

**RESPONSE TO QUESTION 43:
DESCRIPTION OF PROPOSED MODIFICATION AND
PUBLIC INTEREST STATEMENT**

As part of a comprehensive solution that would address the concerns of the GPS community, the National Oceanic and Atmospheric Administration (“NOAA”), and the aviation industry and, at the same time, permit deployment of a terrestrial broadband network assisting in the 4G to 5G transition, New LightSquared LLC (“New LightSquared”) hereby seeks to modify its licenses by reducing power limits, limiting out of band emissions, and incorporating appropriate deference to aviation industry and aviation regulatory concerns. These license modification applications (the “Modification Applications”) are both required by, and designed to fulfill the conditions subsequent in, the separate agreements between New LightSquared and Deere & Company¹ (“Deere”) and New LightSquared and Garmin International, Inc.² (“Garmin,” and Deere and Garmin together, the “Settling GPS Companies”).³

Therefore, pursuant to the Compromise Agreements, New LightSquared hereby abandons its upper 10 MHz downlink band at 1545-1555 MHz and also commits that it will not

¹ Settlement Agreement and Mutual Release made December 8, 2015, by and among Deere & Company and New LightSquared and LightSquared Subsidiary LLC (the “Deere Agreement”).

² Settlement Agreement made December 16, 2015 by and between Garmin International, Inc. and New LightSquared LLC and LightSquared Subsidiary (the “Garmin Agreement” and together with the Deere Agreement, the “Compromise Agreements”).

³ The Deere Agreement and the Garmin Agreement have already been filed with the Commission in the dockets listed above. *See* New LightSquared, Ex Parte Presentation, IB Docket No. 12-340; IB Docket No. 11-109; IBFS File Nos. SAT-MOD-20101118-00239; SAT-MOD-20120928-00160; SAT-MOD-20120928-00161; SES-MOD-20121001-00872; SES-RWL-20110908-01047; SES-MOD-20141030-00835 (Dec. 8, 2015) (“December 8 Ex Parte”); New LightSquared, Ex Parte Presentation, IB Docket No. 12-340; IB Docket No. 11-109; IBFS File Nos. SAT-MOD-20101118-00239; SAT-MOD-20120928-00160; SAT-MOD-20120928-00161; SES-MOD-20121001-00872; SES-RWL-20110908-01047; SES-MOD-20141030-00835 (Dec. 17, 2015) (“December 17 Ex Parte”). The company has reached a separate cooperation agreement with Trimble, and per its provisions, that agreement is not currently public.

deploy on the bands 1526-1536 MHz, 1627.5-1637.5 MHz, 1646.5-1656.5 MHz, 1670-1675 MHz, and 1675-1680 MHz except under the power limits stated in detail below.⁴ Further pursuant to the Compromise Agreements, this is the “appropriate filing” and hence is a condition subsequent that New LightSquared must and hereby does fulfill by the instant date.⁵

These modifications also are significant because Deere and Garmin acknowledge that these operational changes mean that those important GPS companies have no objection to New LightSquared deployment in those bands for all devices (except certified aviation, which is discussed and addressed separately below). Specifically, Paragraph 3 of the Deere Agreement stipulates that “Deere, acting as itself or through any third party, will not object to deployment by New LightSquared of a network in the spectrum bands 1526-1536 MHz, 1627.5-1637.5 MHz, 1646.5-1656.5 MHz, and 1670-1700 MHz as long as such deployment is consistent with such filings.”⁶ Similarly, as long as New LightSquared’s terrestrial deployment plans are consistent with the operational parameters agreed to by the companies in the Garmin Agreement, Garmin agrees not to object to deployment in the spectrum located in the spectrum bands 1627.5-1637.5 MHz, 1646.5-1656.5 MHz, and 1670-1680 MHz.⁷ Furthermore, Garmin agrees not to object to

⁴ New LightSquared is withdrawing its previous license modification applications through appropriate filings in IBFS File Nos. SAT-MOD-20101118-00239; SAT-MOD-20120928-00160; SAT-MOD-20120928-00161; SES-MOD-20121001-00872; SES-RWL-20110908-01047; SES-MOD-20141030-00835. New LightSquared is also submitting a companion letter to the Secretary today regarding the Modification Applications. *See* Letter from Gerard J. Waldron to Marlene Dortch, IB Docket No. 12-340; IB Docket No. 11-109; IBFS File Nos. SAT-MOD-20101118-00239; SAT-MOD-20120928-00160; SAT-MOD-20120928-00161; SES-MOD-20121001-00872; SES-RWL-20110908-01047; SES-MOD-20141030-00835 (Dec. 31, 2015), at 1, n. 2 (hereinafter “Comprehensive Proposal”).

⁵ *See* Deere Agreement at § 2–8, 11; Garmin Agreement at § 6–9.

⁶ *See* Deere Agreement at § 3; Dec. 8, 2015 Ex Parte.

⁷ *See* Garmin Agreement at § 10; Dec. 17, 2015 Ex Parte. Both the Deere Agreement and the Garmin Agreement exclude current MSS and Modeo operations in these frequencies. *See* Garmin Agreement at § 6(f)–(g); Deere Agreement at § 17.

New LightSquared's use of the 1526-1536 MHz spectrum up to and including power levels at 32 dBW for Garmin devices that are not Certified Garmin GNSS Aviation Equipment, provided that and upon the condition that LightSquared adheres to all of the requirements of the Garmin Agreement.⁸

Because Deere and Garmin collectively produce equipment in the vast majority of GPS device categories, New LightSquared believes that resolving the concerns of these companies should effectively resolve the concerns of the GPS industry as a whole. Issuance of a public notice on the Modification Applications will invite comment on that proposition, and the company looks forward to engaging with all parts of the GPS industry to review these issues. For its part, New LightSquared believes these significant compromises establish a constructive industry paradigm that gives clarity to all relevant firms and government agencies and in an appropriately open and timely process. New LightSquared expects that a reasonable comment process—such as one involving a 60-day comment period and 30-day reply period—initiated by this filing going on public notice will illustrate that belief. Moreover, because the vast majority of GPS devices in use today are found in smartphones, and because the mobile phone industry has never suggested that LightSquared's operations are not compatible with smartphones, the Commission will have a record after the completion of this process to assess whether this vital mid-band spectrum can be put to its most productive use. New LightSquared firmly believes the record will show that grant of the Applications will serve the public interest by securing the compromises reached in the Compromise Agreements for the Settling GPS Companies and also by giving the benefit of the bargain to all other parts of the GPS community. And with respect to

⁸ With regard to certified aviation receivers, New LightSquared understands the need to continue to work with Garmin, the FAA, and the rest of the aviation community to address any concerns and has committed to doing so. *See* part III.B., *infra*.

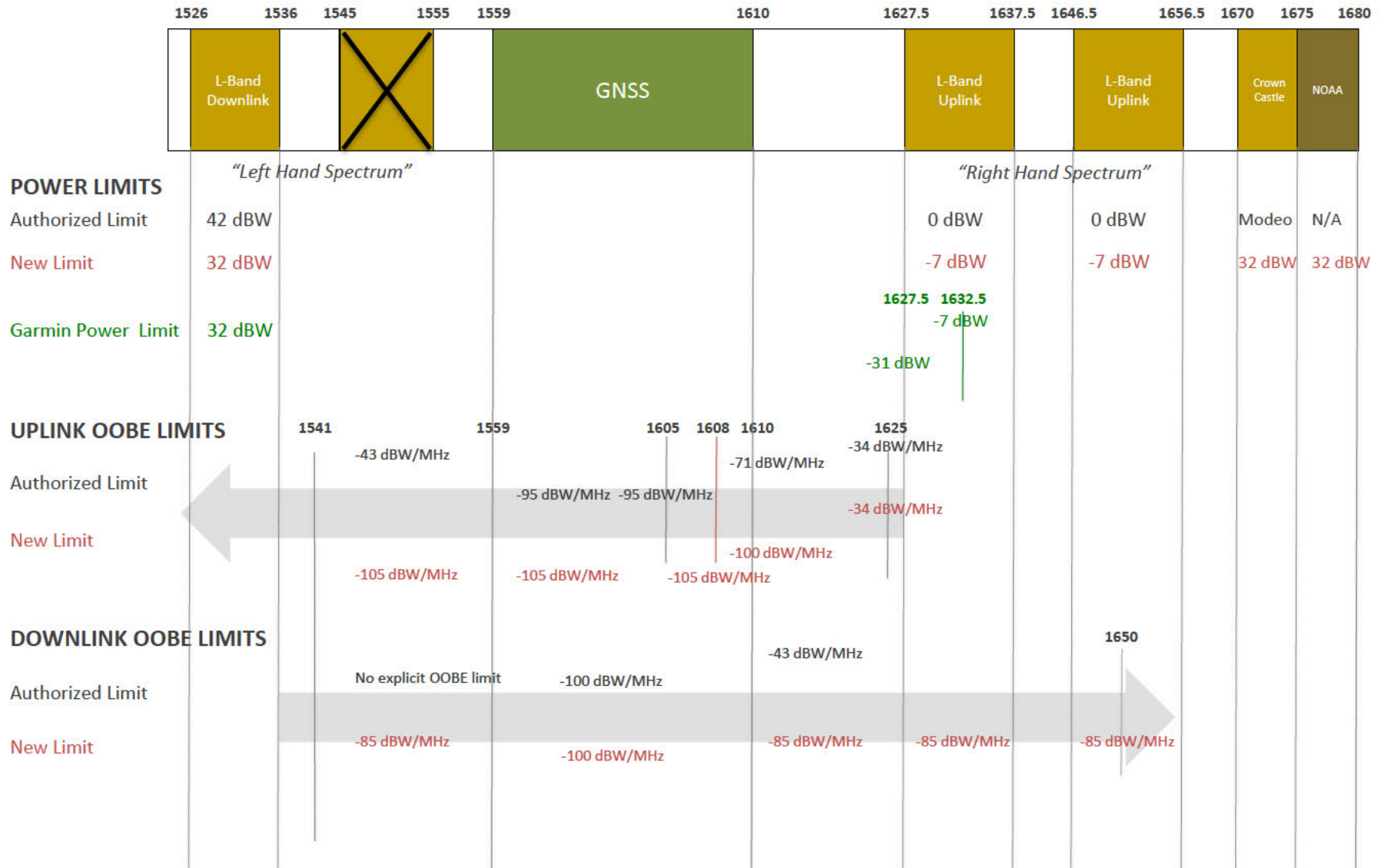
concerns from the aviation community, the Commission can address those concerns by imposing the condition described below regarding compatibility with the Minimum Operational Performance Standards (“MOPS”) and the corresponding Technical Standard Orders developed by the RTCA and FAA.

Equally important from the Commission’s role as spectrum manager, approval of the Modification Applications, coupled with implementation of the reallocation and auction of the 1675-1680 MHz band described below, will provide New LightSquared with the ability to deploy and operate 40 MHz of prime mid-band broadband spectrum and to put to use this vital asset as part of the 4G to 5G transition that will soon commence. In particular, New LightSquared intends to submit the modified technical parameters set forth in these Modification Applications into the 3GPP standardization process in 2016, which will lead to global standards set in Release 14 scheduled for 2017. The modifications proposed by New LightSquared should provide the GPS industry a blueprint for global conduct of its business.

I. NEW LIGHTSQUARED’S PROPOSED LICENSE MODIFICATION

In these Modification Applications, New LightSquared implements the compromises reached in the Compromise Agreements. This approach will serve the public interest by establishing a path forward for New LightSquared to proceed with building a network and providing service over a commercially viable wireless broadband network. New LightSquared’s proposed license modifications consists of the following mutually-dependent and interrelated elements, illustrated here and explained in detail below.

Technical Operating Parameters Specified in Coexistence Plans



Note: The Coexistence Plans also include narrowband limits not depicted here.

The proposed license modifications are as follows:

- New LightSquared permanently abandons its authority to conduct terrestrial operations in its upper 10 MHz downlink band at 1545-1555 MHz—the part of New LightSquared’s downlink band that is closest to the GPS band—thus providing GPS receivers an additional 10 MHz guard band from terrestrial services. This relinquishment of the terrestrial component addresses a critical concern of the GPS industry and enables New LightSquared to continue to operate its long-standing satellite business.
- Pursuant to Section 8(b) of the Garmin Agreement and for clarity, New LightSquared stipulates the following: New LightSquared will not utilize frequencies in the 1545-1555 MHz band for any terrestrial base stations and mobile terminals providing radio communication services, offered together with, or separately from, Mobile-Satellite Services (“MSS”), using or re-using frequencies presently assigned for MSS operations, and it will not enter into a spectrum sharing or similar arrangement with a third party that involves services utilizing such spectrum. New LightSquared will permanently abandon use of the frequency band 1545-1555 MHz, and will not enter into such third-party arrangements. New LightSquared will require any successor, assignee, user, or customer with respect to service in the 1545-1555 MHz band to comply with the same commitment to permanently abandon terrestrial use of the 1545-1555 MHz band. This paragraph does not apply to LightSquared’s satellite-to-earth communications, transmitting pursuant to Part 25 of the FCC’s Rules, 47 C.F.R. Part 25.
- New LightSquared would retain authorization to use its two 10 MHz uplink bands at 1627.5-1637.5 and 1646.5-1656.5 MHz for terrestrial operations and optimally match one of them with an alternative downlink channel at 1670-1680 MHz in an operationally-efficient and commercially viable manner.
- To fulfill conditions subsequent in the Compromise Agreements, and to secure those benefits for the entire GPS industry, New LightSquared requests that the Commission make the following power limit modifications:
 - modify the EIRP limit for the 1646.5-1656.5 band from 0 dBW to -7 dBW;
 - modify the EIRP limit for the 1627.5-1637.5 MHz band from 0 to -7 dBW, *provided that* the 1627.5-1632.5 MHz segment of this band will have an EIRP limit that ramps from -31 dBW to -7 dBW for a period of five years—until January 1, 2021—and then that segment will revert to -7 dBW; and
 - modify the EIRP limit for the 1526-1536 MHz band from 42 dBW to 32 dBW.
- To fulfill conditions subsequent in the Compromise Agreements, and to secure those benefits for the entire GPS industry, New LightSquared further requests that the Commission make the following Out Of Band Emission (“OOBE”) EIRP limit modifications, and these limits ramp between OOBE values at the stated frequencies.
 - For the uplink:
 - retain a -34 dBW/MHz limit at 1625 MHz;
 - modify the limit at 1610 from -71 dBW/MHz to -100 dBW/MHz, ramping up between the values at 1625 MHz and 1610 MHz;

- implement a -105 dBW/MHz limit at 1608 MHz, ramping up between the values at 1610 MHz and 1608 MHz;
 - modify the limit at 1559-1608 from -95 dBW/MHz to -105 dBW/MHz;
 - modify the limit from 1541-1559 MHz from -43 dBW/MHz⁹ to -105 dBW/MHz;
 - modify the limit for narrowband from 1610-1625 MHz to ramp from -110 dBW/700 Hz to -44 dBW/700 Hz;
 - modify the limit for narrowband from 1608-1610 MHz to ramp from -115 dBW/700 Hz to -110 dBW/700 Hz;
 - modify the limit for narrowband from 1559-1608 MHz to -115 dBW/700 Hz; and
 - modify the limit for narrowband from 1541-1549 MHz to -132 dBW/2 kHz.
 - For the downlink:
 - implement a -85 dBW/MHz limit for 1610-1650 MHz;
 - retain the -100 dBW/MHz limit from 1559-1610 MHz;
 - implement a -85 dBW/MHz limit from 1541-1559 MHz;
 - modify the limit for narrowband from 1610-1650 MHz to -95 dBW/700 Hz;
 - retain the limit for narrowband from 1559-1610 MHz to -110 dBW/700 Hz; and
 - modify the limit for narrowband from 1541-1559 MHz to -112 dBW/2 kHz.
- In recognition of the need to operate in a manner that is compatible with the aviation sector's use of GPS and respects vital safety of life issues, the Commission should require, as a license condition, adherence to the following:
 - In addition to the EIRP limit for the 1526-1536 MHz band described above, the licensee would limit its power as necessary to achieve compatibility with current and any future MOPS insofar as they are incorporated into an active Technical Standard Order by the FAA.
- In lieu of any terrestrial use of the 1545-1555 MHz band, New LightSquared seeks to use a contiguous 10 MHz band at 1670-1680 MHz, which would provide the needed coverage for its terrestrial network. The alternative 10 MHz of downlink spectrum consists of:
 - 1670-1675 MHz, which New LightSquared already has authority to use nationwide by virtue of its leasing arrangement with Crown Castle, and
 - 1675-1680 MHz, which New LightSquared proposes should be reallocated for sharing with certain existing federal government users. In the context of, and contemporaneous with, the instant Modification Application, New LightSquared

⁹ Please note that -43 dBW/MHz is a conductive power limit, and each time -43 dBW/MHz appears in these Modification Applications, it represents a conductive power limit. All other power limits are expressed as EIRP.

in its Comprehensive Proposal is renewing its request for the Commission to reallocate the 1675-1680 MHz band on a shared basis for a commercially useable, terrestrial wireless broadband service, and to auction that spectrum.¹⁰

Thus, New LightSquared in effect proposes to provide GPS receivers a significant guard band from terrestrial services. The import of these changes is that the Commission can secure these operational restrictions for the entire GPS community and also promote the public interest benefits of a new, robust broadband network. Furthermore, having major GPS manufacturers agreeing to a set of parameters that allow for compatibility of terrestrial broadband and GPS is a major step forward for U.S. leadership in harmonizing terrestrial use of L-band in other countries. International harmonization will also be advanced by the timely incorporation of these limits into the 3GPP process, which will establish the technical foundation for compatible use wherever this service is authorized.

II. THE PROPOSED LICENSE MODIFICATION WOULD YIELD SUBSTANTIAL PUBLIC INTEREST BENEFITS

A. The Need for Additional Spectrum for Mobile Broadband Remains as Acute as Ever.

An urgent and fast-growing need exists for additional spectrum to be made available to support the transition to 5G and to support mobile broadband services more broadly. As CTIA explains, “making additional spectrum available remains critical to meeting consumer demand, promoting economic growth, and enhancing our Nation’s global competitiveness.”¹¹ CTIA estimates, for instance, that the network traffic generated by a smartphone is 49 times

¹⁰ See Comprehensive Proposal at 3–4.

¹¹ CTIA The Wireless Association, Ex Parte Letter, WT Docket No. 13-135 (Oct. 2, 2014).

more than a basic handset, and smartphone traffic is predicted to increase 325% by 2018.¹² Furthermore, mobile video traffic has exploded 733% from 24 PB a month in 2010 to 200 PB a month in 2013. Consequently, about 56% of all mobile data is now data-intensive video, which will increase by 600% by 2018.¹³ And despite the increase in data use along all sectors, the United States has the least amount of spectrum available per LTE capable device compared to its G7 peers: only 0.65 Hz/LTE capable device. By contrast, Canada provides its citizens with 37 times as much spectrum per person as the U.S. (24.21 Hz/LTE), and Japan provides four times more than the U.S. (2.58 Hz/LTE).¹⁴ The bottom line, as President Obama has explained, is that it is necessary to “make available even more spectrum and create new avenues for wireless innovation.”¹⁵ Jason Furman, Chairman of the President’s Council on Economic Advisors (“CEA”), has stressed that “[t]he fact that increasing demand for this crucial resource is straining the current supply testifies to just how essential spectrum is.”¹⁶

Mr. Furman has further explained that the stakes for managing spectrum properly are high: “[t]he continued primacy of the United States in this Internet economy . . . depends on

¹² CTIA The Wireless Association, Ex Parte Letter, WT Docket No. 13-135 (Oct. 2, 2014) (“CTIA Ex Parte”) *citing* CISCO, VNI Mobile Forecast Highlights, 2013-2018, *available at* http://www.cisco.com/assets/sol/sp/vni/forecast_highlights_mobile/index.html#~Country (“CISCO Forecasts”).

¹³ CTIA Ex Parte *citing* CISCO Forecasts.

¹⁴ CTIA Ex Parte *citing* Roger Entner, Spectrum Fuels Speed and Prosperity, Recon Analytics, at 7–8 (Sept. 2014).

¹⁵ The White House, Office of the Press Secretary, *Presidential Memorandum -- Expanding America’s Leadership in Wireless Innovation* (June 14, 2013), *available at* <https://www.whitehouse.gov/the-press-office/2013/06/14/presidential-memorandum-expanding-americas-leadership-wireless-innovatio>.

¹⁶ Jason Furman, Chairman, Council of Economic Advisers, Remarks on Public Sector Spectrum Policy, Brookings Institution (Sept. 23, 2014), *available at* https://www.whitehouse.gov/sites/default/files/docs/remarks_on_public_sector_spectrum_policy_jf.pdf.

our ability to get spectrum policy right. The United States currently leads the world in 4G wireless internet availability, with nearly half of the global subscriber base residing in the United States, but such a future is uncertain if we do not improve access to and management of the spectrum.”¹⁷ Chairman Wheeler acknowledged the same when he explained the benefits of making more spectrum available: “More spectrum means more speed, capacity and ubiquity of mobile broadband services such as 4G LTE and Wi-Fi networks.”¹⁸

In sum, the need for additional spectrum for mobile broadband services remains more pressing today than ever. In this regard, the Commission and NTIA have an obligation to explore every possible solution not to abandon use of L-band for terrestrial broadband and to seek to reap the significant public interest benefits of New LightSquared’s mobile broadband network.

B. To Protect the Aviation Sector, New LightSquared Requests that the Commission Impose a License Condition Related to FAA/RTCA MOPS.

New LightSquared recognizes the paramount importance of safety issues related to certified aviation GPS receivers. Because aviation GPS receiver certification and operational standards have an existing, well-established, and robust process, and because New LightSquared’s work with the aviation community and that process is ongoing, New LightSquared requests that the Commission impose a license condition with reference to current and any future FAA/RTCA standards. The Garmin agreement specifically excludes certified aviation receivers, thus leaving that issue open. To address the concerns of Garmin—a very

¹⁷ *Id.*

¹⁸ Testimony of Tom Wheeler, Chairman, Fed. Comm’n. Comm’n., Hearing on the FCC’s Fiscal 2015 Budget Request Before the Subcomm. on Fin. Services and Gen. Gov’t, Comm. on Appropriations, U.S. House of Representatives, at 1 (Mar. 25, 2014) (“Wheeler Testimony”), https://apps.fcc.gov/edocs_public/attachmatch/DOC-326246A1.pdf.

significant aviation GPS manufacturer—as well as those of other important stakeholders, New LightSquared proposes that its license be conditioned on power limitation requirements for the 1526-1536 MHz band necessary to achieve compatibility with current and future MOPS that are incorporated into an active Technical Standard Order from the FAA.

This license modification serves two complementary purposes. First, it enables the Commission, as the essential license regulator, to perform its vital role and ensure safety of life issues are addressed by imposing a condition on the license to achieve compatibility with FAA/RTCA standards. In other contexts, the Commission has incorporated by reference standards developed elsewhere, and required further coordination with parties rather than establishing specific compatibility requirements.¹⁹ Aviation provides a similar compatibility scenario, and the Commission should do the same here.

Second, the proposed license modification recognizes that the FAA and RTCA have core competencies in this field and a long and well-established multi-stakeholder consultation process to address the specific types of issues presented here. LightSquared has long participated in that process, and it commits to continuing to work with the FAA, the RTCA, and the rest of the aviation community to address any concerns and ensure that its operations are compatible with existing and future standards. This process would assess aviation-specific use cases and the maximum New LightSquared EIRP that would be consistent with the interference tolerance mask that exists for certified aviation equipment under the RTCA DO-229D and related MOPS, both current and future, that are incorporated into an active Technical Standard Order from the FAA. Because much of the necessary modeling has previously been constructed by the FAA and

¹⁹ See, e.g., 47 C.F.R. § 25.253(c) and (f), which require further coordination—rather than up-front resolution of compatibility concerns—with respect to commercial mobile radio services providers, search and rescue satellite service, and aviation maintenance technology.

aviation stakeholders, New LightSquared believes that with a concerted and cooperative effort, the necessary assessments could be completed in a timely manner.

The advantage from the Commission’s perspective of this approach is that it is both self-executing and “evergreen.” It is self-executing in that the Commission can impose this license condition at any time, and whenever the FAA/RTCA adopts or amends such a requirement, that obligation immediately falls upon the company. It is “evergreen” in that if ever the FAA/RTCA should alter its requirement, then that new obligation becomes binding on the company as an FCC licensee, without need for a Commission action. Finally, the FCC can—and should—participate in the FAA/RTCA process, as appropriate, in order to further the FCC’s core competencies and interests, including promoting broadband deployment.

C. Considerable Public Interest Benefits Would Be Realized by Deployment of New LightSquared’s Network.

Chairman Wheeler has stressed the importance of striking a “fair balance that serves the greater public interest” in matters related to spectrum management.²⁰ By granting this Modification Application, the Commission would be effectuating such a balance and allowing New LightSquared to deploy a mobile broadband network that will offer substantial public interest benefits. These benefits were recognized and relied upon by the Commission when it initially considered New LightSquared’s plan for a mobile broadband network using MSS L-band spectrum.²¹ The Commission, however, has also stated that public interest benefits are

²⁰ Tom Wheeler, *Crafting Balanced Incentive Auction Rules in the Public Interest*, Fed. Comm’n. Comm’n. Blog (June 17, 2015), available at <https://www.fcc.gov/news-events/blog/2015/06/17/crafting-balanced-incentive-auction-rules-public-interest>.

²¹ See *In Re Flexibility for Delivery of Commc’ns by Mobile Satellite Serv. Providers*, Report and Order and Notice of Proposed Rulemaking, 18 FCC Rcd. 1962, 1974 (2003).

“dependent on ... [New LightSquared’s] actually moving forward with its plan.”²² Since that time, despite its best efforts, New LightSquared has been delayed in implementing its plan because of concerns about the compatibility between New LightSquared’s terrestrial base stations and GPS receivers. New LightSquared diligently worked with the GPS industry to reach a successful resolution to those concerns, and New LightSquared still is in the best position among any potential new broadband network operator to bring the benefits of a robust network to the public in the near- and mid-term.

In this Modification Application, New LightSquared has offered a comprehensive solution to the GPS issue and a way to proceed with deployment of its broadband network. The solution involves modifying the power and OOB limits of New LightSquared’s licenses to be consistent with the terms of the various settlement agreements with the Settling GPS Companies, permanently abandoning New LightSquared’s right to deploy terrestrial downlink operations at 1545-1555 MHz, and permanently relocating those terrestrial operations instead to 1670-1680 MHz. Without this relocation, New LightSquared would not be able to deploy its broadband network and the substantial promise of that network would be lost. Conversely, a grant of the Modification Application would: (i) effectuate the carefully negotiated settlement agreements with the Settling GPS Companies and advance long-term protection for the GPS industry, (ii) recognize the vital issues surrounding aviation and setting forth a license condition to address that concern, (iii) devote acceptable portions of the MSS L-band to broadband terrestrial use in accordance with the national broadband plan, (iv) develop a new, robust mobile broadband

²² *In the Matter of Skyterra Commc’ns, Inc.*, Memorandum Opinion and Order and Declaratory Ruling, 25 FCC Rcd. 3059, 3088 (2010).

network, and (v) facilitate a private sector frequency coordination arrangement with federal users that is supported by the extensive precedents of non-federal/federal spectrum use, and offers a unique opportunity to advance the public interest on many fronts.

D. THE COMMISSION HAS AMPLE PRECEDENT FOR ADOPTING THE PROPOSAL SUBMITTED HEREIN

On numerous occasions, the Commission has effectuated creative problem solving solutions to manage spectrum interference concerns. In making the 800 MHz band viable for services that would greatly benefit the public, the Commission undertook an extended effort to rationalize that spectrum by reconfiguring the 800 MHz band to resolve interference issues resulting from the differing uses of the interleaved channels in the band.²³ It bears emphasis that in recognition of the “public interest benefit derived from robust and reliable public safety communications,” as well as the spectrum rights surrendered by Nextel in the 800 MHz Band, the Commission provided Nextel with spectrum in the 1.9 GHz Band.²⁴ Another example comes from the Commission’s relocation of the Digital Electronic Messaging Service (“DEMS”) from the 18 GHz Band to the 24 GHz band, based on national security concerns.²⁵ In that case, the Commission acted at the request of NTIA, in order to address Department of Defense concerns regarding potential interference from DEMS into military satellite earth stations in Denver and Washington, D.C. operating in the 18 GHz Band. By relocating DEMS to the 24 GHz band and providing DEMS access to twice the amount of spectrum originally

²³ See *Improving Public Safety Communications in the 800 MHz Band*, 19 FCC Rcd. 14969 (2004).

²⁴ *Id.* at ¶ 5.

²⁵ See *Amendment of the Commission’s Rules to Relocate the Digital Electronic Message Service From the 18 GHz Band to the 24 GHz Band and to Allocate the 24 GHz Band for Fixed Service*, 12 FCC Rcd. 3471 (1997); *aff’d*, 13 FCC Rcd. 15147 (1998).

licensed, the Commission resolved these concerns, as well as concerns about the sharing of the 18 GHz Band with commercial satellite services.²⁶

In short, the proposals contained in these Modification Applications and the Comprehensive Proposal present the Commission with a solution that substantially advances its goal of making more broadband spectrum available, thus advancing public interest benefits, and at the same time securing specific protections for private interests that also serve the public interest. The modifications proposed herein offer the Commission a heightened assurance of effectiveness because they reflect an engineering-based solution reached after months of deliberative, good-faith negotiations regarding compatibility concerns.

III. GRANT OF THE LICENSE MODIFICATION SHOULD BE COUPLED WITH REALLOCATION OF 1675-1680 MHz TO SHARED USE, FOLLOWED BY AN AUCTION

A. The 1675-1680 MHz Band Is an Ideal Band to Serve as New LightSquared's Alternate Downlink Spectrum.

New LightSquared's proposal to provide GPS receivers an immediate, additional 10 MHz guard band from terrestrial services by abandoning all terrestrial authority for the upper 10 MHz downlink band at 1545-1555 MHz means that New LightSquared's network cannot be deployed now without access to alternative downlink spectrum that is compatible with New LightSquared's two L-band uplink bands at 1627.5-1637.5 MHz and 1646.5-1656.5 MHz. To fill this immediate need and, therefore, to enable the deployment of an operational terrestrial broadband network, New LightSquared proposes to reallocate the 1675-1680 MHz band to shared use with federal government users in a commercially and technically viable manner, and

²⁶ In doing so, the Commission invoked the "military function" exception to the Administrative Procedures Act, facilitating Commission action within approximately two months and without notice and comment procedures. *See* 5 U.S.C. § 553(a)(1).

then to auction that band with appropriate bidding credits. If successful at auction, New LightSquared would use this 5 MHz along with New LightSquared's currently-leased spectrum in the 1670-1675 MHz band to create a contiguous 10 MHz downlink channel for terrestrial wireless broadband services.²⁷

Given its present use of the 1670-1675 MHz band, New LightSquared has extensive experience coordinating the adjacent 5 MHz band with the federal government. The company has used this experience to build out a record that the Commission can use to move forward with a Notice of Proposed Rulemaking on this band.²⁸ New LightSquared remains ready to work with NTIA in establishing the operating parameters and safeguards that will be built into the service rules and license conditions to ensure its interests are protected.

B. The Commission's and NTIA's Rules and Precedents Permit the Commission to Authorize Non-Federal Use of the 1675-1680 MHz Band.

New LightSquared's proposal to reallocate spectrum currently used by federal agencies to shared use is well supported by prior precedents. Over the years, the Commission and NTIA have cooperated in applying their respective public interest mandates to foster sound spectrum management and inject flexibility into the division of the radio spectrum between federal users and non-federal users. The most recent example is the Commission's effort that freed up substantial spectrum in connection with the successful AWS-3 auction. Other examples include the use by non-federal law enforcement agencies of a primary federal frequency for

²⁷ New LightSquared currently is authorized to operate at 1670-1675 MHz by virtue of a leasing agreement through One Dot Six Corp. to which the Commission has consented. *See* ULS Lease ID L000007295.

²⁸ *See* Comprehensive Proposal at 3-4.

stolen vehicle recovery,²⁹ a commercial satellite operator to use federal frequencies to provide satellite service to the Navy,³⁰ an energy exploration company to timeshare NASA satellite capacity to provide commercial satellite service,³¹ and commercial digital message providers to use federal spectrum as a substitute for originally-licensed spectrum that could not be used because of potential interference to government stations.³² In each instance, the Commission and NTIA found that such flexible and innovative spectrum management initiatives served important national goals that could be served in no practical way other than by cooperating to give private parties access to spectrum that either was used exclusively or primarily by federal agencies.

The reallocation of 1675-1680 MHz that New LightSquared seeks is supported by these precedents and is well within the authority of the Commission and NTIA to provide. Given concerns about GPS compatibility with use of New LightSquared's licensed L-band downlink, obtaining access to 1675-1680 MHz is an efficient solution that would allow New

²⁹ *Amendment of Parts 2 and 90 of the Commission's Rules to Provide for Stolen Vehicle Recovery Systems*, 3 FCC Rcd. 7195 (1988) (frequency initially allocated exclusively for federal use re-allocated on a shared basis between federal and non-federal users for the purposes of stolen vehicle monitoring and recovery use).

³⁰ *Hughes Communications Services, Inc.*, FCC 79-809 (rel. Dec. 10, 1979) (authorizing construction of LEASAT satellite system on federal frequencies).

³¹ *In the Matter of Modification Application of SpaceData International LLC; For Authority to Operate on a Time Share Basis NASA's Tracking and Data Relay Satellite System*, 16 FCC Rcd. 9266 (Chief IB 2001) (authorizing use of federal TDRSS spectrum for searching for oil and gas deposits on ocean floor).

³² *See Amendment of the Commission's Rules to Relocate the Digital Electronic Message Service From the 18 GHz Band to the 24 GHz Band and to Allocate the 24 GHz Band For Fixed Service*, 12 FCC Rcd. 3471 (1997) (federal spectrum made available for DEMS to substitute for originally assigned spectrum that could not be used because of potential interference to government stations).

LightSquared to deploy its broadband network in a manner that already has been found to be in the public interest.

IV. NEW LIGHTSQUARED SEEKS TO PAIR ITS TWO UPLINK BANDS WITH THE NEW DOWNLINK BAND IN AN OPERATIONALLY-EFFICIENT AND COMMERCIALY VIABLE MANNER

New LightSquared's proposals in this Modification Application regarding terrestrial use of the L-band would leave it unable ever to use the 1545-1555 MHz band downlink band for terrestrial operations. Accordingly, New LightSquared seeks appropriate authorization to pair either of its two uplink bands at 1627.5-1637.5 MHz and 1646.5 MHz-1656.5 MHz with the 1670-1680 MHz downlink channel proposed herein in an operationally efficient and commercially viable manner. Moreover, New LightSquared recognizes that the Commission may want to address this issue in the context of a Notice of Proposed Rulemaking on the 1675-1680 MHz band. For these reasons, New LightSquared respectfully requests such appropriate adjustments and further authorizations with regard to the Commission's rules as may be needed to facilitate the prompt processing and grant of this Modification Application.

V. CONCLUSION

New LightSquared's proposed license modification and its corresponding relinquishment of terrestrial rights for the 1545-1555 MHz band present the Commission with a constructive and comprehensive approach to resolve the issues that, to date, have precluded the deployment of its terrestrial network. New LightSquared remains committed to fulfilling the Commission's vision of providing a robust wireless broadband capability to the American consumer that can enhance the transition from 4G to 5G. With the Commission's granting of this Modification Application, New LightSquared could achieve this goal in a manner that directly implements the resolutions it has reached with the GPS industry regarding compatibility concerns.