Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Policies Regarding Mobile Spectrum Holdings	)	WT Docket No. 12-269
	)	
	)	

PETITION FOR RECONSIDERATION

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Pursuant to Section 1.429 of the Federal Communications Commission's ("Commission's" or "FCC's") Rules, T-Mobile USA, Inc. ("T-Mobile"),[1] respectfully submits this Petition for Reconsideration of the Commission's *Report and Order* in the above-captioned proceeding ("*Mobile Spectrum Holdings Report and Order*").[2]

I. INTRODUCTION AND SUMMARY

The Commission has recognized that competition is of paramount importance for driving investment, innovation, deployment, and consumer choice in the wireless broadband market. The Commission has also made clear that given the current state of the market, the existence of no less than four robust nationwide providers is best suited to generating wireless competition.[3] In the *Mobile Spectrum Holdings Report and Order*, however, the Commission adopted two policies that are at odds with its stated goal of promoting competition among four nationwide competitors as well as the agency's statutory directives to "avoid[] excessive concentration of licenses" and "disseminat[e] licenses among a wide variety of applicants."[4]

First, while T-Mobile appreciates the Commission's effort to establish a spectrum reserve, a spectrum reserve of thirty megahertz or less is insufficient to promote a market with four robust nationwide wireless broadband competitors. Based on ample record evidence of competitive risk from an

[1] T-Mobile USA, Inc. is a wholly owned subsidiary of T-Mobile US, Inc., a publicly traded company.
[2] *Policies Regarding Mobile Spectrum Holdings: Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Report and Order, 29 FCC Rcd. 6133 (2014) ("*MSH Report and Order"*).
[3] *See, e.g.*, Statement from FCC Chairman Tom Wheeler on Competition in the Mobile Marketplace, FCC News Release (Aug. 6, 2014), http://fcc.us/1sk17dV.
[4] 47 U.S.C. § 309(j)(3).

unchecked auction, the Commission adopted a spectrum reserve to prevent AT&T and Verizon from foreclosing competition for critical low-band spectrum resources; however, a thirty-megahertz maximum reserve that could rapidly decline in low-clearing scenarios fails to adequately prevent AT&T and Verizon from foreclosing competition during the auction. Depending on the clearing scenario, the current reserve policy deprives all – or, at best, all but one – of the non-dominant carriers of the ability to acquire the amount of contiguous low-band spectrum resources needed for an efficient nationwide broadband deployment without exposure to the foreclosure risk posed by the two dominant incumbents.[5]

Second, making the spectrum reserve unavailable to competitive carriers until both portions of the "final stage rule" are satisfied risks exposing competitors to the risk of foreclosure that the reserve is intended to remove. A reserve trigger based on the sum of the amounts necessary to pay broadcasters to exit, repack all remaining broadcasters, account for other statutory expenses, and cover any remaining FirstNet expenses is necessary to ensure a successful auction; however, increases to the reserve trigger above this efficient level, such as the price per MHz-POP threshold found in the final stage rule, could stifle competition, concentrate spectrum holdings further, and risk auction failure.

The brilliance of the Commission's *Mobile Spectrum Holdings Report and Order* is making the pro-competitive spectrum reserve contingent on satisfying the revenue requirements needed for broadcast interests, public safety organizations, and other public purposes. Making the reserve contingent on achievement of these funding obligations allows the Commission to avoid having to choose between robust wireless broadband competition, on the one hand, and sufficient auction revenue, on the other. Increasing the spectrum reserve and eliminating the arbitrary connection between the reserve trigger and the artificial price per MHz-POP prong of the final stage rule will avoid compromising the Commission's

[5] Given the high number of critical geographic areas for carriers seeking to cost-effectively deploy on a near-nationwide basis, with a total of 416 partial economic areas ("PEAs"), the foreclosure threat posed by the two dominant carriers could be sufficient to cause non-dominant providers to hold back in their bidding. By dampening bidding of competitive carriers, this foreclosure threat could frustrate auction revenues and reduce the costs of foreclosure for dominant carriers. As the record reflects, the only protection against this foreclosure threat is to have sufficient reserve to provide assurance to competitive carriers that they will be able to pay competitive prices for spectrum. *See, e.g.*, *MSH Report and Order* ¶¶ 62, 153 (explaining that there is a risk of foreclosure in downstream wireless markets and adopting a market-based reserve to address the foreclosure risk).

stated goal of promoting competition among four nationwide wireless broadband competitors. These changes will also satisfy the agency's statutory mandate to promote competition and avoid an excessive concentration of spectrum licenses while promoting the other public interest goals of the Communications Act.

II. COMPETITION IN THE 600 MHZ AUCTION IS OF PARAMOUNT IMPORTANCE.

Competition in the upcoming 600 MHz auction is essential for driving investment and innovation in the wireless market, as the current Commission strongly favors a market with no fewer than four nationwide providers based on the current state of the market. According to Chairman Wheeler, "four national wireless providers are good for American consumers."[6] Similarly, in the *Mobile Spectrum Holdings Order*, the Commission cautioned that it would revisit its reserve spectrum framework if the current four-provider market structure were altered.[7] The Commission also recently signaled its intention to prevent joint bidding agreements for the 600 MHz Incentive Auction among the four national wireless broadband providers.[8]

Preserving four robust nationwide competitors requires that all four carriers have access to sufficient low-band (below-1-GHz) spectrum necessary to compete. As the Commission has recognized, the low-band spectrum that Verizon and AT&T largely control has superior propagation characteristics compared to the higher-frequency spectrum licenses that comprise the bulk of other national wireless carriers' spectrum portfolios. Unlike high-band spectrum, low-band spectrum allows for superior and more cost-effective coverage over large geographic areas and inside buildings where the majority of

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[6] Statement from FCC Chairman Tom Wheeler on Competition in the Mobile Marketplace, FCC News Release (Aug. 6, 2014), http://fcc.us/1sk17dV.

[7] *See MSH Report and Order* ¶ 171 ("If significant changes in the marketplace structure occur or a proposed transaction is filed with the Commission in the future affecting the top four nationwide providers and their spectrum holdings, we will revisit our decisions here regarding the reserved spectrum provisions for the 600 MHz Band that we adopt today"); *see also id.*, Commissioner Pai Dissenting Statement at 136 (characterizing the Commission's warning as "specifically warning against any major transactions among the top four national carriers" and threatening to "retract any and all preferences being handed out").

[8] *See* Roger Sherman, *Empowering Small Businesses*, FCC Blog (Aug. 1, 2014), http://fcc.us/UFHJt8 (discussing the Commission's goal of providing "innovative, smaller companies the opportunity to build wireless businesses that can spur additional investment and bring more choices to consumers"). At the same time, the Commission has recognized the importance of non-nationwide carriers to the overall competitive landscape, explaining that "regional and local service providers offer consumers additional choices . . . and provide some constraint on the ability of nationwide providers to act in anticompetitive ways." *MSH Report and Order* ¶ 179.

wireless broadband consumption occurs today.[9] Based on these considerations, the Commission determined that carriers require a mix of spectrum resources[10] and held that competitive carriers' inability to access low-band spectrum resources would limit their ability to compete effectively.[11] Given that the Commission has for the past three years declined to conclude that there is effective competition in the wireless market, it is particularly important to provide competitive carriers with access to this vital resource to promote competition in the market.[12]

Recognizing the critical role of low-band spectrum to wireless competition, the Commission also concluded, consistent with findings by the Antitrust Division of the U.S. Department of Justice, that Verizon and AT&T would likely foreclose other nationwide providers and local and regional carriers from accessing 600 MHz spectrum in an effort to reduce wireless competition.[13] As the Commission and the Antitrust Division found, many aspects of the current marketplace increase the potential for anticompetitive conduct by the two dominant providers, including: high market concentration, highly concentrated holdings of low-band spectrum, high barriers to entry, and high margins between price and the incremental cost of providing service to an additional customer.[14] Because the two dominant providers already control 73% of all low-band spectrum available and control at least a similar proportion

[9] *See id.* ¶¶ 50, 54; *see also* Verizon Wireless Reply Comments, WT Docket No. 12-269, Exhibit 1, Stone Decl. ¶ 7 (filed Jan. 7, 2013) ("[s]pectrum below 1 GHz has greater propagation capabilities and therefore may require less infrastructure to deploy"); AT&T's Randal Stephenson on the Network's Strength, CNN Money (July 18, 2012), http://bit.ly/1skocxb (quoting Stephenson as claiming 700 MHz spectrum "propagates like a bandit" and requires "fewer cell sites to get a good quality signal"); *Incentive Auction Report and Order* ¶ 44 n.92 (noting that the superior propagation characteristics of low-band spectrum make it an ideal "coverage band").

[10] *See MSH Report and Order* ¶ 59 ("We find that a service provider holding a mix of low- and high-band spectrum licenses would have greater flexibility and would be better able to optimize its network costs for a given quality level, thus promoting the efficient and intensive use of spectrum.").

[11] *See id.* ¶ 61 ("Providers without access to that mix of spectrum that would allow them flexibility to optimize their networks must incur more costly means of expansion and will be unable to compete as robustly or constrain price increases by providers that do have such access.").

[12] *See Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Mobile Wireless, Including Commercial Mobile Services*, WT Docket No. 11-186, Sixteenth Report ¶ 2 (2013) (declining to issue a formal finding as to whether there is effective competition in the marketplace, consistent with its decision not to issue such findings in the Fourteenth and Fifteenth Mobile Competition Reports).

[13] *See MSH Report and Order* ¶ 62 ("We agree with the Antitrust Division of the DOJ, one of our nation's expert antitrust agencies: there is a risk of foreclosure in downstream wireless markets.").

[14] *Id.* ¶ 62.

of the wireless market,[15] the Commission properly found that Verizon and AT&T would likely foreclose wireless competition without adequate safeguards to prevent the improper exercise of market power.

With this risk in mind, the Commission devised the market-based spectrum reserve in an effort to provide the other two nationwide carriers, as well as the regional and local carriers, the ability to purchase the spectrum they need to compete without exposure to foreclosure risk from the two dominant wireless broadband providers.[16] As the Commission explained, "the forward auction component of the Incentive Auction represents the last opportunity in the foreseeable future for providers to acquire licenses for below-1-GHz spectrum at auction."[17] According to the Commission, "[g]iven the importance of multiple providers, including rural and regional providers, having access to below-1-GHz spectrum for deployment and competition . . . a clear mobile spectrum holdings policy for the Incentive Auction is necessary to increase access opportunities to the 600 MHz Band."[18] Under the reserved-license framework, the Commission plans to reserve spectrum for non-nationwide carriers and those that do not already have significant (45 megahertz or more) low-band holdings in a particular partial economic area ("PEA") according to the following schedule:[19]

Figure 1: Commission's Reserved Spectrum Schedule

Licensed Spectrum In the Initial Clearing Target (in megahertz)	100	90	70	60	50	40
Minimum Unreserved Spectrum	70	60	40	40	40	30
Maximum Reserved Spectrum	30	30	30	20	10	10

As explained below, however, the current spectrum reserve does not adequately prevent foreclosure or promote competition.

[15] *See id.* ¶¶ 25, 69.
[16] *See id.* ¶ 153; *see also Incentive Auction Report and Order* ¶ 10 ("[W]e establish a market-based spectrum reserve . . . designed to ensure against excessive concentration in holdings of low-band spectrum").
[17] *MSH Report and Order* ¶ 153.
[18] *Id.* ¶ 175.
[19] *Id.* ¶ 184.

III. THE CURRENT SPECTRUM RESERVE IS INADEQUATE TO SUSTAIN A WIRELESS MARKET WITH FOUR NATIONWIDE PROVIDERS AND ROBUST RURAL AND REGIONAL COMPETITION.

Section 309(j)(3) of the Communications Act requires the Commission to seek auction rules that "avoid[] excessive concentration of licenses" and "disseminat[e] licenses among a wide variety of applicants."[20] The Commission's reserve framework – particularly reserving only thirty megahertz of spectrum at clearing levels of seventy megahertz and above – falls short of this mandate.[21] The current reserve framework gives too much to the two dominant carriers at the expense of competition.

Reconsideration is warranted when additional facts were not known or did not exist until after the petitioner's last opportunity to present analysis to the Commission.[22] As explained below, new facts about the desirability of no less than four nationwide competitors alter the viability of the Commission's reserve framework. Prior to the *Mobile Spectrum Holdings Report and Order*, neither the Commission nor the Chairman had articulated the importance of having four nationwide carriers given the current market structure.[23] T-Mobile and other competitive carriers had no opportunity to address the size of the reserve in light of either the Commission's apparent commitment to a four-carrier market, or the circulation of a Commission notice of proposed rulemaking that would reverse precedent permitting joint bidding among nationwide carriers. Similarly, the Commission committed material error with regard to the size of the spectrum reserve because the reserve falls short of the Commission's statutory mandate to avoid excessive concentration of licenses.[24] The ruling is also internally inconsistent because it simultaneously recognizes

[20] 47 U.S.C. § 309(j)(3).
[21] Section 309(j)(3) contains many other competing directives, including, *inter alia*, the deployment of new technologies, recovery for the public of a portion of the spectrum resources made available for commercial use, efficient and intensive use of spectrum, and recovery of 110% of the estimated relocation costs. § 309(j)(3)(A)-(F). Limiting the spectrum reserve to only thirty megahertz, however, does not appear to advance any of these other goals. At the very least, the Commission does not explain how limiting the reserve spectrum to allow only one carrier to obtain a twenty-megahertz block might achieve one of these objectives.
[22] *See, e.g.*,47 C.F.R. §1.429; *see also In the Matter of Connect Am. Fund*, Third Order on Reconsideration, 27 F.C.C. Rcd. 5622 ¶ 1 (2012).
[23] *See* Roger Sherman, *Empowering Small Businesses*, FCC Blog (Aug. 1, 2014), http://fcc.us/UFHJt8; *MSH Report and Order* ¶ 179; Statement from FCC Chairman Tom Wheeler on Competition in the Mobile Marketplace, FCC News Release (Aug. 6, 2014), http://fcc.us/1sk17dV.
[24] *See* 47 U.S.C. § 309(j)(3).

the importance of low-band spectrum to competitive wireless service offerings but fails to provide enough of a reserve to maintain the four nationwide-carrier structure of the current market.[25]

As the Commission has explained, twenty-megahertz (10+10 MHz) blocks of spectrum are the foundation of an economical low-band deployment, especially for carriers without meaningful access to low-band spectrum. Especially for carriers with limited or no low-band holdings, larger aggregations of contiguous 600 MHz spectrum, such as a 10+10 MHz carrier, are advantageous because they have greater capacity to balance demand across unused spectrum resources, which improves resource utilization and spectrum efficiency – two other important goals of Section 309(j) of the Communications Act.[26] Even AT&T has explained, "a 10x10 MHz allocation" enables "economic and technical efficiencies in an LTE deployment."[27] Similarly, according to Verizon, "LTE provides higher peak and average data rates if deployed over wider bandwidths (10x10 MHz or higher)."[28] The Commission appears to agree, noting that "20 megahertz of contiguous spectrum is particularly valuable for the deployment of next-generation networks."[29]

As adopted, however, the market-based spectrum reserve is inadequate for more than one competitive provider to secure the twenty-megahertz blocks that the Commission has found "particularly valuable" for broadband deployment. The market-based reserve saves a *maximum* of thirty megahertz of spectrum in each license area for competitive carriers and, as explained above, this amount steadily decreases at lower levels of spectrum clearing.[30] The result is that at most only one reserve-eligible carrier can acquire twenty megahertz of spectrum without facing the risk of foreclosure by the two dominant providers.

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[25] Courts have held that such internal inconsistencies may render an agency action arbitrary and capricious. *See Air Line Pilots Assn. v. U.S. Dept. of Transp.*, 3 F.3d 449, 453 (D.C. Cir. 1993) (remanding agency decision because it was internally inconsistent, arbitrary, and capricious); *Gen. Chem. Corp. v. United States*, 817 F.2d 844, 846 (D.C. Cir. 1987) (finding agency action arbitrary and capricious because it was "internally inconsistent and inadequately explained").

[26] *See* 47 U.S.C. § 309(j)(3); *see also* Anritsu, *Understanding LTE-Advanced Carrier Aggregation* 5 (2013), *available at* http://bit.ly/1tneElb (discussing the benefits of aggregating smaller carriers into a single larger carrier).

[27] Letter from Joan Marsh, Vice President, AT&T, WT Docket No. 12-268 at 2 (filed Apr. 16, 2014).

[28] Stone Supplemental Declaration, Verizon Wireless-SpectrumCo Joint Opposition, WT Docket. No. 12-4 ¶ 8 (filed Mar. 2, 2012).

[29] *MSH Report and Order* ¶ 190.

[30] *See id.* ¶ 146.

AT&T and Verizon can credibly tout the advantages of twenty-megahertz carriers for low-band deployment because they own a number of them.[31] In markets where AT&T or Verizon are ineligible for reserved spectrum, they generally already own two contiguous twenty-megahertz blocks of low-band spectrum (and, of course, would have access to all the unreserved spectrum, so would face no real constraints).[32] By comparison, few competitive carriers – and neither of the two other national providers – have more than 14 MHz of low-band spectrum available for broadband use in any but a few of the 416 PEAs. In light of the vast disparity in low-band spectrum holdings and recognizing, as the Commission does, the importance of low-band spectrum to effective wireless service,[33] thirty megahertz of reserve spectrum is insufficient to protect competition or meaningfully advance the stated goal of ensuring four robustly competitive nationwide carriers.

At the same time that it limits the reserve to only thirty megahertz, the adopted framework ensures forty megahertz of *unreserved* spectrum remains at nearly all levels of clearing. Designating as unreserved spectrum forty megahertz of spectrum among four license blocks permits Verizon and AT&T to divide the available unreserved spectrum evenly between them at twenty megahertz each. This even split permits Verizon and AT&T to avoid directly competing against one another and – as the Commission appears to recognize elsewhere in the *Mobile Spectrum Holdings Report and Order* – damages both wireless competition *and* auction revenues.[34]

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[31] Indeed, AT&T and Verizon's insistence on their need to obtain at least twenty megahertz of spectrum, despite their already substantial low-band spectrum holdings, only underscores the importance of ensuring other providers can access a larger block of spectrum. *See* Letter from the Public Interest Spectrum Coalition, GN Docket No. 12-268, WT Docket No. 12-269 at 3 (filed May 8, 2014) ("PISC May 8 *Ex Parte*).

[32] *See, e.g.*, *MSH Report and Order* ¶ 46 ("Generally speaking, Verizon Wireless and AT&T each were the beneficiaries from their predecessors in interest of one of the two initial cellular licenses that were granted to an incumbent local exchange carrier and a new entrant in the 1980s, and have since further increased their spectrum holdings within this band. In addition, these two service providers together currently hold approximately 72 percent of 700 MHz spectrum.").

[33] *See, e.g.*, *id.* ¶ 159 (discussing the need for spectrum limits "to promote competition by ensuring that in the near future, more providers w[ill] hold a sufficient mix of spectrum to compete robustly").

[34] *See, e.g.*, *MSH Report and Order* ¶ 190 ("[A]n odd number of 10-megahertz blocks[] will facilitate competition among bidders seeking to acquire 20 megahertz." (citing Peter Cramton, *Auction Revenues and Competition Policy in the 600 MHz Auction* at 2 (May 2014)). Perhaps most troubling, both AT&T and Verizon have advocated for an unreserved allocation of at least forty megahertz, claiming they must *each* be able to obtain a twenty megahertz block. *See, e.g.*, PISC May 8 *Ex Parte* at 2. Of course, even under a thirty megahertz unreserved spectrum scenario, *either* Verizon or AT&T could obtain twenty or even a thirty-megahertz block by simply outbidding the other.

By implementing a thirty-megahertz block of unreserved spectrum at clearing levels of seventy and sixty megahertz, however, the Commission would ensure that Verizon and AT&T could not readily divide the spectrum resources evenly and without significant competition between them. Instead, the two largest, most heavily capitalized carriers would have to bid against one another for an odd number of licenses, which would drive up auction revenues.[35] As the Commission recognizes, "an odd number of 10-megahertz blocks[] will facilitate competition among bidders seeking to acquire 20 megahertz."[36] However, the Commission gets it precisely backward by allowing the carriers that already hold substantial low-band spectrum to avoid bidding against one another by splitting an even number of unreserved licenses between them. Rather than reduce competition among the largest carriers in this manner, the Commission should have supported a nationwide four-carrier market by expanding the reserve, which would help mitigate price and quantity uncertainty for competitive carriers that are least able to sustain it.[37] Most importantly, a larger block of reserved spectrum would provide greater access to low-band spectrum to all remaining providers who are unable to compete against AT&T and Verizon when the two dominant carriers are likely to place additional foreclosure value on the ability to secure control over the unreserved spectrum.

The Commission's decision to decrease the amount of reserved spectrum at clearing levels below seventy megahertz erects additional barriers to robust wireless competition. By offering only twenty megahertz of reserved spectrum when sixty megahertz clears and only ten megahertz when fifty or forty megahertz clears, the Commission effectively preserves the right of AT&T and Verizon to divide the unreserved spectrum and acquire twenty megahertz each while precluding competitive carriers from acquiring any substantial amount of spectrum without exposure to the foreclosure risk that the

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Thus, even AT&T and Verizon seem to tacitly acknowledge the importance of being able to split the forty megahertz of unreserved spectrum between themselves. *See id.*

[35] *See* Letter from Trey Hanbury, Counsel to T-Mobile, USA, GN Docket No. 12-268, WT Docket No. 12-269 at 2 (filed Apr. 28, 2014); Letter from Trey Hanbury, Counsel to T-Mobile, USA, GN Docket No. 12-268, WT Docket No. 12-269 at 5 (filed May 5, 2014); Letter from John Bergmayer, Senior Staff Attorney, Public Knowledge, GN Docket No. 12-268, WT Docket No. 12-269 at 1 (filed Apr. 30, 2014).

[36] *See MSH Report and Order* ¶ 190.

[37] Letter from Trey Hanbury, Counsel to Competitive Carriers Association, GN Docket No. 12-268, WT Docket No. 12-269 at 2 (filed Apr. 24, 2014).

Commission has found is posed by the two dominant providers.[38] AT&T and Verizon will still have access to forty megahertz of spectrum – in addition to their existing vast low-band holdings – when sixty or fifty megahertz clears, but the other two nationwide carriers and rural and regional carriers will either be relegated to twenty or ten megahertz of spectrum or face the full brunt of the dominant providers' anti-competitive foreclosure.

If the Commission were to reserve at least half of the available 600 MHz spectrum under different clearing scenarios instead, it would promote robust competition among service providers and ensure the continued vitality of four nationwide providers. A reserved spectrum allotment consistent with the chart below, apportioning at least half of the available spectrum into the reserve spectrum band at each level of initial spectrum clearing, would advance the Commission's goals of ensuring robust competition among four nationwide providers, as well and local and regional carriers.

Figure 2: Reserve Schedule Necessary to Promote Robust Competition with Four Nationwide Carriers, as Well as Rural and Regional Carriers[39]

Licensed Spectrum In the Initial Clearing Target (in megahertz)	100	90	80	70	60	50	40
Minimum Unreserved Spectrum	50	40	40	30	30	20	20
Maximum Reserved Spectrum	50	50	40	40	30	30	20

If the maximum reserve is kept at thirty megahertz, however, then the Commission should not decrease so rapidly reserved spectrum below thirty megahertz at lower levels of spectrum clearing. The Commission's decision to provide thirty megahertz of reserved spectrum constitutes the bare minimum necessary to provide a baseline level of competition to the wireless marketplace, especially given existing

[38] *See MSH Report and Order* ¶ 184.

[39] This schedule is derived from the Commission's reserved spectrum schedule. *See id.* ¶ 184. However, it also includes a column for a clearing target of eighty megahertz, which was omitted from the Commission's original schedule. *See id.* To the extent the Commission is considering eighty megahertz as a possible clearing target, this schedule includes a proposed reserved/unreserved allocation for an eighty megahertz clearing target. *See Incentive Auction Order*, Appendix C ¶¶ 116, 130-32 (describing the band plan and indicating that an eighty megahertz clearing target is under consideration); *see also Incentive Auction Order* ¶ 90 n.291 (noting that the Commission may not use each of these clearing target scenarios).

concentrations of low-band spectrum.[40] The smaller the reserve, the greater the disparity in access to 600 MHz spectrum becomes, and moving below a thirty-megahertz reserve would deprive all other carriers of a meaningful opportunity to increase their low-band spectrum holdings.[41]

The Commission's innovative auction design means that – regardless of the size of the initial spectrum reserve – AT&T and Verizon can access *all* available spectrum offered in the 600 MHz incentive auction in all areas at the start of the auction. Only if and when sufficient demand exists to fulfill all payment obligations to broadcasters that have decided to exit the band, pay all broadcast relocation costs allowed by law, satisfy all other statutory payment obligations associated with the auction, and cover any remaining FirstNet expenses, does the reserve even come into being.[42] The size of the pro-competitive spectrum reserve is thus largely irrelevant to the auction's ability to achieve the many other competing goals of both the Spectrum Act and the Communications Act. The Commission's innovative auction design minimizes the risk of an inefficient spectrum allocation while allowing for the creation of a pro-competitive spectrum reserve. Therefore, creating a reserve that does a better job of promoting competition among the national carriers than the status quo best satisfies the Commission's stated goals of efficient spectrum use and a competitive wireless marketplace without sacrificing other statutory and policy objectives.

IV. ANY PRICE PER MHZ-POP THRESHOLD FOR THE RESERVE TRIGGER, INCORPORATED VIA THE "FINAL STAGE RULE," THREATENS TO VITIATE THE PURPOSE OF THE SPECTRUM RESERVE AND REQUIRES EXPLANATION.

Offering reserved spectrum only after the auction raises sufficient amounts to compensate participating broadcasters, relocate stations that stay on the air, and cover any remaining FirstNet expenses is reasonable and will ensure that the auction successfully transitions spectrum to more flexible

[40] *See* PISC May 8 *Ex Parte* at 1.
[41] At a spectrum clearing level of forty megahertz, however, allotting twenty megahertz of unreserved spectrum and twenty megahertz of unreserved spectrum would be appropriate due to the minimal amount of total spectrum available.
[42] The reserve spectrum is also context sensitive. Limitations on reserve eligibility only apply where low-band spectrum holdings are especially concentrated by those carriers that hold national market power. As a result, Verizon and AT&T are fully eligible to bid on the reserve in hundreds of PEAs due to their limited low-band spectrum holdings in those geographic markets.

use while covering all necessary costs. However, a reserve trigger based on a price per MHz-POP threshold, incorporated via the final stage rule, is contrary to the goal of promoting wireless broadband competition and undermines the entire reserve license framework. Because it omitted any explanation for this choice, the Commission must reconsider this arbitrary and capricious decision to make its reserve trigger contingent on an artificial price per MHz-POP threshold.[43]

The Commission adopted a trigger for reserved spectrum that is based directly on the final stage rule: the reserved spectrum only becomes available when the final stage rule is satisfied.[44] The final stage rule, in turn, is a reserve price with two components, both of which must be satisfied.[45] One component requires that the forward auction cover all mandatory expenses set forth in the Spectrum Act (i.e., compensation for participating broadcasters, relocation costs, and relevant administrative costs of the auction)[46] as well as any remaining amounts needed in connection with FirstNet.[47] The other component is a price per MHz-POP-based reserve price requiring that the proceeds meet either (1) a fixed price benchmark (ie., a price per MHz-POP); *or* (2) a variable price benchmark, based on a spectrum clearing benchmark (i.e., a price benchmark X a spectrum clearing benchmark X the total pops for those license).[48]

Putting aside the merits of an arbitrary price per MHz-POP threshold for purposes of the overall final stage rule and for determining whether the auction closes,[49] a price per MHz-POP threshold for

[43] *See In the Matter of Connect Am. Fund*, Third Order on Reconsideration, 27 F.C.C. Rcd. 5622 ¶ 1 (2012) (explaining that reconsideration is appropriate in cases of material omission); *see also Motor Vehicle Manufacturers Assn. of the United States, Inc. v. State Farm Mutual Automobile Insur. Co.*, 463 U.S. 29, 43 (1983) (explaining that an agency must "articulate a satisfactory explanation for" adopting its decision, "including a 'rational connection between the facts found and the choice made'").
[44] *See MSH Report and Order* ¶ 187.
[45] *Incentive Auction Order* ¶ 26.
[46] *See* Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, § 6403(c)(2), 126 Stat. 156 (2012) ("Spectrum Act").
[47] *Incentive Auction Order* ¶ 26.
[48] *Id.* ¶ 340.
[49] As in the context of the spectrum trigger, a price per MHz-POP threshold for purposes of whether the overall auction closes raises serious concerns. In typical auctions, a reserve price is less risky because the FCC can always re-auction the spectrum at a future date when conditions are more favorable. In the Incentive Auction, however, carriers have a "once-in-a-lifetime" opportunity to acquire spectrum – any spectrum not sold will not be recaptured from the broadcasters and will never be available for auction. *See, e.g.*, *Incentive Auction Order*, Statement of Chairman Tom Wheeler.

purposes of the reserve spectrum undercuts the ostensible goal of promoting wireless competition and is unnecessary.

First, as the Commission recognizes, it has adopted the spectrum reserve framework to promote competition;[50] any apparently revenue-generating goal of a price per MHz-POP threshold as part of the final stage rule is separate and distinct from the goal of promoting competition. The price per MHz-POP threshold is not necessary to ensure the auction raises enough revenue to promote efficiency – that role is covered by the other component of the final stage rule requiring that all statutory clearing objectives are met. Nor is the price per MHz-POP component in any way related to promoting competition – it only delays the pro-competitive reserved spectrum framework at a direct risk to competitive access. The only purpose of the price per MHz-POP component of the reserve trigger is to meet an arbitrarily determined revenue goal for the reserve, and it comes at a direct threat to the very competition the Commission says it seeks to promote.[51]

Second, by incorporating a price per MHz-POP threshold, the current rule opens the door for AT&T and Verizon to foreclose competitive access to low-band spectrum at any point after the auction meets its required statutory and FirstNet costs, but before it generates whatever price per MHz-POP target upon which the Commission happens to decide. In other words, any delay in triggering the reserve after meeting all the expenses actually necessary for the auction to close allows for the very type of foreclosure that the Commission has found would likely occur in the absence of its reserved license framework. The *Mobile Spectrum Holdings Report and Order* is wholly silent on any rationale for reintroducing the risk of foreclosure to the 600 MHz incentive auction after adopting the reserve spectrum framework to reduce or eliminate that very risk.

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[50] *See, e.g.*, *MSH Report and Order* ¶ 153 ("[g]iven the importance of multiple providers, including rural and regional providers, having access to below-1-GHz spectrum for deployment and competition . . . a clear mobile spectrum holdings policy for the Incentive Auction is necessary to increase access opportunities to the 600 MHz Band."); *Incentive Auction Order* ¶ 10 ("[W]e establish a market-based spectrum reserve . . . designed to ensure against excessive concentration in holdings of low-band spectrum").

[51] The price per MHz-POP component of the reserve trigger is also contrary to Section 309(j)(7), which prohibits the consideration of revenue when the Commission makes public interest determinations in crafting systems of competitive bidding.

Third, any price per MHz-POP threshold the Commission ties to the reserve license framework will be arbitrary, thus increasing the opportunity for foreclosure. Spectrum is notoriously hard to value, particularly in situations where, as here, the amount of spectrum coming to market is uncertain.[52] According to analysts with J.P. Morgan, "spectrum valuation is more art than science, with valuations swinging widely due to supply and demand."[53] As analysts at Sanford C. Bernstein explain, "spectrum prices are largely unrelated to any kind of fundamental value."[54] Reasons for the difficulty in valuating spectrum include market illiquidity resulting from few buyers and sellers, different players placing different value on spectrum based on their current spectrum holdings and network deployments, potential regulatory changes, potential technological changes, and uncertainty of future supply.[55] According to these analysts, attempting to divine the price per MHz-POP of spectrum is "like attempts to predict the value of commercial real estate in midtown Manhattan in 2016 based on the price of a condo in Miami in 2010 – unlikely to be very accurate, except by chance."[56] As a result, using the price per MHz-POP trigger in the final stage rule risks adding significant inefficiency into the auction by failing to transition spectrum from broadcasters to more flexible use, and, for the purposes of this petition, artificially and unnecessarily increasing the chances of anticompetitive behavior in the auction.

Fourth, the Commission's stated purpose of the reserve trigger within its "market-based reserve" framework is to ensure sufficient revenues to meet the clearing target before reserve licenses are available.[57] In other words, the market-based reserve ensures that the reserved license framework is never the reason that the auction fails to raise enough revenues to clear broadcasters. By the Commission's own

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[52] *See, e.g.*, Coleman Bazelon & Giulia McHenry, *Spectrum Value*, The Brattle Group at 2 (Aug. 28, 2012) (explaining that valuating spectrum is challenging because, "[d]ue to the nature of spectrum, . . . complete information is generally not available" regarding comparable transactions or accurate forecasts of revenue and costs).

[53] Philip Cusick et al., *Telecom Services & Towers*, J.P. Morgan at 1 (Dec. 5, 2012); *id.* at 2 ("In our view, spectrum valuations are floor valuations, which can swing widely given technology, usage, carrier interest and capital availability.").

[54] Paul de Sa, *Weekend Media Blast: Spectrum, Metaphors and Megahertz*, Bernstein Research (July 18, 2014).

[55] *Id.*

[56] *Id.*

[57] *See, e.g.*, *MSH Report & Order* ¶ 194 ("Setting an appropriate spectrum reserve trigger for determining how much spectrum will be allotted for reserve-eligible bidders will ensure that all bidders, those eligible to bid on reserved spectrum and other bidders, contribute a fair share to the *clearing costs* identified in the reverse auction and the other *costs* specified in the Incentive Auction final stage rule.") (emphasis added).

reasoning, "[t]he market-based spectrum reserve leverages competition across both reserved and unreserved spectrum to provide all bidders with the incentive to bid aggressively and *repurpose larger rather than smaller amounts of spectrum*."[58] In this manner, the "market-based reserve" increases "the likelihood that the auction will close at a higher spectrum target."[59] Once the statutory requirements have been met, however, reserved spectrum bidders will have paid their "fair share" to ensure spectrum is cleared and that overall spectrum clearing levels are not depressed.[60] A price per MHz-POP threshold is unrelated to a "fair share" of spectrum clearing costs and is simply an effort to increase revenues while endangering the efficacy of the reserve, an outcome that requires justification notably absent from the Commission's decision.

Fifth, to clarify any ambiguity or uncertainty regarding auction mechanics, the reserve trigger need not be tied to both components of the final stage rule. In the *Mobile Spectrum Holdings Report and Order*, the Commission decided to tie the trigger to both the statutory clearing costs as well as a price per MHz-POP threshold.[61] But, the Commission could have just as easily tied the reserve trigger to only the statutory clearing costs as well as any remaining FirstNet expenses. Under this scenario, once sufficient forward auction revenues are raised to clear broadcasters, the reserve framework would be triggered. To the extent there was still demand, bidders would continue to increase bids for reserved and unreserved spectrum alike.

The Commission has failed to "articulate a satisfactory explanation for" adopting a price per MHz-POP threshold for the reserve trigger, and it must provide an explanation, "including a 'rational connection between the facts found and the choice made.'"[62] Tying the reserve trigger to the final stage rule does not advance the goals of promoting competition and preventing foreclosure that the Commission says it seeks to achieve. On the contrary, tying the reserve trigger to the final stage rule moves in

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[58] *Id.* (emphasis added).
[59] *Id.*
[60] *See, e.g.*, *id.* ¶¶ 185, 194 (discussing the need for reserve bidders to pay their "fair share" of spectrum clearing costs).
[61] *See MSH Report and Order* ¶ 187.
[62] *Motor Vehicle Manufacturers Assn. of the United States, Inc. v. State Farm Mutual Automobile Insur. Co.*, 463 U.S. 29, 43 (1983).

precisely the opposite direction, risking the entire four-nationwide-carrier framework that Chairman Wheeler has said is so important, reintroducing the real threat of foreclosure the Commission has said it must check, and raising the very real prospect of auction failure – not as a result of an sufficient number of willing buyers and sellers, but due to a failure to meet an arbitrary price per MHz-POP revenue target that has nothing to do with competition, diversity, or any other of the objectives found in Section 309(j) of the Act.

Examining and explaining the underlying rationale for the price per MHz-POP component of the trigger, as required under the Administrative Procedures Act, will reveal the necessity to adopt a trigger related only to the broadcast exit expenses, relocation costs, and any remaining FirstNet expenses. Only by tying the trigger to what is actually required to clear broadcasters will the Commission maintain consistency with its own stated goal of promoting competition and meet its statutory mandate to avoid the concentration of licenses.[63]

V. CONCLUSION

The spectrum reserve amounts and the reserve trigger that the Commission adopts in its *Mobile Holdings Spectrum Report and Order* are at odds with the statutory requirements of promoting competition in the wireless broadband market and avoiding excessive concentration of licenses. The adopted reserved spectrum amounts are inadequate to provide competitive carriers, including T-Mobile, Sprint, and other providers, a meaningful opportunity to expand their low-band spectrum holdings. Instead, under the current framework, the most likely outcome is that low-band spectrum holdings will become further concentrated among AT&T and Verizon, diminishing other providers' ability to meaningfully compete for subscribers. Additionally, the Commission's adopted reserve trigger is arbitrarily and inexplicably based on the revenue-generating goals of the price per

[63] To the extent the Commission considers retaining a price per MHz-POP threshold either for the reserve trigger or for the overall auction, a lower price per MHz-POP threshold reduces the potential harms associated with a price per MHz-POP threshold, including risking auction failure, reducing the amount of spectrum for mobile broadband, and harming downstream wireless competition.

MHz-POP component of the final stage rule, and it similarly creates an opportunity for AT&T and Verizon to foreclose competition. Before the Commission risks the viability of the competitive wireless market it is seeking to promote, the Commission must explain the rationale to link the reserve trigger to the artificial price per MHz-pop prong of the final stage rule.

The Commission should revise its spectrum reserve framework to allocate at least half of the available spectrum in the reserved spectrum band. Likewise, the Commission should eliminate the price per MHz-POP component of its spectrum reserve trigger and adopt a spectrum reserve that is triggered as soon as forward auction revenues cover baseline broadcast exit expenses, relocation costs, and any remaining FirstNet funding requirements.

Respectfully submitted,

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