-12.75 GHz band in Region 2.

Accordingly, ES 172 LLC respectfully requests that the Bureau:

- i. clarify that the geographic scope of Condition 4 is limited to “the provision of FSS . . . in the 12.7-12.75 GHz frequency band (space-to-Earth)” *within the United States*, while access to and use of that band *outside the United States* remains permitted and governed by Condition 3 of the EUTELSAT 172B License, including as a conforming use in ITU Regions 1 and 3;
- ii. clarify the interference objectives and criteria for coordination contemplated by Condition 4.c and limit its scope to operation of fixed earth stations located within the United States or, in the alternative, eliminate this provision;
- iii. clarify that the notice provision contemplated by Condition 4.d applies to earth stations at fixed geographic locations within the United States using only the 12.7-12.75 GHz band or, in the alternative, eliminate this provision;

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- e. In the event that Eutelsat receives any report of harmful interference, Eutelsat shall inform the Commission of this and provide details of how it has been resolved;
 - f. To further protect services in this band, the power flux density limits (PFD) at the surface of the Earth for transmissions from the satellite in the band 12.7 - 12.75 GHz shall not exceed the limits specified in Sections 25.208, 25.138 and 25.140 of the Commission’s rules, and those in rule No. 21.16 of the ITU Radio Regulations, as applicable.

There is a further footnote that provides:

Article 21.16 of the International Radio Regulations imposes power flux density (PFD) limits on satellite downlink transmissions in this band in order to protect terrestrial services. As Eutelsat’s non-conforming downlink transmissions are also in a terrestrial service band, we impose the same PFD limits on Eutelsat’s downlink transmissions in this band.

- iv. clarify any PFD limits that apply to EUTELSAT 172B's operations in the 12.7-12.75 GHz band under Condition 4.f; and
- v. to the extent necessary, stay the application of Condition 4 (or at least the provisions of Condition 4 for which clarification or reconsideration is sought) during the pendency of Bureau consideration of this Petition.

ES 172 LLC does not request clarification or reconsideration of any other condition affecting any other band authorized in the EUTELSAT 172B License.

I. REQUEST FOR CLARIFICATION OR RECONSIDERATION

ES 172 LLC appreciates the Bureau's recent decision to expand EUTELSAT 172B's authority to operate in the 12.7-12.75 GHz band with earth stations located in the United States.⁵ It appears, however, that Condition 4 could be read to impose its conditions on services provided both within and outside the United States. Furthermore, some of the provisions of Condition 4 appear better suited to the provision of service to fixed earth stations (*i.e.*, they are designed to limit potential encumbrance of the band by fixed earth station operators) but do not appear to contemplate ESIM mobility terminal operations for which EUTELSAT 172B was designed. ES 172 LLC requests clarification or reconsideration of these provisions as discussed below.

A. Clarification that Condition 4 Applies to FSS Provided in the United States

As written, Condition 4 could be interpreted as applying to operations outside the United States, which would be inconsistent with EUTELSAT 172B's previous license conditions and ES 172 LLC's current operations. In the Commission's original license grant, the Commission authorized EUTELSAT 172B to use the 12.7-12.75 GHz band in the space-to-Earth direction at locations outside of the United States, and ES 172 LLC has been doing so in accordance with that authority. Condition 4 could be viewed as significantly altering that grant by requiring compliance

⁵ EUTELSAT 172B License at Condition 4.

with its provisions even outside the United States “[b]efore operating in the 12.7-12.75 GHz frequency band.”

Operations outside the United States are already sufficiently addressed elsewhere in the EUTELSAT 172B License. For example, Condition 2 addresses any concerns regarding extraterritorial operations by requiring Eutelsat to comply with the applicable laws, regulations, rules, and licensing procedures of any other country where it provides service;⁶ and Condition 3 now includes reference to accessing 12.7-12.75 GHz sub-band (as part of the 12.2-12.75 GHz band) as a non-conforming user in Region 2.⁷ Although not entirely clear, it seems the Bureau reasonably sought to distinguish the 12.7-12.75 GHz services authorized in Conditions 3 and 4, including updating the provisions in Condition 3 of the Original EUTELSAT 172B License governing services outside the United States.

B. Clarification of Condition 4.c’s Prior Coordination Requirements

ES 172 LLC requests that the Bureau clarify the prior coordination requirements of Condition 4.c. This provision includes no definitions, performance criteria, interference objectives, or other means of identifying or coordinating with potentially affected terrestrial users. EUTELSAT 172B already uses this band for space-to-Earth communications without any interference incidents, demonstrating that these downlink transmissions recede into the background noise and pose no interference threat to higher-power terrestrial operations.

⁶ EUTELSAT 172B License at Condition 2. It is important to note that while FSS downlink operations in the 12.7-12.75 GHz frequency band are non-conforming in ITU Region 2, they are conforming in Regions 1 and 3 and ES 172 LLC operates EUTELSAT 172B downlinks in those regions consistent with applicable ITU Radio Regulations.

⁷ Compare Original EUTELSAT 172B License at Condition 3 *with* EUTELSAT 172B License at Condition 3.

Additionally, EUTELSAT 172B supports receive operations of ESIMs outside the United States (with incidental satellite downlink beam coverage of U.S. territory) that cause no potential interference. Indeed, it is not possible for earth station receive operations in the 12.7-12.75 GHz band pose an interference threat to terrestrial operations. With respect to EUTELSAT 172B's downlink transmissions, ES 172 LLC complies with the PFD limits applicable in ITU Regions 1 and 3 designed to protect terrestrial operations from harmful interference, and compliance with similar limits in Region 2 would also protect terrestrial operations in the United States.

To the extent the Bureau seeks to impose any conditions in the 12.7-12.75 GHz band to preserve access for terrestrial services, other more efficient regulatory mechanisms (including other provisions in Condition 4 remain available. However, should the Bureau seek to preserve the prior coordination provision notwithstanding the challenges noted above, it should clarify that Condition 4.c applies only to the operation of earth stations that are permanently installed at fixed geographic locations within the United States.

C. Clarification that Condition 4.d Applies to Fixed Earth Station Services Provided Using Only the 12.7-12.75 GHz Band

Like the prior provision, Condition 4.d could have unintended effects outside the United States, which would be inconsistent with the Original EUTELSAT 172B License conditions and ES 172 LLC's current operations. In the Original EUTELSAT 172B License, the Commission authorized EUTELSAT 172B to use the 12.7-12.75 GHz band in the space-to-Earth direction at locations outside of the United States and ES 172 LLC has been doing so for months in accordance with that authority with no reported issues. Condition 4.d of the EUTELSAT 172 License appears to require that additional notices be provided to ES 172 LLC customers and end-users of services delivered using EUTELSAT 172B.

The 12.7-12.75 GHz band represents a small 50 megahertz portion of the overall range of Ku-band spectrum that EUTELSAT 172B utilizes in providing service and there are currently no services provided exclusively in that sub-band. Customers also have access to spectrum outside this band which is not similarly encumbered. Because customers would not be faced with service deprivation even in the event this band became unavailable, there is no need for this condition and requiring notice that service could be interrupted or discontinued altogether at any time would be substantially overbroad, inaccurate, and unnecessarily disruptive. Moreover, neither the ESIM service provider customers for EUTELSAT 172B nor ES 172 LLC's competitors are subject to analogous notice conditions.⁸

If the Bureau retains Condition 4.d at all, therefore, ES 172 LLC requests that it limits the provision to requiring notice to operators of earth stations that are permanently installed at fixed geographic locations within the United States for services that are delivered exclusively using the 12.7-12.75 GHz band. Only in this limited case would unavailability of the 50 megahertz band at 12.7-12.75 GHz possibly deprive customers of service, thereby potentially justifying the notice requirement included in the provision.

⁸ See, e.g., *AC BIDCO*, Call Sign E120106, File No. SES-MFS-20170725-00793 (granted Oct. 4, 2017) (granting waiver of the Table of Frequency Allocations to permit space-to-Earth ESAA operations in Region 2 (including the United States) using 12.7-12.75 GHz on an “unprotected, non-interference basis,” subject to the condition that “the aircraft earth station operations authorized herein must accept interference from any radio station operating in conformance with the U.S. Table of Frequency Allocations”); see also *Horizons-3 License LLC*, Call Sign S2947, File No. SAT-LOA-20151202-00080 (granted July 6, 2016) (permitting use of 12.7-12.75 GHz band in Region 2, including the United States, on a “non-interference, non-protected basis” and not imposing additional notice conditions); and *Intelsat License LLC*, Call Sign S2460, File Nos. SAT-MOD-20120619-00100 and SAT-AMD-20120815-00131 (granted Aug. 9, 2013) (same).

D. Clarification of Condition 4.f Regarding PFD Limits

Condition 4.f requires ES 172 LLC to observe the PFD limits in the 12.7-12.75 GHz band set forth in Sections 25.208, 25.138, and 25.140 of the Commission's rules, as well as Rule 21.16 of the ITU Radio Regulations. However, because the 12.7-12.75 GHz band is not allocated on a primary basis for space-to-Earth transmissions in Region 2, the PFD limits contained in those provisions do not apply to EUTELSAT 172B's operations in this band in Region 2.

The Bureau has reviewed and authorized EUTELSAT 172B's downlink PFD levels for service outside the United States, which also entails satellite downlink transmissions to U.S. territory (*i.e.*, U.S. territory is illuminated by the satellite downlink beam even if no service is provided in the United States) and there have been no reported cases of interference. If the Bureau nonetheless seeks to retain this provision, then ES 172 LLC proposes that the Bureau should clarify the requirement for EUTELSAT 172B PFD limits in Region 2 to comply with the PFD levels provided in rule No 21.16 of the ITU Radio Regulations applicable in 12.7-12.75 GHz band in Region 3 and some countries in Region 1 – limits designed to protect terrestrial operations from harmful interference.⁹

II. REQUEST FOR STAY

ES 172 LLC requests that, to the extent necessary to preserve access to the 12.7-12.75 GHz band for services outside the United States pending clarification or reconsideration as requested above, the Bureau stay the effectiveness of Conditions 4.c and 4.d of the EUTELSAT 172B License.¹⁰ Under Section 1.102(b)(2) of the Commission's rules, the Bureau may stay the

⁹ See, e.g., Horizons-3 License LLC, Call Sign S2947, File No. SAT-LOA-20151202-00080 (granted July 6, 2016) at Condition 6.

¹⁰ Condition 4.f is excluded from the request for stay because it fails to prescribe an applicable PFD limit for EUTELSAT 172B's operations at 12.7-12.75 GHz, as was the Bureau's presumed intent. Therefore, ES 172 LLC believes that clarification or reconsideration of that

effectiveness of its decision, pending disposition of this Petition.¹¹ In considering a request for stay, the Bureau applies the four-factor test established in *Virginia Petroleum Jobbers Ass'n v. FPC*,¹² weighing whether: (i) Petitioners are likely to prevail on the merits; (ii) Petitioners will suffer irreparable harm absent a stay; (iii) other interested parties will not be harmed if the stay is granted; and (iv) the public interest favors grant of the stay.¹³ That test is amply met here.

A. Likelihood of Success on the Merits

As discussed above, Conditions 4.c and 4.d are vague, overbroad, unworkable, and unnecessary to protect other licensees operating in the 12.7-12.75 GHz band or the customers and end-users of services provisioned using EUTELSAT 172B. At the same time, these conditions impose severe and anti-competitive operational limits on ES 172 LLC's ability to provide services using EUTELSAT 172B that appear far outside the Bureau's customary conditions imposed on satellite operators that request authority to use spectrum in ways that vary from the Table of Frequency Allocations. ES 172 LLC has demonstrated herein that a narrower reading (or alternatively elimination) of these conditions will better serve the Bureau's goals,

provision is clearly warranted, but that stay of the provision is unnecessary because it does not impose additional compliance obligations.

¹¹ 47 C.F.R. § 1.102(b)(2) ("If a petition for reconsideration of a non-hearing action is filed, the designated authority may in its discretion stay the effect of its action pending disposition of the petition for reconsideration").

¹² *Virginia Petroleum Jobbers Ass'n v. FPC*, 259 F.2d 921, 925 (D.C. Cir. 1958), as modified by *Washington Metropolitan Area Transit Commission v. Holiday Tours, Inc.*, 559 F.2d 841, 843 (D.C. Cir. 1977).

¹³ See, e.g., *EchoStar Satellite Operating Company Application for Special Temporary Authority Related to Moving the EchoStar 6 Satellite from the 77° W.L. Orbital Location to the 96.2° W.L. Orbital Location, and to Operate at the 96.2° W.L. Orbital Location*, File No. SAT-STA-20130220-00023, Call Sign S2232, Memorandum Opinion and Order, DA 13-854, 28 FCC Rcd 5475 (Int. Bur. 2013), at ¶ 8.

protect existing terrestrial licensees, avoid customer and end-user confusion, and facilitate EUTELSAT 172B's delivery of service using the 12.7-12.75 GHz band.

B. Irreparable Harm

Because they are vague and overbroad, Conditions 4.c and 4.d will, at a minimum, delay the introduction of service in the United States using the 12.7-12.75 GHz band, slowing ES 172 LLC's ability to offer broadband services. Not only will this delay be costly for ES 172 LLC, it will also harm those potential users whose service will be impaired in the interim. Similarly, if Conditions 4.c and 4.d are read to apply broadly to EUTELSAT 172B's operation in the 12.7-12.75 GHz band throughout its service area, and not solely in the United States, those conditions will cause substantial disruption to ES 172 LLC's existing operations.

As discussed above, the Bureau previously authorized EUTELSAT 172B's use of the 12.7-12.75 GHz band outside of the United States and ES 172 LLC has begun operating successfully in that band. If these provisions force ES 172 LLC to suspend service outside the United States in the 12.7-12.75 GHz band – while it undertakes coordination with unknowable potentially affected parties using undefined coordination criteria and interference objectives and implements an alarming and unhelpful customer notice process – ES 172 LLC would suffer unnecessary costs, erosion of customer goodwill, unjust harm to the company's commercial reputation in the marketplace, and needless impairment of service.

C. Lack of Harm to Other Parties

The EUTELSAT 172B License authorizes use of the 12.7-12.75 GHz band for space-to-Earth operations, where the space station will be transmitting from geostationary orbit above the equatorial Pacific Ocean. Thus, with respect to the potential for harmful interference between those transmissions and a terrestrial co-channel licensee, it is EUTELSAT 172B's transmissions – as received at the earth station – that are likely to be the victim of harmful interference, as the

distant satellite signals are drowned out by stronger transmissions from nearby terrestrial sources. Of course, ES 172 LLC will operate these downlinks on an unprotected basis.

Even absent the new prior coordination requirement in Condition 4.c, other conditions in EUTELSAT 172B License require ES 172 LLC to cease operations immediately and notify the Commission if harmful interference should occur. That safeguard has been employed on numerous previous occasions by the Bureau, with no evidence that it insufficiently protects the interests of other licensees using the band in accordance with its primary allocation. Similarly, the onerous notice provisions of Condition 4.d are not typically imposed in the context of mobility terminal operations that require and seek no protection, and where alternative spectrum may be available to support service to customers and end users.

D. The Public Interest

The apparent intent of Conditions 4.c and 4.d on the EUTELSAT 172B License is to protect terrestrial users of the 12.7-12.75 GHz band and to avoid surprising customers and end-users if harmful interference should occur. However, the prior coordination process, together with the contemplated notices, are likely instead to sow confusion and needlessly delay incorporation of that spectrum into the EUTELSAT 172B services in the United States. Such delay and confusion would undermine the Commission's interest in making broadband communications widely available as quickly as possible.

III. CONCLUSION

The Bureau's recent expansion of EUTELSAT 172B's authority to incorporate use of the 12.7-12.75 GHz band in the United States, while fundamentally in the public interest, includes certain conditions that require clarification or reconsideration to adequately effect the Bureau's intent and appropriately reflect EUTELSAT 172B's predominant service to ESIMs. For all of the foregoing reasons, the Bureau should clarify or reconsider the provisions of Condition 4

discussed above and, to the extent necessary, stay the application of those provisions pending clarification or reconsideration as requested herein.

Respectfully submitted,

A handwritten signature in cursive script that reads "Carlos M. Nalda".

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On behalf of Eutelsat S.A.

May 29, 2018