

In the Matter of)
)
Expanding Flexible Use of the 3.7 to 4.2 GHz Band) GN Docket No. 18-122

Global Eagle Entertainment Inc. (“Global Eagle”) submits these comments in response to the Notice of Proposed Rulemaking released by the Federal Communications Commission (“FCC” or the “Commission”) in the above-referenced proceeding.¹

Global Eagle provides satellite-based broadband connectivity, television and entertainment services, content, and data analytics to customers across air, sea, and land. Global Eagle also owns and operates active C-band earth stations. Naturally, Global Eagle will be significantly impacted by any reallocation of the 3.7-4.2 GHz band (“Lower C-band”) to facilitate more intensive terrestrial mobile use.

As the Commission considers reallocating the Lower C-band, it should ensure that any reallocation mechanism adopted in this proceeding—including any market-based mechanism—achieves three critical objectives: (i) protecting incumbent C-band operations to the maximum extent possible; (ii) fairly compensating incumbent licensees and their customers for lost value; and (iii) maintaining Commission oversight of any “transition period” occurring as a result of any such reallocation.

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I. GLOBAL EAGLE CURRENTLY UTILIZES C-BAND CAPACITY TO PROVIDE CONTENT AND CRITICAL CONNECTIVITY SERVICES TO MARITIME AND OFFSHORE PLATFORMS

A. C-band Spectrum Constitutes a Critical Component of Global Eagle's Connectivity and Content Solutions

As a result of its unique market position, Global Eagle will experience profound impacts in the event of any reallocation of the Lower C-band for widespread terrestrial mobile use. Currently, Global Eagle relies on C-band spectrum in order to provide service to four different segments of the mobility market:

- ***C-band Satellite Operator.*** Global Eagle owns C-band transponders used to support the provision of connectivity services to cruise liners, commercial ships, ferries, yachts, and other maritime vessels.
- ***C-band Satellite Customer.*** Global Eagle is among the largest lessees of satellite capacity in the world. Global Eagle currently contracts for C-band capacity on numerous geostationary satellites, which it utilizes to provide an array of services to maritime vessels and offshore energy platforms, including critical communications and ship telemetry.
- ***C-band Earth Station Operator.*** Through its wholly-owned subsidiaries, MTN License Corp. and Emerging Market Communications, LLC, Global Eagle owns and operates many Commission-licensed C-band earth stations.
- ***Content Broadcaster.*** Global Eagle broadcasts popular video and television content to cruise liners and yachts via its MTN-TV and PRIVA brand products that are uplinked from Global Eagle's U.S. teleports and downlinked to vessels using the C-band.

In short, C-band connectivity serves as the spectrum backbone for a wide cross-section of Global Eagle's service offerings, including almost all services—such as tracking, telemetry, and critical communications—provided to the maritime and offshore energy markets.

Importantly, these Global Eagle services are part of a market experiencing exponential growth. Noting that an “insatiable demand for connectivity is driving the market,” Northern Sky Research estimates that the maritime satcom market “will generate \$36 Billion in cumulative

revenues through 2027.”² In particular, the kind of connectivity Global Eagle provides to the maritime market “will face booming bandwidth requirements coming not only from bandwidth-hungry passengers and crew but also from the overall development of smart applications.”³ As the Commission considers “the current and future economic value” of fixed-satellite service (“FSS”) in the Lower C-band, the Commission should be careful not to unintentionally stymie the ongoing innovation and value creation generated by Global Eagle and other connectivity and media providers in the C-band mobility market.⁴

B. Disruptions to Connectivity and Content Services Could Result in Significant Costs to C-band Customers like Global Eagle

In order to preserve the valuable services that it provides today, Global Eagle urges the Commission not to authorize any spectrum reallocation mechanism, unless it is confident that incumbent C-band operators and their customers will not be negatively impacted. Global Eagle fully agrees with Commissioner Michael O’Rielly that “any reallocation must fully protect the incumbent contractees that currently use C-band to bring many services to consumers” and that any proposal that does not afford such protection is “close to a non-starter.”⁵

Any disruption to C-band spectrum availability to the vibrant and growing mobility market would have two immediate negative impacts for Global Eagle. *First*, as described above, Global Eagle relies on robust access to C-band spectrum to provide connectivity and content services that reach hundreds of marine vessels and offshore energy platforms. Any transition of existing FSS

² Northern Sky Research, NSR Report: Full Steam Ahead for Broadband Maritime Connectivity, *available at* <https://www.nsr.com/nsr-report-full-steam-ahead-for-broadband-maritime-connectivity/> (accessed Oct. 11, 2018).

³ *See Maritime Bandwidth Demand Poised for Significant Growth*, Satellite Markets and Research, *available at*: <http://www.satellitemarkets.com/market-trends/maritime-bandwidth-demand-poised-significant-growth> (accessed October 8, 2018).

⁴ NPRM at ¶ 57.

⁵ *Id.*, Statement of Commissioner Michael O’Rielly at 2.

users from the Lower C-band must be managed such that end-user services are not compromised, especially Global Eagle's services which facilitate effective maritime safety. For example, Global Eagle utilizes C-band spectrum to facilitate ship to shore communications, which are highly sensitive to any potential ground-based interference.

Second, any transition of services out of the Lower C-band potentially jeopardizes Global Eagle's existing long-term capital investments in C-band infrastructure and ability to monetize these investments. As the current owner of C-band transponders, Global Eagle is situated no differently than other satellite operators, who expect that their space-based assets will not be significantly impaired without fair compensation. In addition to the C-band transponders that Global Eagle owns, Global Eagle also expends significant capital to outfit maritime vessels and offshore platforms with state of the art antennas and user terminals. As discussed in detail in Section II.B below, in the event that terrestrial mobile services are authorized in the Lower C-band, Global Eagle will be forced to either purchase and install filtering equipment, and/or wholly replace antennas and/or user terminals on nearly one thousand maritime vessels and offshore energy platforms. This burdensome retrofitting will not only result in service interruptions, but also the loss of substantial revenue to Global Eagle. The inherent costs that C-band customers will incur should inform the Commission's cost-benefit analysis in the event of any C-band reallocation.

II. ANY REALLOCATION AND TRANSITION OF FSS OPERATIONS FROM THE LOWER C-BAND SHOULD REIMBURSE CUSTOMERS FOR LOST VALUE AND BE CLOSELY SUPERVISED BY THE COMMISSION

In the NPRM, the Commission sought comment on a variety of approaches to facilitate terrestrial mobile use in the Lower C-band, including allowing C-band satellite operators to engage

in secondary market transactions, or alternatively, several potential auction-based approaches.⁶ At this time, Global Eagle takes no position on the relative merits of secondary market and auction-based approaches. However, Global Eagle emphasizes that irrespective of the “clearing” approach adopted in this proceeding, the Commission should ensure (i) that all incumbent C-band services are adequately protected; (ii) any relocation costs and lost value to C-band customers are fully compensated; and (iii) any transition of services is conducted pursuant to a framework developed and enforced by the Commission.

A. The Protection of Incumbent C-band Customers Must Be a Condition to Commission Approval of Any Reallocation Mechanism

Pursuant to the suggestion of Intelsat Corporation (“Intelsat”), SES S.A. (“SES”), and Intel Corporation, in the NPRM the Commission sought comment on a process that would allow incumbent satellite operators to make C-band spectrum available to terrestrial operators in secondary market transactions.⁷ Intelsat and SES, joined by Eutelsat and Telesat, have formed the C-Band Alliance (“CBA”) in order to serve as “Transition Facilitator” if they secure Commission approval to sell a portion of their current C-band spectrum rights to entities who will provide terrestrial wireless services.⁸ The CBA believes a “Market-Based Approach is best-suited to achieve faster 5G deployment in mid-band spectrum by freeing up a portion of the 3.7-4.2 GHz

⁶ *Id.* at ¶ 58.

⁷ NPRM at ¶ 66.

⁸ See Press Release, *Intelsat, SES, Eutelsat and Telesat Establish the C-Band Alliance (CBA), a Consortium to Facilitate Clearing of U.S. Mid-band Spectrum for 5G While Protecting U.S. Content Distribution and Data Networks* (Oct. 1, 2018) available at <https://ecfsapi.fcc.gov/file/1003113578400/Attachment%20B%20-%20Press%20Release%20CBA%20C-band%20Alliance.pdf> (accessed Oct. 29, 2018).

band for terrestrial mobile use voluntarily, expeditiously, and efficiently, while fully protecting incumbent satellite services.”⁹

At this time, other than as described below, Global Eagle is not necessarily opposed to the CBA’s proposal that the Commission authorize secondary market-based mechanisms for reallocating C-band spectrum. However, Global Eagle believes that any Commission-approved secondary market mechanism must adequately safeguard the substantial investments made to date by both incumbent C-band operators and their customers. The adoption of such a framework is squarely in-line with the Commission’s stated goal of fostering terrestrial mobile use in the Lower C-band “while protecting existing operations in the band from harmful interference.”¹⁰ Thankfully, the CBA has recognized the enormous investments made in the C-band and has highlighted the importance of protecting these incumbent services.¹¹

Moreover, the CBA recently affirmed to the Commission its commitment “to provide world class C-band satellite service to their existing customers” even after the potential reallocation of the Lower C-band.¹² The CBA has made explicit commitments to its customers, promising to “provide existing customers with filters and other necessary equipment, supply installation services, and cover all reasonable costs necessary for spectrum clearing” and “make

⁹ See Letter from Jennifer D. Hindin to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 17-183 and 18-122 (filed Oct. 9, 2018).

¹⁰ NPRM at ¶ 26.

¹¹ See, e.g., Spacenews, *SES allies with Intelsat, Intel on revised US C-band proposal* (Feb. 9, 2018) available at <https://spacenews.com/ses-allies-with-intelsat-intel-on-revised-us-c-band-proposal/> (former SES CEO Karim Sabbagh noting that “[s]pace and ground segment operators have invested billions of dollars in U.S. C-band networks and connectivity and generate important value out of it. It is therefore our duty and mission to protect the C-band in the U.S. from any form of disruption and preserve its use.”).

¹² See Letter from Jennifer D. Hindin to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 17-183 and 18-122 (filed Oct. 15, 2018).

users whole, including hardware and its installation, equipment rentals (e.g., cranes/lifts), dual illumination of uplinks and reasonable labor costs (stipend), with all transition costs covered by the CBA.”¹³

As both the owner of C-band transponders and an existing C-band capacity customer, Global Eagle believes the Commission must prioritize the protection and adequate compensation of incumbent licensees and their end-user customers, even if this means that incumbent satellite operators stand to realize lower profits in secondary market sales. Consistent with this goal of protecting incumbent C-band services, in the NPRM, the Commission asked if there are “alternative technologies available that could wholly or partially replace the services provided by FSS without significant disruption to existing customers.”¹⁴ For the kinds of connectivity and content services Global Eagle provides, there simply is no technically and commercially feasible alternative to the use of C-band. As a provider to mobility markets including maritime vessels and offshore energy platforms, Global Eagle simply cannot transition its existing services to fiber. Similarly, relocating existing C-band operations to either the Ku- and Ka-band could compromise the performance of Global Eagle’s network because of the atmospheric attenuation challenges presented in those bands. In short, relocating to other spectrum bands or employing alternative technologies for the provision of its connectivity and content services is not a commercially viable option.

¹³ *Id.*; Letter from Jennifer D. Hindin to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 17-183 and 18-122 (filed Oct. 17, 2018).

¹⁴ NPRM at ¶ 57.

B. C-band Operators Who Benefit From Secondary Market Transactions Must Be Required to Compensate Their Customers For All Lost Value

Some satellite industry analysts speculate that CBA members stand to realize approximately \$60 billion in revenue as the result of potential secondary market transactions in the C-band.¹⁵ The CBA has represented to the Commission that it is “working with customers to gain support for the Market-Based Approach” and “engaging with...individual companies, to provide more details related to ensuring the protection of antennas.”¹⁶ Global Eagle encourages the CBA to continue these efforts and notes that this approach anticipates two important and fundamental questions the Commission posed in the NPRM: “[w]ho would be responsible for reimbursing incumbent earth station operators and C-band customers for costs incurred in any transition, and how would such cost reimbursement be accomplished? How would disputes relating to cost reimbursement be resolved?”¹⁷ As explained herein and consistent with applicable Commission precedent, those costs should be reimbursed by the satellite operators benefitting from secondary market transactions, and disputes relating to cost reimbursement should be resolved by the Commission.

Any dramatic change to the current C-band framework—such as the introduction of widespread terrestrial mobile use—will likely give way to two potential outcomes for operators who rely on C-band spectrum to provide service to mobility markets. *First*, because relocating to other spectrum bands or transitioning earth station communications to fiber is not technically or

¹⁵ See Seeking Alpha, *Intelsat S.A. And SES S.A.: To The Moon* (Jun. 27, 2018), available at <https://seekingalpha.com/article/4184057-intelsat-s-ses-s-moon> (accessed Oct. 11, 2018).

¹⁶ See Letter from Jennifer D. Hindin to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 17-183 and 18-122 (filed Oct. 9, 2018).

¹⁷ NPRM at ¶ 29; see also *id.* at ¶ 66 (“satellite operators could be responsible for...notifying earth stations of the need to modify their operations and compensating them for any costs associated with that transition.”).

commercially feasible, Global Eagle will likely be forced to relocate at least some of its existing services to other frequencies within the conventional C-band. This process will likely involve, at a minimum, significant retrofitting of antennas and user terminals, the installation of filters and other equipment to guard against harmful interference from terrestrial mobile base stations, and the expenditure of significant capital to make these necessary changes and ensure fluidity of service to its end-user customers. Ground-based interference to the C-band terminals on Global Eagle-equipped vessels currently pose the biggest operational risk to Global Eagle's network and potential reallocation of the Lower C-band to facilitate terrestrial mobile use in the United States would only exacerbate this threat.

Second, Global Eagle notes that it is currently unclear how much spectrum will be reallocated for terrestrial mobile use. Although some CBA members previously noted that “approximately 100 MHz of nationwide spectrum in the U.S. would be cleared within 18 to 36 months” of any FCC Order in this proceeding, it appears the CBA is now focused on clearing up to 200 MHz of spectrum.¹⁸ This is consistent with the stated goal of Commissioner Michael O’Rielly and the wireless industry, who have advocated for more than 100 MHz of C-band spectrum to be cleared.¹⁹ Under this outcome, it is possible that Global Eagle’s access to the Lower

¹⁸ See Joint Use Proposal Fact Sheet *available at* <http://www.intelsat.com/wp-content/uploads/2018/06/C-band-Fact-Sheet-Intelsat-Intel-SES.pdf> (noting that satellite operators planned “to clear and make quickly available nationwide, approximately 100 MHz of C-band downlink spectrum for licensed terrestrial mobile service on a market-by-market basis”); (“CBA Fact Sheet”) (accessed Oct. 10, 2018); *see also* Letter from Jennifer D. Hindin to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 17-183 and 18-122 (filed Oct. 23, 2018) (“The C-Band Alliance (CBA) announced today that up to 200 MHz of mid-band (C-band downlink) spectrum could be cleared, dependent upon demand, under its updated proposal to the U.S. Federal Communications Commission (FCC) opening new spectrum to support 5G wireless deployment while protecting current users.”).

¹⁹ See O’Rielly Statement at 2 (“I have strongly advocated for at least 200 or 300 megahertz, with a serious review to release even more.”); Letter from Charla Rath, Verizon Wireless, to Marlene H. Dortch, Secretary, FCC GN Docket No. 17-183 *et al.* (filed May 16, 2018) (“well more than

C-band—both as an owner of transponders and as an FSS capacity customer—could be entirely foreclosed. Complete loss of such C-band connectivity could result in tens of millions in lost value to Global Eagle.

These costs incurred by C-band customers can and should be reimbursed by the satellite operators who stand to potentially reap windfall profits from secondary market transactions involving Lower C-band spectrum. Basic principles of fairness and equity mandate that if the Commission approves some form of the CBA’s proposal to allow satellite operators to sell all or a portion of their rights to Lower C-band spectrum, it should ensure that their end-user C-band customers are also assured of the ability to recapture all of their lost value. In the NPRM, the Commission observed that “satellite operators could be responsible for clearing the portion of the band that would be made available for flexible use, including notifying earth stations...and compensating them for any costs associated with that transition.”²⁰ Global Eagle supports this approach and believes the Commission should mandate that these costs be reimbursed by any Commission-approved Transition Facilitator. Global Eagle notes the CBA has consistently asserted that secondary market agreements must “compensate C-band FSS operators for their prior investments in building the business and for future foregone business opportunity costs.”²¹ There is no reason entities that own C-band transponders or lease C-band capacity from satellite operators should not be similarly compensated. As such, Global Eagle and similarly situated providers should be entitled to the same foregone business opportunity costs as CBA members.

100 MHz” of spectrum would need to be made available to ensure the effectiveness of the [market-based] approach”).

²⁰ NPRM at ¶ 66.

²¹ C-band Fact Sheet at 1.

This approach is also entirely consistent with applicable Commission precedent when clearing incumbent operations to make way for new wireless services. When the Commission authorized the reconfiguration of the 800 MHz band, it ensured that the costs incurred by public safety entities were reimbursed.²² More recently, the Commission designed and conducted the Broadcast Incentive Auction to free up 84 MHz of broadcast spectrum while simultaneously ensuring that the “repacking” costs of broadcasters who remained in the band were reimbursed.²³ Global Eagle recognizes that determining just compensation for C-band customers will involve balancing many complex valuation issues. But this complexity should in no way prevent the Commission from conditioning approval of any secondary market transaction mechanism upon the reimbursement of C-band earth station operators and customers for their substantial loss of value.

C. Transitioning Existing Licensees and Customers from the Lower Portion of the C-band Must Be Carefully Managed by the Commission

In the NPRM, the Commission asked for comment generally on “using a market-based approach through a Transition Facilitator” and specifically on “what form of supervisory authority the Commission should maintain over the Transition Facilitator, if any.”²⁴ The establishment of a Transition Facilitator to implement a transition framework developed and enforced by the

²² See *Improving Public Safety Communications in the 800 MHz Band*, Report and Order, Fifth Report and Order, Fourth Memorandum Opinion and Order, 19 FCC Rcd 14969 at ¶¶ 177-178 (2004) (“800 MHz Reconfiguration Order”) (“Band reconfiguration will be costly Under the band reconfiguration plan, the principle [sic] cost component will be borne by Nextel, which will pay for all channel changes necessary to implement the reconfiguration. Nextel is obligated to ensure that relocated licensees receive at least comparable facilities when they change channels.”).

²³ See e.g., *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Report and Order, 29 FCC Rcd 6567 at ¶ 598 (2014); *Post-Incentive Auction Transition, Incentive Auction Closing and Channel Reassignment Public Notice*, 32 FCC Rcd 2786 (2017) (authorizing reimbursement payments of up to \$1,750,000,000 for eligible broadcasters and MVPDs).

²⁴ NPRM at ¶¶ 70, 78.

Commission will be critical to the success of any C-band relocation efforts. Global Eagle emphasizes the need for the Commission to task the Transition Facilitator with two guiding principles: ensuring that (i) C-band customers are adequately compensated for their lost value and (ii) any disruptions to existing C-band services are promptly addressed. In particular, the Commission should consider implementing the following mandatory guidelines for any Transition Facilitator:

- *Good-Faith Negotiation.* The Commission should require the Transition Facilitator and all commercial parties involved in any C-band relocation to negotiate in good faith.²⁵ Such a rule will help establish a framework in which all parties can be expected to be fairly compensated for their lost value and equally share in the proceeds from any secondary market, C-band spectrum transactions.
- *Immediate Reporting of Service Disruptions.* The Commission should require the Transition Facilitator to have a mechanism for receiving reports of disruptions from incumbents, and the Transition Facilitator should be required to notify the Commission when it receives such reports.²⁶ This will ensure that the Commission retains appropriate oversight of any relocation process and achieves the core objective of protecting incumbent services.
- *Dispute Resolution Mechanism.* Disputes relating to the appropriate amount of reimbursement to C-band customers on which the Transition Facilitator and a C-band incumbent or customer cannot agree should be referred to the Commission for resolution. No actual transition of services should occur until such disputes are resolved.
- *Regular Submission of Status Reports.* In order that the Transition Facilitator remains ultimately accountable to the Commission for its actions, the Commission should require the Transition Facilitator, on a monthly basis, to submit reports detailing the status of negotiations with C-band incumbent operators. These reports should include the referral of any reimbursement disputes between the Transition Facilitator and C-band incumbents and customers.

Global Eagle stresses that the Commission should closely monitor the Transition Facilitator's ongoing activities. This close level of oversight is consistent with the 800 MHz band reconfiguration, in which the Commission exercised close oversight of the transition and also

²⁵ See *id.* at ¶ 83.

²⁶ *Id.* at ¶ 85.

adjudicated disputes the Transition Administrator was unable to resolve. To do otherwise would be to abdicate the Commission's statutory role in assigning spectrum in accordance with the public interest.²⁷

III. CONCLUSION

For the foregoing reasons, the Commission should permit reallocation of the Lower C-band for terrestrial mobile use *only if* such a process will result in no disruption or lost value to existing incumbents. As in prior spectrum proceedings that involved a nexus of many commercial parties, complex spectrum allocations, and extensive existing services, the Commission should carefully develop a record, before taking any action that could have transformational impacts on the market for many innovative, satellite-based services in the United States.

Respectfully submitted,

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²⁷ 800 MHz Reconfiguration Order, ¶ 194.