

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

In the Matter of)	
)	
Applications of T-Mobile US, Inc.)	WT Docket No. 18-197
)	
and)	
)	
Sprint Corporation)	
)	
For Consent to Transfer Control of the Licenses)	
and Authorizations)	

**JOINT OPPOSITION OF
T-MOBILE US, INC. AND SPRINT CORPORATION**

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EXECUTIVE SUMMARY

In the Public Interest Statement (“PIS”), T-Mobile and Sprint demonstrated that the merger will produce enormous consumer benefits and intensify competition in ways that neither company could do on its own. The merged company (“New T-Mobile”) will be able to leverage a unique combination of complementary spectrum and cell sites to unlock massive synergies. This will allow New T-Mobile to invest nearly \$40 billion to accelerate and deliver a more robust nationwide 5G network and next-generation services that would not be possible for either company on its own. While both T-Mobile and Sprint have standalone plans to deploy 5G networks, the New T-Mobile network will be far superior and will create expanded capacity and lower costs so that American consumers will pay less and get more. The network will produce fiber-like speeds that enable innovative mobile wireless uses; unleash an alternative to in-home, fixed broadband providers; enable disruptive video services; spark more competition for enterprise; bring better service to rural America, including high-speed broadband; create thousands of additional American jobs; and achieve accelerated 5G deployment in the United States. No petitioner seriously challenges that the proposed New T-Mobile network will deliver transformative increases in capacity, speed, and coverage to the public.

The Merger Benefits Consumers and Intensifies Competition. The PIS fully documented the pro-consumer and pro-competitive effects of the merger. A small number of petitioners nonetheless claim that the merger will lead to higher prices, lower output, and less competition. In response, the Applicants submit the following:

- **Economic Analysis Confirms that Consumers Will Get More Data on Average at Much Lower Prices.** In his declaration, Dr. David Evans documented how the transaction will result in a dramatic increase in cellular data output and decrease in cellular data prices through dynamic investment competition. These effects are a result of New T-Mobile integrating the networks and spectrum portfolios of T-Mobile and Sprint, and accelerating the deployment of a strong 5G network, which will induce

AT&T and Verizon to accelerate and intensify their 5G deployments to remain competitive. He showed that consumers would pay roughly 55 percent less per gigabyte (“GB”) of data in 2024 as a result of the transaction. DISH’s economist, Dr. David Sappington, argues that Dr. Evans’ analysis failed to consider the impact on static price competition and omitted other considerations. In his attached reply declaration, Dr. Evans shows that even if DISH’s estimates of Average Revenue Per User (“ARPU”) increases, which are not empirically valid, were accepted, consumers would pay nearly 50 percent less per GB of data as a result of the transaction—just slightly less favorable than the outcome predicted in Dr. Evans’ original study.

- **Merger Simulations Show Prices Will Not Increase and Consumers Will Benefit.** DISH, in opposing the merger, retained Dr. Joseph Harrington and the Brattle Group (“Brattle”) to present merger simulations that purport to show ARPU would likely increase as a result of the transaction. However, their analysis is defective because of its failure to account for *any* efficiencies in the form of lower costs and higher quality, the presence of each of which will benefit consumers through lower quality-adjusted pricing, as well as spur greater competition among wireless carriers. When these gains are properly accounted for, the DISH-sponsored merger simulations confirm that consumers will benefit substantially from the merger. Applicants also submit merger simulations by Compass Lexecon that use data from T-Mobile and Sprint to properly and more comprehensively model salient features of the industry, while applying more conservative assumptions than DISH’s economists. The Compass Lexecon merger simulations support the conclusion that “the proposed transaction is projected to generate significant marginal cost savings, which will strengthen the combined firm’s incentive and ability to compete for users by offering lower quality-adjusted prices.” This will also benefit consumers because it will “increase competitive pressures on rival service providers.” Furthermore, Compass Lexecon demonstrates that “the proposed transaction will generate significant quality improvements, which will benefit consumers and increase competitive pressures on rival service providers.” Finally, the Compass Lexecon study refutes claims by some opponents that the merger will create incentives to raise wholesale prices to MVNOs.
- **The Merger Will Not Increase Risks of Coordination.** In the PIS, Prof. Steven Salop and Dr. Yianis Sarafidis provided an economic analysis of why post-merger coordination among Verizon, AT&T, and New T-Mobile is unlikely. Here, they provide a supplemental declaration that systematically refutes petitioners’ attempts to criticize their analysis and confirms their determination “that the Commission would lack a credible basis to conclude that the proposed T-Mobile/Sprint merger transaction would increase the risk of successful coordination or encourage attempts to coordinate.”
- **Sprint as a Standalone Entity Faces Substantial Competitive Challenges.** Several petitioners assert that the apparent improvements in Sprint’s business performance somehow demonstrate that Sprint will act as a competitive and pricing constraint on other national carriers absent the merger. As described in Dow Draper’s supporting declarations to the PIS and this Joint Opposition, Sprint continues to face significant business challenges that limit its ability—now and in the future—to act as a competitive constraint on the larger wireless carriers.

- **Spectrum and HHI Screens Are Not Evidence of Local Harms.** Some petitioners argue that the merger results in holdings that exceed the spectrum and HHI screens. These screens, however, are merely tools used to distinguish Cellular Market Areas (“CMAs”) that should be exempt from detailed review rather than undergo closer examination; they are not intended to determine the outcome of a review. And no petitioner has made a credible showing that the transaction causes anticompetitive harm in any local market. Importantly, Verizon and AT&T are in virtually every local CMA and, in most CMAs, there are additional local regional or local competitors. Consequently, the various demands made for spectrum divestitures are not grounded in any legitimate public interest considerations.

The Merger Benefits All Segments of the Wireless Market for Consumers, the Country, and American Workers. Some opponents contend that the consumer benefits described in the PIS are not merger-specific or verifiable. Notably, no petitioner presents credible evidence that the network as planned will not deliver significant speed and capacity gains over the standalone networks. Instead, opponents insist either that the merger is unnecessary to build such a nationwide 5G network or that the standalone companies have alternatives to merging. They further hypothesize that the transaction will result in harmful effects on specific segments of the wireless market, rural areas, and company employment. As explained below, the documented capacity and speed gains are entirely dependent on combining the two companies and they cannot be achieved but for the merger:

- **The Merger Enables a Robust Nationwide 5G Network with the Capacity, Speed, and Lower Costs to Deliver Massive Consumer Benefits.** Some merger opponents suggest that T-Mobile and Sprint already have announced 5G plans and can find other spectrum, technology, or commercial arrangements to produce enhanced 5G networks similar to New T-Mobile’s in the future. As demonstrated in the PIS and confirmed in declarations filed with this Opposition, the T-Mobile and Sprint standalone plans to deploy 5G are not even close to comparable to what New T-Mobile will deliver. The alternatives suggested by petitioners are unworkable, unavailable, or impossible.
- **Ensuring America’s Leadership in 5G.** New T-Mobile will build a world-leading 5G network. This, in turn, will stimulate competitive responses from Verizon, AT&T, and others that will help the U.S. win the race to 5G global leadership and secure for our country the benefits of this technological leap forward.
- **Millions of Consumers Will Receive Broadband Alternatives and Save Billions.** The PIS described how New T-Mobile will create competition for in-home broadband, as well

as consumer benefits from enabling the substitution of wireless services for wired broadband services. Contrary to the claims of DISH and others, New T-Mobile will have the network and the business incentives to deliver wireless broadband for consumers. Today, millions have no real broadband choice, but with New T-Mobile they will. Dr. Harold Furchtgott-Roth estimates that increased broadband competition enabled by the merger could produce annual consumer savings of as much as \$13.65 billion a year by 2024.

- **Prepaid Customers, Just Like All Other New T-Mobile Customers, Will Benefit from Lower Costs, More Capacity, Higher Quality, and Increased Competition.** Some petitioners speculate that New T-Mobile will reduce service and/or raise prices for prepaid plans attractive to cost-conscious and low-income customers. These concerns, like those raised when T-Mobile acquired MetroPCS, are unfounded. Following this merger, all MetroPCS, Boost Mobile, and Virgin Mobile USA customers with compatible handsets will benefit from the increased capacity and improved service quality that the New T-Mobile nationwide network will provide. Prepaid plan customers with compatible handsets will enjoy the same improved network as postpaid plan customers, and perhaps more so, since many prepaid plan customers use more data than those on postpaid plans. This improved service will not come with higher prices. New T-Mobile will be incentivized to deliver more for the same or less due to having substantially more capacity and lower costs. New T-Mobile also will face continued and likely intensified competition from Verizon, AT&T and others. The Compass Lexecon merger simulations take into account the claimed reduction in the number of prepaid competitors and demonstrate that the merger nonetheless will benefit all consumers whether they are on prepaid or postpaid plans.
- **The Expanded Coverage, Increased Capacity, and Higher Quality 5G Nationwide Network Resulting from the Merger Will Benefit MVNOs and Their Subscribers.** Combining T-Mobile and Sprint's spectrum and site assets will lower costs and increase competition for wholesale services. The massive capacity gains and lower operational costs resulting from the merger will allow New T-Mobile to reduce its wholesale prices. Moreover, the superior New T-Mobile 5G network will allow the combined entity to apply significant competitive pressure to Verizon and AT&T, spurring the two incumbents to increase investment in their networks, expand network capacity, and provide more favorable terms to MVNOs. MVNO subscribers will benefit from increased, improved, and lower cost network options. These benefits are confirmed by MVNOs such as TracFone filing in support of the merger.
- **Rural Americans Will Benefit from Improved Broadband Service While Rural Carriers Will Receive Continued Roaming and Technical Assistance.** The merger provides the scale, capacity and incentives to deliver enormous benefits to rural Americans in terms of coverage and quality of service, an in-home broadband alternative, 600 or more new retail stores and up to five new Customer Excellence Centers located to serve small towns and rural communities. New T-Mobile also will continue the efforts of T-Mobile and Sprint by becoming the preferred roaming partner to smaller rural carriers.

- **The Merger Increases Jobs from Day One and Thereafter.** The proposed merger will grow U.S. jobs from day one and for the foreseeable future. New T-Mobile will need more employees than the standalone companies to integrate and upgrade network infrastructure, expand the combined company’s retail footprint, extend the T-Mobile “Team of Experts” model of customer care to millions of Sprint subscribers, and perform other critical functions. In an unsubstantiated, but convenient, reversal of claims it made about job gains in the proposed AT&T/T-Mobile merger, the Communications Workers of America (“CWA”) distorts facts and assumptions to claim the present transaction will result in job losses. As reflected in the PIS and confirmed herein, the merger will increase jobs and CWA’s statements are baseless.
- **National Security Interests Are Fully Addressed.** CWA and the Rural Wireless Association assert that the Commission needs to examine national security issues because of New T-Mobile’s foreign ownership. But the merger does not introduce any new foreign ownership and T-Mobile and Sprint are trusted operators with long histories of working well with the U.S. government. Furthermore, consistent with past transactions involving foreign ownership, the Applicants are undergoing Team Telecom and CFIUS review.

Requests That Are Unrelated to the Merger Should Be Rejected. Finally, some parties inappropriately attempt to use the merger review to extract business concessions or conditions that are unrelated to the merger. The Commission has a longstanding policy of not considering private disputes or issues of general industry applicability in the context of merger proceedings. Consistent with that well-founded precedent, the petitions filed by Atif Khan, Stanley D. Besecker, CarrierX, Voqal and Aureon should be summarily dismissed or denied.

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**JOINT OPPOSITION OF
T-MOBILE US, INC. AND SPRINT CORPORATION**

T-Mobile US, Inc. (“T-Mobile”) and Sprint Corporation (“Sprint”) hereby submit their Joint Opposition to petitions to deny and comments in the above-captioned proceeding. On August 27, 2018, the Commission received petitions and comments concerning the transaction and its effects on consumers and competition.¹ As detailed below, the concerns expressed about the merger are ill-founded and without credible bases, while the benefits from its approval are supported by detailed engineering, business, and economic evidence. In this Joint Opposition, T-

¹ Each of Free Conferencing’s, Aureon’s, Atif Khan’s, and Stanley Besecker’s petitions are flawed on procedural grounds and should be dismissed for failure to show standing. Unlike rulemaking proceedings, in which any interested party may provide its views to the Commission, the rules governing license transfer proceedings require parties filing petitions to deny to establish standing (47 U.S.C. § 309(d)(1); 47 C.F.R. §§ 1.45, 1.939). To establish standing as a party in interest, a petitioner must (1) allege facts sufficient to demonstrate that grant of the application would cause it direct injury; (2) demonstrate a causal link between claimed injury and the challenged action; and (3) demonstrate it is likely that the injury would be prevented or redressed by the relief requested. None of the above cited petitions can meet this standard. Mr. Besecker does not even allege an injury resulting from the merger. Free Conferencing, Mr. Khan, and Aueron’s petitions all center on allegations that predate the merger, and therefore cannot demonstrate a causal link between their alleged injuries and the Transaction. Moreover, these petitioners all fail to even assert standing. They therefore fail to satisfy the standing requirement, and their petitions should be dismissed on procedural grounds accordingly.

Mobile and Sprint (“Applicants”) address and answer all of the material questions raised by petitioners and commenters. In so doing, the Applicants provide the Commission with further merger-specific and verifiable bases for rapid approval of the transfer applications to effectuate the merger.

I. THE PROPOSED MERGER WILL LOWER PRICES AND INCREASE COMPETITION

The Applicants’ Public Interest Statement (“PIS”) provided detailed network engineering, business plan, and economic information to document the merger benefits for consumers and competition.² The network engineering information established the dramatic increases in capacity, speed, and coverage that would result from the planned 5G network.³ Mike Sievert, President and Chief Operating Officer of T-Mobile, explained that “New T-Mobile will have every incentive to grow its customer base” and increasing prices post-merger “would be economically irrational and contrary to shareholder interests.”⁴ The economic analyses concluded that building the nationwide 5G network will provoke competitive responses from Verizon and AT&T that result in as much as a 55 percent decrease in price per GB and a 120 percent increase in cellular data supply for all wireless customers⁵ and that “there is no credible

² *Applications of T-Mobile US, Inc. and Sprint Corporation for Consent to Transfer Control of the Licenses and Authorizations*, WT Docket No. 18-197, Description of Transaction, Public Interest Statement, and Related Demonstrations (filed June 18, 2018) (“Public Interest Statement” or “PIS”).

³ See generally PIS, Appx. B, Declaration of Neville R. Ray, Executive Vice President and Chief Technology Officer, T-Mobile, US, Inc. (“Ray Decl.”).

⁴ See PIS, Appx. C, Declaration of G. Michael (“Mike”) Sievert, President and Chief Operating Officer, T-Mobile, US, Inc., at ¶26 (“Sievert Decl.”).

⁵ See PIS, Appx. G, Declaration of Dr. David Evans, at Section V.C (“Evans Decl.”).

basis to conclude that the merger on balance would enhance the vulnerability of the market to successful coordination.”⁶

As documented in the PIS, the combined network will more than *double* 5G monthly capacity by 2021 and nearly *triple* 5G monthly capacity by 2024 when compared to the combined 5G capacities of the standalone networks.⁷ Further, T-Mobile Executive Vice President and Chief Technology Officer Neville Ray explained in his declaration that, by 2024, the total capacity of the new network—inclusive of LTE—will be approximately twice the combined capacity of the standalone firms.⁸ By 2024, “New T-Mobile’s 5G network will deliver average data rates above 100 Mbps to 292.3 million covered POPs, average data rates above 150 Mbps to 278.1 million covered POPs, average data rates above 300 Mbps to 252.4 million covered POPs, and average data rates above 500 Mbps to 208.7 million covered POPs.”⁹

New T-Mobile’s network, business and capital plans work in concert and are all predicated upon T-Mobile and Sprint creating a single combined network. Indeed, as discussed in Section II below, the two networks will be integrated as soon as possible, because (1) running two parallel networks makes no engineering or economic sense; (2) a combined network is needed to deliver the capacity, speed, and coverage benefits to the two companies’ customers; and (3) network efficiencies from integration account for 60 percent of the transaction’s total synergies. Integrating the networks requires the deployment of new equipment, which given the

⁶ See PIS, Appx. H, Joint Declaration of Prof. Steven C. Salop and Dr. Yianis Sarafidis, at ¶12 (“Salop/Sarafidis Decl.”).

⁷ PIS at 42-43.

⁸ Ray Decl. at Fig. 5.

⁹ *Id.* at ¶20. These figures have shifted very slightly from those in the PIS as a result of additional modeling that determined that more spectrum could be refarmed to 5G services more quickly than originally planned.

current state of technology at the time of deployment, will be 5G-capable. As such, the rapid integration of the two networks to meet business plan goals will drive accelerated 5G roll-out at low incremental cost.

A. The New T-Mobile Network’s Massive Increase in Capacity Drives Lower Costs and Competition

As a matter of fundamental economics, significantly increasing the supply of available capacity puts substantial downward pressure on the per unit price of capacity. New T-Mobile’s business plan tracks this fundamental economic tenet by recognizing that the optimal strategy to monetize the combined network’s additional capacity is to reduce prices. As Mike Sievert put it: “[w]e will compete aggressively with lower prices to take market share from Verizon and AT&T, allowing more customers to enjoy the benefits of our increased capacity.”¹⁰ Consistent with these economic incentives, “the [New T-Mobile] financial model projects passing scale benefits on to customers in the form of an over 6 percent reduction in average revenue per user (“ARPU”), going from [REDACTED] to [REDACTED] by 2024.” This contrasts with T-Mobile’s standalone plan, which projects [REDACTED] over time.¹¹ The fundamentals of the proposed transaction and its massive increase in wireless capacity and output will benefit competition and consumers across all segments of the wireless market, including retail services provided on prepaid and postpaid plans as well as services sold at wholesale to MVNOs and other hybrid participants in the wireless ecosystem.¹²

¹⁰ Sievert Decl. at ¶21.

¹¹ See PIS, Appx. D, Declaration of Peter Ewens, Executive Vice President, Corporate Strategy, T-Mobile US, Inc., at ¶8 (“Ewens Decl.”).

¹² See *infra* Sections II.C and II.D.

In the PIS, leading economists supported the merger’s benefits of increased output and lower costs. Dr. David Evans’ economic analysis concluded that, by 2024, by building the nationwide 5G network and provoking competitive responses from Verizon and AT&T that the transaction will result in as much as a 55 percent decrease in price per GB and a 120 percent increase in cellular data supply for all wireless customers.¹³ In addition, Prof. Steven Salop and Dr. Yianis Sarafidis found that “there is no credible basis to conclude that the merger on balance would enhance the vulnerability of the market to successful coordination.”¹⁴

Without challenging the New T-Mobile network’s ability to produce massively increased capacity, speed, and coverage, some opponents simply resort to claiming that the combination of T-Mobile and Sprint is a four-to-three merger and relying on the untenable thesis that such combinations *per se* harm consumers and competition. However, modern competition analysis should not be reduced to a simple shorthand exercise in unsubstantiated generalities. From an economic perspective, a merger is only anticompetitive when it leads to artificial reductions in supply, increases in price, or lower quality, thereby reducing consumer welfare. While it is true that some four-to-three mergers may result in reduced supply, increased price, or lower quality the opponents have not seriously contested Applicants’ well-supported and empirical demonstration that the combination of T-Mobile and Sprint will do just the opposite; it will result in a massive increase in the capacity of the combined network, lower prices, and higher quality service. They also have not challenged that these benefits will trigger a competitive response from Verizon and AT&T to similarly expand capacity, lower prices, and increase quality in an attempt to match the performance of New T-Mobile’s network. As discussed below, transactions

¹³ See Evans Decl. at Section V.C., ¶¶220-44.

¹⁴ See Salop/Sarafidis Decl. at ¶12.

and conditions in the past, in other businesses and other countries that involve different facts, circumstances and markets, are not relevant here, given the demonstrated market and consumer benefits from the transaction.

DISH is the only opponent that has even attempted to make an economic showing addressing the T-Mobile/Sprint merger. Its petition includes merger simulations and declarations purportedly indicating risks of post-merger price increases and coordination. These submissions, however, confirm rather than refute the merger's pro-competitive and pro-consumer effects. As detailed below, by altogether ignoring the merger's efficiencies, including its impact on reductions of marginal costs of increasing capacity, DISH's economists manage to predict increases in ARPUs. But once the simulation is corrected to include merger efficiencies (as required under the long-accepted standards for merger simulations) that reflect the merger's competitive effects, the DISH-sponsored merger simulations confirm that the merger promotes consumer welfare even without accounting for considerable improvements in quality resulting from faster speeds, lower latency, and improved coverage.

To further corroborate the merger's pro-consumer and pro-competition effects, T-Mobile and Sprint submit herewith: (1) a reply declaration from Dr. Evans responding to petitions to deny and confirming the dramatic reductions in the price/GB attributable to the merger and the likely output-enhancing competitive responses by Verizon and AT&T; (2) even more conservative merger simulations than those put forward by DISH prepared by Mark Israel, Michael Katz, and Bryan Keating of Compass Lexecon ("Compass Lexecon") confirming that the merger promotes consumer welfare; (3) the response of Prof. Salop and Dr. Sarafidis to DISH's criticisms of their conclusion that the merger will not result in increased risks of harmful coordination; and (4) a reply declaration of Brandon "Dow" Draper, Sprint's Chief Commercial

Officer, reiterating that Sprint in the standalone world faces challenges that refute opponents' assumptions about Sprint's competitive abilities.

B. The Competitive Effects of the Transaction Are Dynamic, and Dr. Evans Shows That the Transaction Will Be Profoundly Pro-Competitive

In his PIS declaration, Dr. David Evans demonstrated that the transaction would produce a dramatic increase in cellular data output and decrease in cellular data prices as a result of New T-Mobile's integration of T-Mobile's and Sprint's networks and spectrum portfolios. The accelerated deployment of a robust 5G network will also create strong incentives for AT&T and Verizon to accelerate and intensify their own 5G deployments to remain competitive. Dr. Evans' declaration presented a detailed, fact-based analysis of dynamic investment competition among cellular carriers, grounded in the longstanding business realities of the industry and the implications of the transaction for the prices, output, and quality for cellular data in light of these business realities. Given the merger-specific efficiencies estimated by T-Mobile's engineering model and a projection that ARPU remains flat, which is generally consistent with T-Mobile's contemporaneous business planning documents, Dr. Evans found that the transaction would increase GB/subscriber by 120 percent and reduce price/GB by 55 percent by 2024.

On behalf of DISH, Prof. David Sappington challenges Dr. Evans' findings, based on alleged flaws in his study.¹⁵ In response, Dr. Evans in his reply declaration attached hereto provides a point-by-point refutation demonstrating why Prof. Sappington's criticisms are unfounded:

- Prof. Sappington claims that the study is "incomplete" because Dr. Evans did not conduct an analysis of static price competition.¹⁶ As explained in the PIS, and not contested by DISH, dynamic investment competition in wireless networks has been

¹⁵ Petition to Deny of DISH Network Corporation, WT Docket No. 18-197, at 35-38 (filed Aug. 27, 2018) ("*DISH Petition*").

¹⁶ *Id.* at Exhibit A, Declaration of David E. M. Sappington, at 2 ("*Sappington Decl.*").

the main determinant of increases in cellular data output and cellular data price reductions. Dr. Evans shows that the dynamic merger-specific decline in price/GB in 2024 would be 49.9 percent even if he assumed that ARPU's would increase by the upper bound of 10.4 percent claimed by the DISH economists.¹⁷ The bottom line is that the dynamic, efficiency-driven price declines exceed the DISH economists' estimates of static price increases.

- Prof. Sappington claims that, as a result of assuming that in the absence of the transaction AT&T and Verizon would match T-Mobile and not Sprint, Dr. Evans' analysis is subject to "prediction bias."¹⁷ Prof. Sappington ignores, and does not contest, the evidence presented in Dr. Evans' declaration that Sprint's network has substantially lower coverage which limits its attractiveness to subscribers and makes it a weaker competitor, and that AT&T and Verizon have historically responded to T-Mobile. Prof. Sappington also questions whether AT&T and Verizon would respond to a combination of the Sprint and T-Mobile networks that simply combined their capacities but did not increase capacity. But Prof. Sappington ignores the fact that this hypothetical network would be stronger, since it would provide more coverage to previous Sprint customers and more capacity to previous T-Mobile customers, thereby necessitating a competitive investment response by AT&T and Verizon.¹⁸
- Prof. Sappington claims that the assumptions used in Dr. Evans' analysis are "not fully supported."¹⁸ However, Prof. Sappington's analysis ignores, misstates, or downplays the extensive empirical evidence on investment competition among cellular carriers set forth in the PIS declaration. That evidence showed that, regardless of the intensity of spectrum use or other factors, cellular carriers are forced to make investments to compete on network performance and do not willingly choose to leave capacity unutilized; the fact that carriers choose to use spectrum differently does not alter this conclusion. Prof. Sappington's assertion that the estimates of practical capacity are not "precisely" estimated for 2024 because many factors could affect capacity is not a substantive economic critique. He does not show that any of his criticisms of the Applicants' capacity forecasts would result in material changes to Dr. Evans' conclusions that the transaction will lead to substantial reductions in price/GB that far exceed the Brattle economists' estimated static price increase.
- Finally, Prof. Sappington claims that "merger gains may only be incremental"—*i.e.*, that the merger merely brings forward in time gains that would materialize eventually anyway—apparently suggesting that Dr. Evans' analysis overlooked this possibility and exaggerated the gains from the merger as a result.¹⁹ Dr. Evans shows that Prof. Sappington's claim is wrong because the transaction will enable New T-Mobile to deploy a stronger 5G network faster than the standalone companies could. The increased efficiency due to combining the two networks is a permanent gain. Dr.

¹⁷ Reply Declaration of Dr. David Evans, Appx. G, at ¶¶12-15 ("Evans Reply Decl.").

¹⁸ Sappington Decl. at 9.

¹⁹ Sappington Decl. at 14.

Evans also shows that the transaction would generate incremental gains by bringing benefits forward in time as a result of accelerating the deployment of 5G technology by Verizon and AT&T. The fact that the considerable gains from accelerating 5G are smaller than the even larger total value of 5G is irrelevant.

Dr. Evans thus confirms the dramatic reductions in the price/GB attributable to the merger and the likely output-enhancing competitive responses by Verizon and AT&T.

C. Merger Simulations Confirm that the Merger Will Enhance Consumer Welfare from a Static Unilateral Effects Perspective

In addition to criticizing Dr. Evans’ model in its petition to deny, DISH presents the results of static merger simulations prepared by Prof. Joseph Harrington and the Brattle Group that purport to demonstrate that the transaction would result in price increases to retail customers.²⁰ The Brattle declaration also purports to show an incentive for New T-Mobile to increase wholesale prices, although it does not attempt to quantify those price increases.²¹

Mark Israel, Michael Katz and Bryan Keating from Compass Lexecon reviewed the Brattle declaration and identified “several serious shortcomings.”²² They concluded that, “[i]ncorporating the merger-specific efficiencies projected by the Parties’ network plans and their Network Build Model into the [Brattle model] leads to the conclusion that the merger will strengthen competition and raise consumer welfare,” exceeding the level of efficiencies needed to show a pro-competitive results.²³ Compass Lexecon notes that, by excluding consideration of efficiencies, the Brattle model would “necessarily find that *any* merger of firms competing for the same customers harms competition and consumers” and, thus the Brattle model “cannot

²⁰ See *DISH Petition* at 77-78.

²¹ *Id.* at Exhibit B, Declaration of Joseph Harrington, Coleman Bazelon, Jeremy Verlinda, and William Zarakas at 76, Table 25 (“Harrington/Brattle Decl.”).

²² Declaration of Compass Lexecon, Appx. F, at 1 (“Compass Lexecon Decl.”).

²³ *Id.* at 5.

support any conclusions about the net effect of the transaction on competition and consumer welfare.”²⁴ As noted in the PIS, the transaction will produce significant merger-specific efficiencies, including lowering the marginal costs to add additional network traffic,²⁵ increasing the throughput and coverage consistency,²⁶ and reducing the need for usage controls on New T-Mobile’s network relative to the standalone companies.

As the Department of Justice and Federal Trade Commission’s Horizontal Merger Guidelines explain, properly used, a merger simulation can be a useful tool to assess the competitive effects of a transaction.²⁷ Unlike the HHI or price pressure screens on which DISH also relies, merger simulations incorporate more data from the parties and from the industry to incorporate how merger efficiencies and competitor reactions will impact the ultimate prices charged to retail consumers. Merger simulations additionally do not rely on defining a particular relevant antitrust market, sidestepping DISH’s own market definition assertions.²⁸ Further, contrary to Brattle’s attempt to suggest that a merger simulation first calculates a price increase that the parties then attempt to “offset” with efficiencies, Compass Lexecon explains that a merger simulation properly incorporates the effect of efficiencies on New T-Mobile’s price-setting behavior, thus showing that New T-Mobile will not raise prices in the first place.²⁹

In its modeling, Compass Lexecon used the following approach:

²⁴ *Id.*

²⁵ PIS at 51.

²⁶ *Id.* at 43-47.

²⁷ See U.S. Department of Justice and the Federal Trade Commission, *Horizontal Merger Guidelines*, at §6.1 (Aug. 19, 2010), <http://www.justice.gov/atr/public/guidelines/hmg-2010.pdf> (“DOJ/FTC Horizontal Merger Guidelines”).

²⁸ See *id.*

²⁹ Compass Lexecon Decl. at 15.

- To start, Compass Lexecon calculated the critical level of either marginal cost or quality-enhancement efficiencies needed for the Brattle model to show that the transaction would be competitively neutral—found to be less than \$3/subscriber/month.³⁰
- Compass Lexecon then used the financial model presented to T-Mobile’s board in approving the transaction and an engineering model built by T-Mobile’s engineers based on ordinary-course principles to calculate that, even under conservative assumptions, the transaction would reduce T-Mobile’s marginal costs by more than \$6/subscriber/month and Sprint’s by more than \$3/subscriber/month in 2021, more than exceeding the critical levels set by Brattle’s own model.³¹
- Compass Lexecon then corrected other flaws in the Brattle model and made other adjustments, which had the effect of making the merger simulation considerably more conservative than the Brattle model.³² Assuming usage restrictions and using these more conservative assumptions, Compass Lexecon’s merger simulation demonstrates that the transaction efficiencies would reach the higher critical efficiency thresholds implied by the simulation as long as the enormous expected quality improvements of the transaction are valued at least *one penny* per month by consumers.³³
- Compass Lexecon then relaxed the usage restriction assumptions in its more conservative model. Despite the significant increase in usage expected as a result of eliminating the restrictions, the Compass Lexecon merger simulation demonstrates that, even under the most conservative assumptions, consumers only need to value the enormous incremental benefit of unrestrained use on New T-Mobile’s superior network at around \$1 for the transaction to be procompetitive and consumer welfare enhancing throughout the period examined (2021-24).³⁴

³⁰ *Id.* at Table 1. In calculating these values, Compass Lexecon substituted actual data, such as the Applicants’ margins, for data Brattle had assumed, but did not make any other changes to correct flaws in the Brattle model.

³¹ *Id.* at Table 12. The marginal cost savings for 2024 are close to \$8/subscriber/month for T-Mobile and more than \$4/subscriber/month for Sprint, which together would still exceed the Brattle thresholds. *Id.*

³² *Id.* at 19-28. For example, Compass Lexecon changed the model structure to allow for T-Mobile and Sprint to be closer competitors than their market shares might suggest, incorporated the Applicants’ plans for how they would improve their standalone networks in the future (even though Sprint’s plans are not, and may never be, funded), and adjusted the model to use a lower estimate than the Brattle model of how likely mobile wireless consumers are to go without a mobile subscription altogether.

³³ *Id.* at 82-83.

³⁴ *Id.* at 83.

Even with these changes, Compass Lexecon found that the transaction “promotes competition and benefits consumers.”³⁵

It is worth noting that even properly conducted merger simulations of the type that Brattle and Compass Lexecon conducted are not all encompassing.³⁶ There are a number of factors that are not included in typical merger simulations which, once properly accounted for, could mitigate or eliminate the harms that a merger simulation might predict. For example, a typical merger simulation will not account for the impact of a merger on dynamic investment incentives. Merger simulations also typically depend on the switching patterns that exist at the time of the merger, and so they do not generally account for product repositioning.³⁷ In a case like this one, where networks are primarily differentiated by quality and the merger lowers the cost to the merged firm of increased quality, that could substantially change the switching patterns that we might expect. Finally, merger simulations do not typically account for entry, such as the entry by cable firms that is described in the PIS.³⁸ All of these factors mean that, even if a merger

³⁵ *Id.* at 6.

³⁶ Oliver Budzinski and Isabel Ruhmer, *Merger Simulation in Competition Policy: A Survey*, 6 J. COMP. L. & ECON. 277 (2010) (“reliance on [merger simulation models] in real-world merger cases might entail the risk of neglecting some important welfare effects, thereby causing deficient decisions.”).

³⁷ Elizabeth M. Bailey, Gregory K. Leonard, and Lawrence Wu, *Unilateral Competitive Effects of Mergers Between Firms with High Profit Margins*, 25(1) Antitrust 28 at 30 (“Most unilateral effects models—including the UPP approach and many merger simulation models—explicitly or implicitly are “static” in that they assume that no entry or repositioning is possible. Without first analyzing the likelihood that entry or repositioning would defeat an attempt by the merged firm to raise price after the merger, it would be premature to rely solely on the predictions of an anticompetitive effect from a static model.”).

³⁸ *Id.* See also Mike Walker, *The Potential Significant Inaccuracies in Merger Simulation Models*, 1 J. COMP. L. & ECON. 473, 487 (2005) (“competitive effects analysis looks at post-merger constraints on the merged entity. The principal areas of focus are usually barriers to entry, barriers to expansion, buyer power, and the increased scope for coordinated behaviour post-merger. Merger simulations do not, in general, take account of these facts.”).

simulation were to show some residual upward pricing pressure, that would not necessarily mean that the merger would be anticompetitive.

Compass Lexecon additionally assessed Brattle’s attempt to calculate New T-Mobile’s incentives to raise wholesale prices to MVNOs using the “vertical Gross Upward Pricing Pressure Index” or vGUPPI tool.³⁹ As described further in the declaration of Prof. Salop and Dr. Sarafidis, Brattle made errors in calculating the index and did not discuss the significance of the impact of the index on the MVNOs’ costs. The corrected index shows that, *even before accounting for efficiencies*, the expected retail price impact would only be about \$0.03/subscriber/month.⁴⁰ After integrating the result into the merger simulation model, Compass Lexecon found that it does not change its conclusions.

Overall, the Compass Lexecon declaration demonstrates that the only basis for DISH’s assertions that the transaction would harm competition is the counter-factual assumption that the transaction would not produce any efficiencies. The strong showings made in the PIS and further supplemented in this filing thoroughly debunk this misguided and misleading assumption. Once this assumption is corrected, DISH’s own economic models demonstrate the transaction’s strong pro-competitive effects.

D. Economic Analysis Confirms There Is No Credible Basis to Find Increased Risks of Coordination

The PIS demonstrates that coordinated effects will not result from this merger. T-Mobile and Sprint presented business and economic declarations, including from Prof. Salop and Dr. Sarafidis, explaining that there is not a credible basis for the Commission to conclude that the

³⁹ Compass Lexecon Decl. at 23-25.

⁴⁰ Joint Supplemental Declaration of Professor Steven C. Salop and Dr. Yianis Sarafidis, Appx. H, at ¶¶46-49 (“Salop/Sarafidis Supp. Decl.”).

merger would increase the risk of coordination with Verizon and AT&T.⁴¹ Simply put, the structure and dynamics of competition in the marketplace, the efficiencies flowing from the transaction, and New T-Mobile’s competitive incentives make post-transaction coordination implausible. In their declaration, Prof. Salop and Dr. Sarafidis addressed these factors and the firms’ incentives in light of those factors.

DISH, in its petition to deny, asserts that T-Mobile and Sprint are wrong about the prospects of post-merger coordination. In support of this contention, DISH submitted an analysis by Prof. Harrington and the Brattle Group arguing that the mobile voice/broadband market is suitable for coordination,⁴² that New T-Mobile will reduce incentives for a maverick strategy,⁴³ and that the merger would increase the likelihood of tacit collusion among the remaining carriers post-merger because: (1) New T-Mobile will be more willing to coordinate with AT&T and Verizon than either Sprint or T-Mobile before a merger; and (2) post-merger, it is less difficult for AT&T, Verizon, and New T-Mobile to coordinate than it would be in the pre-merger market.⁴⁴

When relevant industry characteristics, merger efficiencies and New T-Mobile’s incentives are taken into account, however, the analysis of Prof. Harrington and Brattle Group falls short. Prof. Salop and Dr. Sarafidis explain in their attached reply declaration that the Harrington/Brattle critique “does not properly account for three key factors that are critical to

⁴¹ *Id.* at ¶6.

⁴² *DISH Petition* at Exhibit B, Declaration of Joseph Harrington, Coleman Bazelon, Jeremy Verlinda, and William Zarakas at 56 (“Harrington/Brattle Decl.”).

⁴³ *Id.* at 67.

⁴⁴ *Id.* at 80.

consider in a proper economic analysis of this merger and formed the basis of our analysis.”⁴⁵

These three key factors that Harrington/Brattle ignore are critical to any economic evaluation of the post-merger incentives here:

- **Harrington/Brattle ignore the impact of the large expected efficiencies.** As explained in the PIS, 5G is on the horizon and together T-Mobile and Sprint will be able to accelerate and deliver a more robust nationwide 5G network that will be far superior to anything the companies could deliver on their own. New T-Mobile will also be able to achieve merger efficiencies—reductions in non-network marginal costs, reductions in legacy Sprint’s network marginal cost (from reduced roaming fees), and network quality improvements (including from the immediate implementation of Multi-Operator Core Networks (MOCN))—that will begin to be achieved in the transition period after closing. Harrington/Brattle fail to take these expected efficiencies into account.⁴⁶
- **Harrington/Brattle ignore the nature of wireless demand and its interplay with these efficiencies.** Prof. Salop and Dr. Sarafidis explained in their initial declaration that wireless demand is dynamic, in the sense that gaining additional subscribers today will lead systematically to more subscribers in the future.⁴⁷ The dynamic nature of wireless demand, coupled with the expected future efficiencies, creates pro-competitive incentives for New T-Mobile to grow its subscriber base both in the future and in the short term even before some of the expected efficiencies are fully realized. Prof. Salop and Dr. Sarafidis explain in their reply declaration that “an analysis of maverick incentives that ignores merger efficiencies is not valid.”⁴⁸
- **Harrington/Brattle ignore the disruptions of technology shifts.** Prof. Salop and Dr. Sarafidis explained in their initial declaration that successful coordination is facilitated by a stable competitive environment, but that the technological transition from 4G LTE to 5G will disrupt the industry in ways that make coordination unlikely.⁴⁹ In their reply declaration, Prof. Salop and Dr. Sarafidis point out that Harrington/Brattle fail to mention or analyze the disruption that will be caused by the arrival of 5G technology.⁵⁰

⁴⁵ Salop/Sarafidis Supp. Decl. at ¶2.

⁴⁶ *Id.* at ¶10.

⁴⁷ Salop/Sarafidis Decl. at ¶55.

⁴⁸ Salop/Sarafidis Supp. Decl. at ¶26.

⁴⁹ Salop/Sarafidis Decl. at ¶43-45.

⁵⁰ Salop/Sarafidis Supp. Decl. at ¶18.

While ignoring these three key factors, Harrington/Brattle claim that certain (selected) industry characteristics (“‘checklists’ of factors” such as higher consolidated market share of T-Mobile and Sprint, supposed transparency of pricing, alleged lack of buyer-side power, elimination of long-term contracts, and barriers to entry and expansion)⁵¹ make the mobile voice/mobile broadband market suitable for tacit collusion.⁵² Harrington/Brattle, however, fail to take into account Prof. Salop’s and Dr. Sarafidis’ further discussion of other industry characteristics.⁵³ Given the weight of the arguments by Prof. Salop and Dr. Sarafidis that Harrington/Brattle leave unaddressed, their analysis does not provide a valid basis to conclude that the merger would increase the risk of coordination in the mobile broadband marketplace.

Furthermore, Harrington/Brattle presented an economic analysis of New T-Mobile’s incentives to vertically foreclose MVNOs, using an index (“vGUPPI”) that was co-developed by Prof. Salop (with Dr. Serge Moresi). In their reply declaration, Prof. Salop and Dr. Sarafidis explain that Harrington/Brattle calculated this index incorrectly, and that after addressing these errors, the economic significance of the resulting index is trivial, in the sense that the Harrington/Brattle analysis shows that, even assuming New T-Mobile attempts to raise wholesale prices, these MVNOs’ costs will rise by a *de minimis* amount.⁵⁴

Finally, Harrington/Brattle misapply an index developed by Prof. Salop and Dr. Sarafidis (with co-authors) in 2011, claiming that the index calculations “show[] an increase of about 20% in the risk of coordinated effects.”⁵⁵ That index, called the Coordinated Price Pressure Index

⁵¹ Salop/Sarafidis Decl. at ¶¶71-72.

⁵² Harrington/Brattle Decl. at 56-65.

⁵³ Salop/Sarafidis Supp. Decl. at ¶¶19.

⁵⁴ *Id.* at ¶49.

⁵⁵ *DISH Petition* at 85.

(“CPPI”), was developed to evaluate the proposed AT&T and T-Mobile merger in 2011.⁵⁶ Prof. Salop and Dr. Sarafidis explain, however, that the CPPI framework can only be applied to “gauge[] the incentives of two leading firms” (*e.g.*, AT&T and Verizon) to engage in parallel accommodating conduct,” which T-Mobile and Sprint are clearly not.⁵⁷ In addition, they point out that if the Harrington/Brattle Declaration “had considered the CPPI for coordination between AT&T and Verizon, it would have found that the T-Mobile/Sprint merger would have no effect.”⁵⁸

E. Sprint Faces Challenges that Limit its Ability to be an Effective Competitive Constraint Today and in the Future

Some petitioners cherry-pick improvements in certain recent financial metrics in an effort to suggest that Sprint has overcome its past challenges and is now on a trajectory that will enable it to exert significant competitive pressure on other nationwide wireless carriers in the absence of the merger. In the first place, the relevant comparison is whether any hypothetical improvement in Sprint’s performance would be equal to or exceed the pro-competitive impact of the massive increase in industry supply generated by the merger. The Applicants have demonstrated that combining the spectrum and network assets of T-Mobile and Sprint will yield substantially more capacity than the sum of what the two firms could achieve on their own. But, in any case, as explained at greater length in the declarations submitted by Dow Draper, the reality is that Sprint, as a standalone entity, faces business challenges that will severely limit its ability to simultaneously make necessary network investments and also maintain the same level of

⁵⁶ *Id.* at 85-86.

⁵⁷ Salop/Sarafidis Supp. Decl. at ¶51.

⁵⁸ *Id.* at ¶54.

aggressive promotional activities, and as a consequence, Sprint will be a much less effective competitor compared to New T-Mobile.

As described in the PIS and accompanying declarations, Sprint faces significant structural challenges stemming from its network performance difficulties, poor customer perception, low share of gross adds (“SoGA”), high churn rate, insufficient scale, and lack of free cash flow.⁵⁹ These challenges have, and will continue to, limit the degree to which Sprint will be a competitive check in the wireless industry—particularly on the two largest nationwide carriers, AT&T and Verizon.

A key reason Sprint faces these challenges is its network performance deficiencies. Sprint’s network suffers from a lack of coverage and deployed capacity, which creates a sub-par experience for many of the company’s subscribers.⁶⁰ Existing subscribers have a persistent negative perception of Sprint’s network and communicate this to other potential subscribers. As a result, it is more difficult for Sprint to attract (*i.e.*, high SoGA) and keep subscribers (*i.e.*, low churn)—preventing Sprint from achieving scale.⁶¹ Sprint has been largely unsuccessful in reversing this trend through promotional discounts and rates.⁶²

Sprint now needs to make significant investments in its network to improve LTE and launch 5G, but its ability to simultaneously increase network investment and offer significant

⁵⁹ See *e.g.*, PIS, Declaration of Brandon “Dow” Draper, Chief Commercial Officer, Sprint Corporation, Appx. F, at ¶22 (“Draper Decl.”); Reply Declaration of Brandon “Dow” Draper, Chief Commercial Officer, Sprint Corporation, Appx. E (“Draper Reply Decl.”) at ¶¶5-9.

⁶⁰ See *e.g.*, PIS, Declaration of John C. Saw, Chief Technology Officer, Sprint Corporation, Appx. E, at ¶¶14-15 (“Saw Decl.”); Draper Decl. at ¶¶7-15; Draper Reply Decl. at ¶¶11-12.

⁶¹ Draper Reply Decl. at ¶18.

⁶² Draper Decl. at ¶20; Draper Reply Decl. at ¶14.

promotional pricing is necessarily limited.⁶³ The realities facing Sprint’s business require the company to raise prices—which is already occurring—and focus its network investment in locations where the company can potentially achieve sufficient scale, forgoing broader national competition to the detriment of rural subscribers and MVNO partners.⁶⁴

Several petitioners and commenters assert that, absent the merger, Sprint will somehow overcome these challenges to exert greater pressure on its competitors. Opponents’ arguments fail to engage with the significant business obstacles that Mr. Draper described and instead envision a future for Sprint that is belied by both Sprint’s recent business performance and economic logic.

- **Despite recent improvements in certain business metrics, Sprint remains significantly financially constrained.**⁶⁵ As Mr. Draper explains in his declarations, Sprint’s recent positive metrics—which petitioners trumpet without context—were achieved largely through cost cutting, reduced investment, a one-time tax law change, and unsustainable promotional practices.⁶⁶ Sprint remains free cash flow constrained and without sufficient scale to achieve necessary returns on investment. As a result, Sprint as a standalone company would be financially unable to pursue both greater network investment and continued aggressive promotional efforts.
- **Sprint’s standalone 5G network will be geographically limited.**⁶⁷ Some petitioners repeatedly highlight that Sprint has committed to investing in a 5G network. The scope of that 5G network, however, is constrained by Sprint’s lack of scale, limited current network footprint on which to build 5G sites, and cost of utilizing 2.5 GHz (the only

⁶³ Draper Decl. at ¶¶16-20; Draper Reply Decl. at ¶¶18, 20.

⁶⁴ Draper Reply Decl. at ¶¶11-12, 14.

⁶⁵ See, e.g., Comments of AT&T Services, Inc., WT Docket No. 18-197, at 11 (filed Aug. 27, 2018) (“*AT&T Comments*”); Petition to Condition, or in the Alternative Deny of Cellular South d/b/a/ C Spire, WT Docket No. 18-197, at 7 (filed Aug. 27, 2018) (“*C Spire Petition*”); *DISH Petition* at 15-16; Petition to Deny of Public Knowledge et al., WT Docket No. 18-197, at 23-24 (filed Aug. 27, 2018) (“*Public Knowledge et al. Petition*”); Petition to Deny of the Rural Wireless Association, Inc., WT Docket No. 18-197, at 5 (filed Aug. 27, 2018) (“*RWA Petition*”).

⁶⁶ See Draper Decl. at ¶¶16, 22, 28; Draper Reply Decl. at ¶6.

⁶⁷ See, e.g., Comments of Communications Workers of America, WT Docket No. 18-197, at 39-40 (filed Aug. 27, 2018) (“*CWA Comments*”); *DISH Petition* at 15-16; 23-24; Petition to Deny of Free Press, WT Docket No. 18-197, at 58 (filed Aug. 27, 2018) (“*Free Press Petition*”).

spectrum on which Sprint plans to launch 5G as a coverage layer). Accordingly, Sprint’s standalone 5G network will be geographically limited and cover just 150 million POPs by 2020.⁶⁸ Although Sprint is significantly increasing its network investment to pursue a 5G network, much of that planned investment is actually targeted at improving the company’s LTE network.⁶⁹ In addition, as a standalone company, Sprint will need to reserve significant amounts of 2.5 GHz spectrum for LTE for the foreseeable future, whereas New T-Mobile will be able to fully unlock the value of these spectrum holdings by deploying more spectrum faster in a nationwide 5G network.

- **Sprint’s recent promotional practices are not sustainable or effective.**⁷⁰ As described above and in Mr. Draper’s declarations, Sprint’s recent pricing practices are unsustainable and have not resulted in improvements to scale or long-term growth in net adds sufficient to justify their cost.⁷¹

Absent the merger, the likely result of the business challenges facing Sprint, coupled with its recent performance, is a company that focuses on investment and competition in the limited geographies where it can profitably invest. This more regional focus and lack of resources would lessen Sprint’s ability to operate as a competitive constraint on the decisions of other wireless carriers, and particularly the other three nationwide carriers.

F. Mergers in the Past, in Other Industries and Around the World Do Not Inform the Transaction-Specific Effects of T-Mobile and Sprint Merger

DISH and others suggest that the review of the T-Mobile and Sprint merger should be informed by the failed AT&T/T-Mobile merger, other unrelated domestic transactions, decisions by international regulators on “four to three” mergers, or experiences in countries with “three carrier” market structures. However, the details of other mergers and markets are not relevant here. As an initial matter, the Commission engages in a transaction-specific review of proposed

⁶⁸ Draper Reply Decl. at ¶12.

⁶⁹ *Id.*; Saw Decl. at ¶22.

⁷⁰ See e.g., *C Spire Petition* at 12; *Free Press Petition* at 38; *Public Knowledge et al. Petition* at 9.

⁷¹ Draper Decl. at ¶5; Draper Reply Decl. at ¶14.

mergers.⁷² The Communications Act directs the Commission to conduct review of the particular public interest benefits and harms arising from a transfer of control. Under the Commission’s broad standard of review, there is no pre-set right or wrong answer based on the number of providers in a market.⁷³ Instead, the review process solicits showings of merger-specific benefits and evaluations of merger-specific harms. The Communications Act also bars the Commission from considering alternative transactions instead of the one submitted by Applicants.⁷⁴

As detailed in the PIS and explicated further in this Opposition, the combination of T-Mobile and Sprint will produce substantial consumer benefits and intensify competition. In contrast to DISH and its economists’ analogies to mergers in the past or outside the United States, the Applicants are not opining in a generalized or abstract way about whether three-firm markets are as competitive as four-firm markets, or analogizing to other, unrelated industries or countries. Rather, the Applicants have demonstrated that this particular merger of two smaller

⁷² See 47 U.S.C. §§ 214(a), 310(d). See also *AT&T Inc. BellSouth Corp. Application for Transfer of Control*, Memorandum Opinion and Order, 22 FC Rcd 5662, 5671-72 ¶19 (2007). Noting that the Commission’s review is centered entirely on the proposed transaction, and whether the transfer of control will serve the “public interest, convenience, and necessity.” Additionally the Commission has noted that it will only address harms that are merger-specific. See, e.g., *SBC Communications Inc. and AT&T Corp. Applications for Approval of Transfer of Control*, Memorandum Opinion and Order, 20 FCC Rcd 18290, 18303 ¶19 (2005); *Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corporation for Consent to Transfer Control of Licenses and Authorizations et al.*, Memorandum Opinion and Order, 19 FCC Rcd 21522, 21545-46 ¶43 (2004); *Applications of Nextel Partners, Inc. Transferor, and Nextel WIP Corp. and Sprint Nextel Corporation, Transferees, for Consent to Transfer Control of Licenses and Authorizations*, Memorandum Opinion and Order, 21 FCC Rcd 7358, 7361 ¶9 (2006).

⁷³ *Applications for Consent to the Transfer of Control of Licenses XM Satellite Radio Holdings Inc., Transferor to Sirius Satellite Radio Inc., Transferee*, Memorandum Opinion and Order and Report and Order, 23 FCC Rcd 12348, 12374 ¶51 (2008) (“Under these worst case assumptions therefore, the proposed merger is a merger to monopoly.”).

⁷⁴ 47 U.S.C. § 310(d).

competitors in the U.S. wireless industry enhances consumer welfare because it creates capacity gains and lower costs, while enabling robust competition against two much larger competitors.

DISH cites to the proposed AT&T/T-Mobile merger in 2011 without acknowledging obvious differences between the transactions, most notably that this merger combines the number three and four carriers whereas in that failed merger attempt, the resulting third provider would have had only a 15 percent market share with Verizon roughly twice its size and AT&T holding nearly half the market on its own.⁷⁵ Here, the transaction is creating a stronger maverick to compete with two larger incumbents. In addition, the result of the merger would not just be significantly increased capacity at lower prices for customers on the New T-Mobile nationwide 5G network, but capacity increases with price decreases for all wireless customers flowing from the competitive responses of Verizon and AT&T. Ironically, in the context of AT&T's proposed merger with T-Mobile, DISH's own economist here, Coleman Bazelon, recognized the importance and benefits of capacity increases in assessing mergers as well as the positive effects of network investments for the economy and for jobs.⁷⁶

With respect to mergers in other countries, their relevance is even more attenuated by a multiplicity of different market, regulatory and local conditions or circumstances.⁷⁷ There is

⁷⁵ See *US. v. AT&T Inc., T-Mobile USA, Inc. and Deutsche Telekom AG*, Department of Justice Complaint, Case 1:11-cv-01560 (D.C. Cir. 2011).

⁷⁶ *Brattle Principal Coleman Bazelon at California Public Utilities Commission Public Workshop: Proposed Acquisition by AT&T of T-Mobile: Effect of the Proposed Merger on Service Quality, Consumer Services, Employment, and California's Economy* at 192 (July 22, 2011).

⁷⁷ DISH's economist referencing to a 2014 Organisation for Economic Co-operation and Development (OECD) Report, based on 11 case studies, claim that "increased industry concentration [] is often associated with diminished innovation, both in general and in the wireless communication sector in particular." Sappington Decl. at 4. Dr. Evans, however, shows that "The OECD Report does not demonstrate that reducing the number of carriers below four leads to lower improvements in data capacity, speeds, latency, or other metrics of network performance. Nor does the OECD Report present a systematic investigation of how carrier

little point in belaboring or rebutting the examples offered by petitioners.⁷⁸ However, it is worth noting that in looking ahead to 5G and the associated infrastructure costs, the United Kingdom’s Office of Communication recently observed that “[a]s far as the Government is concerned, there is no magic number of mobile network operators. Each merger control case should be assessed on its merits at a particular time, by the relevant authorities.”⁷⁹

G. The Proposed Transaction, and the Spectrum Aggregation Involved, Is in the Public Interest and Arguments to the Contrary Are Unsubstantiated and Unpersuasive

As discussed in the PIS, the FCC has used a series of “screens” to identify the local geographic areas that can be excluded from its review of the competitive effects of a proposed wireless transaction.⁸⁰ The two principal screens currently employed for transaction review include: (i) a spectrum screen that assesses whether the transaction would result in the aggregation of more than one-third of the available spectrum for mobile broadband services; and (ii) a screen based on the Herfindahl-Hirschman index (“HHI”).⁸¹ Various petitioners have

investment evolved over time in the markets considered or how industry investment changes with the number of carriers. [] Yet industry investment has been the source of the dramatic improvements in data capacity, data speeds, latency, or other aspects of network performance by cellular carriers globally. Indeed, when it comes to innovation, investment in successive generations of wireless technology has been the main story of the cellular industry for decades.” See Evans Reply Decl. at ¶17 n.39.

⁷⁸ Petition to Deny of the American Antitrust Institute, WT Docket No. 18-197, at 11 (filed Aug. 27, 2018) (“AAI Petition”); *DISH Petition* at 7-9, 66-68, 78-80; *Public Knowledge et al. Petition* at 11.

⁷⁹ United Kingdom Department for Digital, Culture, Media & Sport, *Future Telecoms Infrastructure Review*, at ¶190 (July 23, 2018), <https://www.gov.uk/government/publications/future-telecoms-infrastructure-review>. Note that these relevant authorities include European Union member countries’ communications regulator, and the EU’s European Commission.

⁸⁰ PIS at Section IV.E.

⁸¹ The HHI trigger is exceeded if the transaction results in a post-closing HHI of 2800 or more with a change of 100 or more points or a change of 250 or more points, regardless of the post-closing index. *SprintCom, Inc., Shenandoah Personal Communications, LLC, and NTELOS*

stated that the combined company would exceed the FCC’s “spectrum screen” or HHI thresholds in a large number of local markets and that, therefore, the transaction should be denied or divestiture of spectrum required as a condition of closing.⁸² The FCC should reject these unsubstantiated arguments and confirm the competitive and other public interest benefits of the proposed merger.

The petitioners misstate the function and import of the competitive screens. The FCC spectrum screen rule provides only that proponents of spectrum transactions “must demonstrate that the public interest, convenience, and necessity will be served [by the spectrum acquisition],” noting that “[t]he Commission will evaluate any such license application consistent with the

Holdings Corp., 31 FCC Rcd 3631, 3639 ¶17 (2017). The FCC also employs a millimeter wave screen that is triggered if applicants aggregate more than one-third of the available millimeter wave spectrum; that screen is not relevant to the proposed transaction. *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services*, GN Docket No. 14-177 at ¶¶35-36 (rel. June 8, 2018). The FCC additionally has indicated that it will “treat certain further concentration of below-1-GHz spectrum as an enhanced factor in our case-by-case analysis of the potential competitive harms posed by individual transactions.” *Policies Regarding Mobile Spectrum Holdings*, 29 FCC Rcd 6133, 6239 ¶283 (2014) (“*Mobile Spectrum Holdings Order*”). The Applicants provided an exhibit addressing those enhanced factors in their original filing. See PIS, Appx. J.

⁸² Petition to Condition or Deny of Altice USA, Inc., WT Docket No. 18-197, at 19-22 (filed Aug. 27, 2018) (“*Altice Petition*”); AAI Petition at 7; Petition to Deny of Broadcast Data Corp., WT Docket No. 18-197, at 6 (filed Aug. 27, 2018) (“*BDC Petition*”); *C Spire Petition* at 14; *CWA Comments* at 16, 22-23; *DISH Petition* at 70-75; *Free Press Petition* at 24; Comments of Frontier Communications and Windstream Services, LLC, WT Docket No. 18-197, at 1-2, 5 (filed Aug. 27, 2018) (“*Frontier/Windstream Comments*”); Petition to Deny of Liberty Cablevision of Puerto Rico LLC, WT Docket No. 18-197, at 9 (filed Aug. 27, 2018) (“*Liberty Petition*”); Petition to Deny of NTCA-The Rural Broadband Association, WT Docket No. 18-197, at 12 (filed Aug. 27, 2018) (“*NTCA Petition*”); *Public Knowledge et al. Petition* at 6-7; Petition to Condition or Deny of the Rural South Carolina Operators, WT Docket No. 18-197, at 4-5 (filed Aug. 27, 2018) (“*RSCO Petition*”); *RWA Petition* at 18; Petition to Deny of Union Telephone Company *et al.*, WT Docket No. 18-197, at 29-31 (filed Aug. 27, 2018) (“*Union Tel. et al. Petition*”); Petition to Deny of Voqal, WT Docket No. 18-197, at 17-18 (filed Aug. 27, 2018) (“*Voqal Petition*”).

policies set forth in [the *Mobile Spectrum Holdings Order*].”⁸³ The Commission has been clear that the spectrum and HHI screens are simply tools to “identify those local markets in which no competitive harm clearly arises from the transaction.”⁸⁴ In other words, the fact that a screen is exceeded does not result in a presumption of harm, but merely means that the Applicants do not qualify for a streamlined process exempting that local market from standard competitive review. Local markets where a screen is triggered, therefore, are *not* markets where the proposed aggregation is presumptively anticompetitive, but rather markets where case-by-case review is warranted. And while petitioners note that the proposed transaction triggers this routine competitive review in a large number of local markets, the number of markets subject to review is not a factor in the competitive analysis, much less dispositive to that review. The FCC conducts its post-screen competitive analysis on a local-market-by-local-market basis, considering a variety of competitive factors in those triggered markets.

Consistent with the Commission’s framework, the Applicants explain below the absence of local competitive harms and why review of the transaction’s effects on local markets demonstrates that the merger will affirmatively stimulate competition, not harm it. The Applicants also describe why the Commission’s preliminary screens overstate the potential for competitive harm (which is not surprising given their purpose). Finally, Applicants demonstrate

⁸³ 47 C.F.R. §20.22(a).

⁸⁴ *Applications of AT&T Inc. and Centennial Communications Corp. for Consent to Transfer Control of Licenses, Authorizations, and Spectrum Leasing Arrangements*, Memorandum Opinion and Order, 24 FCC Rcd 13915, 13931 ¶34 (2009) (“AT&T/Centennial Order”). See also *Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corporation for Consent to Transfer Control of Licenses and Authorizations, et al.*, Files No. 000165065, Memorandum Opinion and Order, WT Docket No. 04-70, 19 FCC Rcd. 21522, 21568 ¶108 (2004); *Applications of AT&T Inc. and Cellco Partnership d/b/a Verizon Wireless for Consent to Assign or Transfer Control of Licenses and Authorizations and Modify a Spectrum Leasing Arrangement*, WT Docket No. 09-104, Memorandum Opinion and Order, 25 FCC Rcd 8704, 8720-21 ¶32 (2010).

that, in the absence of any evidence of anticompetitive harm in any local market, spectrum divestitures would not serve any legitimate competitive purpose.

1. In Contrast to the Documented Pro-Competitive Effects of the Transaction, Petitioners and Commenters Have Failed to Provide Evidence of Anticompetitive Harm in Any Local Market

While the spectrum screen figures prominently in a number of petitions and comments, none of the opponents have provided evidence suggesting that any triggered local market has specific characteristics that would create the potential for anticompetitive harm. Instead, they wrongly argue that the screen is effectively a cap,⁸⁵ that specific spectrum bands are “markets” being monopolized by the Applicants,⁸⁶ or that the Applicants are “liberalizing” the screen in some manner.⁸⁷ Some of these arguments are not even transaction-specific. For example, T-Mobile has no 2.5 GHz spectrum and therefore will not contribute to any perceived “concentration” in that band, but petitioners somehow claim otherwise. Other commenters assert

⁸⁵ *Altice Petition* at 21 (consent to the transaction should be conditioned on “divesting spectrum that exceeds the spectrum screen”); *Frontier/Windstream Comments* at 1 (“[t]he Commission should . . . require the companies to divest where . . . the joint companies would hold more than one-third of low- and mid-band spectrum and where the companies hold more than one-third of mmW spectrum”); *Union Tel. et al. Petition* at 35, 45 (“[t]he Commission should impose an across-the-board divestiture of spectrum so that New T-Mobile holds no more than 238.5 MHz of spectrum in any county”).

⁸⁶ *BDC Petition* at 3 (“[t]he Merger Transaction would enhance Sprint’s monopolization of BRS/EBS spectrum”); *RSOC Petition* at 1-2 (arguing Sprint holds all 2.5 GHz spectrum in South Carolina); *Voqal Petition* at 10 (the FCC “should treat the market for 2.5 spectrum as a properly-defined product market”). The 2.5 GHz spectrum is not a “market.” In fact, the FCC includes 2.5 GHz spectrum with a variety of other bands in a blended spectrum screen based on an input spectrum market for the provision of broadband mobile services. Moreover, even if 2.5 GHz were somehow misconstrued as having isolated relevance, T-Mobile has no 2.5 GHz spectrum and therefore there is nothing about the merger that would increase or alter concentration in that band.

⁸⁷ *Liberty Petition* at 8; *RWA Petition* at 18 (suggesting inclusion of 600 MHz and AWS-3 bands may not be warranted despite clear FCC pronouncements to the contrary). *See also Mobile Spectrum Holdings Order*, 29 FCC Rcd at 6178.

that the Applicants have tried to obfuscate or make it difficult for filers to analyze the aggregation data, an allegation already rejected by the FCC,⁸⁸ or completely misapply the relevant screens.⁸⁹ Mostly, however, the opponents simply refer to purportedly relevant catalogs of screen overages⁹⁰ and suggest that the existence of an overage by itself is a presumptive harm that must be remedied, making circular arguments such as “[t]he most apparent and detrimental competitive harm will be Sprint/T-Mobile’s increased spectrum aggregation.”⁹¹ Under unequivocal FCC policy, however, aggregation of spectrum above the screen is not itself presumptively anticompetitive; it merely means those markets are not exempted from local competitive review.

⁸⁸ *Applications of T-Mobile US, Inc. and Sprint Corporation*, Order, DA 18-870 (Aug. 22, 2018). See *RWA Petition* at 21 n.41 (“[t]he data provided by the Applicants is not in a format that could be readily used to make the determinations necessary,” notwithstanding that the data was easily saved as a manipulatable Excel file); *Frontier/Windstream Comments* at 3 n.1 (“the Applicants have not provided the information regarding how the screens were exceeded directly, and substantial manipulation of data was required,” suggesting that summing the data provided in columns and applying the FCC’s multiplier to EBS is an unwarranted burden).

⁸⁹ *Frontier/Windstream* argues the transaction proponents “would exceed the mmW screen in 71 county or county-equivalents,” notwithstanding that Sprint only holds mmW spectrum in one county in Alaska and the Applicants are one gigahertz below the mmW screen in every county in the United States. *Frontier/Windstream Comments* at 2. Applicants hold no more than 850 MHz of mmW spectrum in any county and the FCC’s mmW screen is 1850 MHz. See *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services*, 32 FCC Rcd 10988, 11011 (2017).

⁹⁰ *BDC Petition* at 3 (purported monopolization of 2.5 GHz spectrum in one Florida market); *C Spire Petition* at 14 (overages in significant areas of the country); *DISH Petition* at 70-72 (overages only considering “the spectrum holdings of the Big 4 facilities-based carriers”); *Frontier/Windstream Comments* at 2 (counties where Applicants exceed the screen by various amounts); *NTCA* at 12 (percentage of rural counties); *Public Knowledge et al. Petition* at 7 (top 20 markets where screen is exceeded); *RSOC Petition* at 4 (counties in South Carolina); *RWA Petition* at 18 (percentage of most populous counties and percent of counties in each state); *Union Tel. et al. Petition* at 29-31 (percentage of counties served by specific carriers); *Voqal Petition* at 17-18 (percentage of first 400 counties where screen is exceeded by more than 10 percent).

⁹¹ *RSOC Petition* at 5.

The few commenters that cite *any* local competitive factors clearly miss the mark. The Rural Wireless Association (“RWA”) provides coverage maps of Alpine County, California, and Benton County, Mississippi. However, neither mapping exercise shows that a competitive issue exists. The FCC has repeatedly held that the relevant geographic markets for its local competitive analysis are CMAs,⁹² so a county-based focus is too narrow. In both the California 3 CMA (which contains Alpine County) and the Mississippi 2 CMA (which contains Benton County), Applicants are a distant third and fourth by market share and would have less than ten percent combined market share. It is not credible to suggest that the merger would enhance the potential for competitive harm in a local market when the post-merger entity would have only single digit market share in that CMA.

The only other commenter to raise specific local market concerns was Liberty Cablevision of Puerto Rico LLC (“Liberty”). Liberty, which holds a monopoly on cable service in Puerto Rico, emerges to complain about threats to wireless competition. Liberty, of course, has no wireless business and has never sought to acquire spectrum or become a wireless company. In the face of merger-related plans to bring broadband and cable competition to Puerto Rico, Liberty seeks to block or impair broadband and cable choice for consumers in those local markets. Notwithstanding Liberty’s self-serving comments, the wireless marketplace in Puerto Rico is plainly competitive, and Liberty’s “there is no Verizon” argument ignores the presence of the Puerto Rico Telephone Company (“PRTC”), which has a significant share of the Puerto Rico CMAs and is part of the largest wireless operation in Latin America.⁹³

⁹² See, e.g., *Application of AT&T Inc. and Qualcomm Incorporated*, 26 FCC Rcd 17589, 17603 ¶32 (2011) (“*AT&T/Qualcomm Order*”).

⁹³ Liberty tries to argue that “[t]he Applicants have not attempted to make the required [enhanced factor] showing for Puerto Rico.” See *Liberty Petition* at 9. However, Applicants’ Appendix J, titled “Low-Band Spectrum Aggregation,” contains extensive factual detail on Puerto Rico. See

2. The FCC’s Local Market Review Should Conclude that the Transaction Is Pro-Competitive

In the PIS, Applicants extensively documented the pro-competitive benefits of the merger, which will enhance wireless and broadband competition and benefit consumers on both a national and local basis.⁹⁴ These competitive benefits are further underpinned by the merger simulation and the accompanying declaration of Compass Lexecon.⁹⁵ The empirical modeling demonstrates that the merger will result in substantial increases in New T-Mobile’s network capacity, as compared to the sum of the standalone companies, with incentives for New T-Mobile to price that capacity to provide greater value to consumers.⁹⁶ Significantly, the transaction will generate these competitive benefits even in local areas in which spectrum aggregation would be above the FCC’s screen threshold.

In deploying its nationwide 5G network, New T-Mobile will deliver improved speeds, capacity, and capabilities to almost every local market in the country and bring increased competition to Verizon (or PRTC), AT&T, and other competitors. In so doing, New T-Mobile will fully utilize the combined and complementary spectrum resulting from the merger to accelerate the transition to the delivery of spectrally efficient and advanced 5G services. To the extent that foreclosure is one of the policy concerns the spectrum screen attempts to address, the engineering model⁹⁷ shows that New T-Mobile will intensively use its spectrum and this

PIS, Appx. J at 5-10. As noted in that Appendix, AT&T and PRTC, or their predecessors-in-interest, were the original 850 MHz cellular licensees on the islands, and their current market share reflects the advantages of long-time incumbents.

⁹⁴ PIS at Section III.

⁹⁵ See generally Compass Lexecon Decl.

⁹⁶ See *supra* Sections I.B-I.D.

⁹⁷ See Specification 13 Exhibit A Engineering Model submitted with Response to Information Request by T-Mobile US, Inc., WT Docket No. 18-197 (Sept. 5, 2018).

demonstrates that it is not acquiring the spectrum for the purpose of denying assets to competitors. The engineering model also documents the particular synergies that arise from combining the spectrum of these two companies, and how the full use of the spectrum is necessary to deliver a 5G network with the consumer benefits documented in the PIS. These compelling public interest benefits easily overshadow any speculative concerns about local competition advanced by petitioners.

The PIS specifically addressed the local market review undertaken by the FCC. The FCC has said that local-market-by-local-market analysis “consider[s] variables that . . . are important for predicting the incentive and ability of service providers to successfully restrict competition on price or non-price terms.”⁹⁸ These variables include a wide range of factors, including “the total number of rival service providers,” “the coverage of the firms’ respective networks,” and “the spectrum holdings of each of the rival service providers,” among many other factors.⁹⁹ The FCC has added that, “[i]n reaching determinations [under this analysis], we balance these factors on a market-specific basis, and consider the totality of the circumstances in each market.”¹⁰⁰

The Applicants have provided extensive data in their initial filing addressing factors relevant to competitive review.¹⁰¹ While the context of that discussion was the national market, the unilateral and coordinated effects discussions in the PIS are equally compelling with respect to a local market review.¹⁰² The PIS also discussed the results of the Applicants’ analysis of

⁹⁸ *Applications of Cellco Partnership d/b/a Verizon Wireless and Atlantis Holdings LLC*, 23 FCC Rcd 17444, 17487-88 ¶91 (2008).

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ PIS at Section II.

¹⁰² *Id.* at Section IV.E.

local market coverage effects, which were conservatively based on the FCC Form 477 mobile coverage data for the end of 2016.¹⁰³ Applicants calculated the number of “genuine” competitors in each CMA and found that, with only one exception, there were no markets where both T-Mobile and Sprint were considered competitors, but where Verizon and AT&T were not also considered competitors.¹⁰⁴ The sole exception was in Puerto Rico, where, as noted, Verizon does not have a presence but PRTC is a strong wireless competitor.¹⁰⁵ Accordingly, the transaction would not cause the number of genuine competitors to be reduced below three in any local market.

New T-Mobile will have the incentive to compete aggressively against its larger, more diversified rivals. As explained in the PIS, New T-Mobile will have incentives to monetize the added capacity of its network through the broadest possible base of customers.¹⁰⁶ New T-Mobile will use merger efficiencies to create further competitive inducements for potential customers by delivering more value for less money. New T-Mobile will also be motivated to enhance its ability to compete more effectively in areas where it has a lower customer share and where greater growth in SoGA is possible, such as in rural areas.¹⁰⁷ There is no credible threat of harmful unilateral conduct by New T-Mobile.

Further, in addition to traditional wireless market participants, a number of large telecom and media companies are entering the wireless industry and will have increasing competitive impact, particularly with respect to 5G. Comcast and Charter are now each offering a wireless

¹⁰³ *Id.*

¹⁰⁴ *Id.* at 136.

¹⁰⁵ *Id.*

¹⁰⁶ *Id.* at Section IV.D.2.

¹⁰⁷ *Id.*

service and DISH has announced near-term plans for both a narrowband IoT network and a 5G network.¹⁰⁸ These companies are well-established, well-capitalized and have widely recognized brands. They operate over competitively significant regions, have millions of customers for cross-selling wireless services, and have access to the necessary spectrum, equipment, network facilities and programming to offer an attractive competitive service. Significantly, any post-merger attempt at coordinated conduct by the traditional wireless carriers would disproportionately favor these new wireless service providers, a fact that further reduces the already remote likelihood of such coordination.

3. Accounting for the Relative Utility of Different Spectrum Bands, a Review of Markets Triggered by the Spectrum Screen Demonstrates That the Proposed Merger Does Not Raise Competitive Concerns

While the FCC’s spectrum screen is formulaic in application, the FCC’s competitive review in local markets triggered by the screen considers a broad variety of factors, as discussed above. Despite the flexible nature of this analysis, some petitioners suggest that the spectrum screen rigidly compels the FCC to mandate spectrum divestitures, or that the size or scope of the screen variances require denial of the transaction.¹⁰⁹ This flawed argument is undercut not only by the evidence of competitive benefits in the merger simulation and the accompanying declaration of Compass Lexecon, but also by the characteristics of the spectrum that would be

¹⁰⁸ Contrary to Charter’s protestations that it is not much of a competitive player in the wireless market (*Charter Comments* at 1-6), Charter recently touted that it offers “the best network and the best devices, all at the best value in the market.” See Charter, *Charter Launches Spectrum Mobile: A Smarter Network Designed for the Future* (Sept. 4, 2018), <https://newsroom.charter.com/press-releases/charter-launches-spectrum-mobile-a-smarter-network-designed-for-the-future/>.

¹⁰⁹ *Altice Petition* at 21; *BDC Petition* at 6; *C Spire Petition* at 14; *CWA Comments* at 16, 22-23; *DISH Petition* at 70-75; *Frontier/Windstream Comments* at 1-2, 5; *Liberty Petition* at 9; *NTCA Petition* at 12; *Public Knowledge et al. Petition* at 6-7; *RSCO Petition* at 4-5; *RWA Petition* at 18; *Union Tel. et al. Petition* at 29-31; *Voqal Petition* at 17-18.

aggregated by the proposed transaction. As the Applicants discuss below, a rational evaluation of New T-Mobile’s prospective spectrum holdings supports a finding that the proposed combination will not create anticompetitive problems.

Local competition analysis in the mobile broadband market cannot be reduced to a simple, one-dimensional proxy, such as the extent of wireless operators’ spectrum holdings. As has been repeatedly pointed out, the FCC’s spectrum screen currently has limited utility in assessing wireless competition, because the screen does not recognize that different spectrum bands have different characteristics and values for wireless carriers. In fact, there have been recurring suggestions that this key defect be addressed, including requests by both T-Mobile and Sprint that pre-date this transaction.¹¹⁰ The FCC has explicitly considered mechanisms to adjust for differential spectrum values, and even recognized that “there are significant differences in deployment costs between low-band and high-band spectrum.”¹¹¹ Indeed, the Commission has recognized that “in principal, spectrum weighting has the potential to enhance the . . . competitive analysis of proposed spectrum acquisitions.”¹¹² Rather than adopting a “weighted screen” that accords varying weights to different bands, however, the FCC ultimately concluded that it would, rather than adjust the screen, “consider those differences as a key factor in its case

¹¹⁰ Reply Declaration of Peter Cramton, Application of Cellco Partnership d/b/a Verizon Wireless and SpectrumCo LLC for Consent to Assign Licenses, WT Docket No. 12-4 (filed Mar. 26, 2012); Petition to Deny of Free Press, WT Docket No. 12-4, at 10-19 (filed Feb. 21, 2012); Reply Comments of Free Press, WT Docket No. 12-4, at 23-25 (filed Mar. 26, 2012); Letter from Harold Feld, Senior Vice President, Public Knowledge, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 12-4, at 3 (filed Apr. 30, 2012); Comments of Sprint Nextel Corporation, WT Docket 12-269, at 6-8 (filed Nov. 28, 2012); Comments of T-Mobile USA, Inc., WT Docket No. 12-269, at 14-17 (filed Nov. 28, 2012); Letter from Lawrence Krevor, Sprint Nextel Corporation, to Marlene Dortch, Secretary, Federal Communications Commission, WT Docket No. 12-269 (filed May 5, 2017).

¹¹¹ *Policies Regarding Mobile Spectrum Holdings*, 30 FCC Rcd 8635, 8642 ¶15 (2015).

¹¹² *Id.*

by-case review of proposed secondary market transactions moving forward.”¹¹³ The FCC, in effect found that it was unnecessary to take on the administrative complexity of a weighted screen, since “the revised screen would not ‘prevent’ any transactions because ‘it is a screen, not a cap’ and the Commission retains the authority to approve transactions that trigger the screen.”¹¹⁴ Thus, even though the FCC did not apply a weighted screen in identifying local markets deserving of streamlined processing, it found that spectrum weighting was *prima facie* relevant to the FCC’s competitive analysis in local markets triggered by the screen.

If value-weighting were applied to the aggregation of spectrum contemplated in this transaction, the Commission would have to consider the inherent differences between higher band “capacity” spectrum and lower band “coverage” spectrum. Indeed, in adopting a separate screen for millimeter wave spectrum, the Commission has already acknowledged that not all megahertz are, in fact, equal. Millimeter wave spectrum is plainly being deployed for 5G wireless services, and is viewed by the Commission as a primary band for 5G.¹¹⁵ And, as shown in Appendix L-2 of the PIS, Verizon and AT&T hold far more spectrum in the millimeter wave bands than T-Mobile and Sprint combined, and have aggressively touted the usefulness and value of this spectrum.¹¹⁶ In fact, Verizon and AT&T largely base their 5G strategies on this spectrum. In that regard, as shown in Figure 1 below, Verizon has heavily emphasized the benefits of its “[i]ndustry leading spectrum assets for 5G” when talking to investors:

¹¹³ *Id.*

¹¹⁴ *Id.* at 8642 ¶17.

¹¹⁵ *See, e.g., Use of Spectrum Bands Above 24 GHz For Mobile Radio Services*, GN Docket No. 14-177 at ¶1 (rel. Aug. 3, 2018) (noting 37 and 39 GHz bands are “critical opportunity” for 5G).

¹¹⁶ *See* PIS at Appx. L-2.

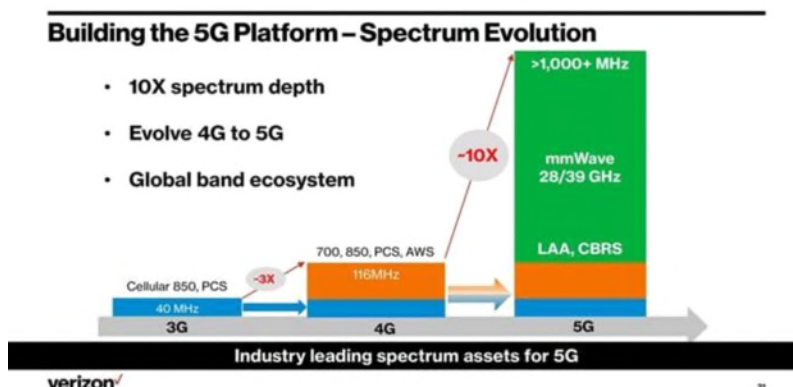


Figure 1: Verizon Investor Presentation Slide¹¹⁷

Simply put, the Commission should not overemphasize the importance of its one-dimensional, band-insensitive screen mechanism as it undertakes a comprehensive competitive analysis of this transaction.

4. The FCC’s HHI Triggers Are Similarly Not Dispositive in Competitive Analysis

Like the spectrum screen, the HHI screen is a crude proxy for competition. Indeed, the Department of Justice and the Federal Trade Commission’s *Horizontal Merger Guidelines* state explicitly that “[t]he purpose of these thresholds is not to provide a rigid screen to separate competitively benign mergers from anticompetitive ones,” and that the HHIs “provide one way to identify some mergers unlikely to raise competitive concerns and some others for which it is particularly important to examine whether other competitive factors confirm, reinforce, or counteract the potentially harmful effects of increased concentration.”¹¹⁸ Thus, like the spectrum screen, application of the HHI screen represents the beginning of a competitive analysis, not the end. As the Applicants have demonstrated, this merger is pro-competitive, it will result in

¹¹⁷ Verizon Investor Presentation Slideshow, SEEKINGALPHA (May 21, 2018), <https://seekingalpha.com/article/4176248-verizon-vz-investor-presentation-slideshow>.

¹¹⁸ See DOJ/FTC Horizontal Merger Guidelines at §5.3.

substantial increases in capacity, improved service quality, and decreases in per gigabyte prices. Whether or not local market reviewed is triggered, the Applicants have met their burden of demonstrating that this particular transaction is in the public interest.

5. In the Absence of Any Showing of Local Anticompetitive Harms, Spectrum Divestitures Serve No Legitimate Competitive Purpose

As discussed above, petitioners have not shown anticompetitive harms in any local markets. Significantly, the existence of screen overages in local markets does not mean that the merger will harm competition in those markets. In urging the Commission to mandate spectrum divestitures or take the even more draconian step of denying the Applicants' applications, petitioners are insisting on a "solution" without demonstrating any problem, or even how this "solution" would enhance consumer welfare. In this circumstance, an FCC decision to force arbitrary divestitures of spectrum would be counterproductive because such divestitures would limit the pro-competitive benefits of the transaction. The engineering model demonstrates not only that New T-Mobile will intensively use the spectrum licensed to the company, but also that removing specific bands or decreasing its volume of spectrum will adversely impact the company's capacity, speed, and/or coverage. Fundamentally, as discussed above, any concerns regarding local markets are far outweighed by the enormous benefits to competition and consumers from the merger. If the Commission grants these divestiture requests, such action would be arbitrary and capricious and would cause substantial harm both to the Applicants and the public interest.

II. THE MERGER BENEFITS ALL SEGMENTS OF WIRELESS, THE COUNTRY AND AMERICAN JOBS

A. The Merger Is Necessary for the Companies to Build and Deploy a World Leading, Nationwide 5G Network

In the PIS, T-Mobile and Sprint established that the merger will accelerate the arrival of a 5G network with capabilities beyond what each company could provide on its own.¹¹⁹ No party in opposition argues that the combination of resources as contemplated by the transaction will not be capable of providing these benefits. Instead, opponents of the transaction have erroneously argued that: (1) T-Mobile and Sprint individually have plans to deploy robust 5G services;¹²⁰ (2) each of the two companies has more spectrum than needed to accomplish this outcome;¹²¹ (3) network integration would adversely affect consumers;¹²² and (4) there are other alternatives available (*e.g.*, new spectrum from auctions, roaming agreements, network sharing).¹²³

Although Sprint and T-Mobile will offer 5G on their own, both have limitations in what they can offer—*i.e.*, T-Mobile lacks capacity and Sprint lacks coverage. The Applicants have demonstrated that only the combined cell site and spectrum resources of the two companies will enable New T-Mobile to create a robust 5G network that can deliver the broad coverage, deep capacity, high data rates, and the first truly robust nationwide mobile 5G network. In addition to these direct benefits to wireless customers, this network—which cannot be developed on a

¹¹⁹ PIS at Section III.B.

¹²⁰ *See e.g., AAI Petition* at 17-18; *C Spire Petition* at 8-9; *CWA Comments* at 38; *DISH Petition* at 22-25; *Free Press Petition* at 51-52; *Public Knowledge et al. Petition* at 33; *Union Tel. et al. Petition* at 20.

¹²¹ *See id.*

¹²² *See e.g., AAI Petition* at 18; *DISH Petition* at 33-34.

¹²³ *See e.g., DISH Petition* at 33; *Free Press Petition* at 45-47; *Public Knowledge et al. Petition* at 35-36, 38; *RWA Petition* at 6; *Union Tel. et al. Petition* at 20-22.

standalone basis by either company—also will enable device designers and app developers to create platforms with capabilities that are not possible on the 5G network that Sprint or T-Mobile (or AT&T or Verizon) could offer on their own.

1. The Standalone Companies Cannot Match the Customer Experience Improvements of New T-Mobile

Petitioners and opposing commenters mistakenly insist that T-Mobile and Sprint each have all the spectrum and cell site resources they need to deploy robust standalone 5G networks and, therefore, that the merger is not needed. In particular, DISH, Public Knowledge *et al.*, Free Press, CWA, AAI, AT&T, Console, and C Spire all wrongly argue that T-Mobile and Sprint are each individually deploying 5G comparable to what New T-Mobile could achieve and therefore do not require the merger to compete against Verizon and AT&T for 5G services.¹²⁴ Free Press takes this argument further, inaccurately arguing that the capacity calculations contained in the PIS showed that the standalone companies will have sufficient capacity on their 5G systems to meet customer demands.¹²⁵ Public Knowledge *et al.* add incorrect assertions that the merged network's 5G capacity would improve by only 19 to 52 percent compared to LTE.¹²⁶ Based on these fundamental errors, opponents wrongly assert that the proposed merger is unnecessary to enable a robust and competitive 5G network deployment.¹²⁷

The PIS showed that only by combining resources to optimize sites and spectrum can New T-Mobile expeditiously deploy a 5G network with sufficient coverage and capacity to

¹²⁴ See AAI Petition at 17-18; AT&T Comments at 5-8; C Spire Petition at 6-11; Console Petition at 3; CWA Comments at 37-46; DISH Petition at 22; Free Press Petition at 51-55; Public Knowledge *et al.* Petition at 32-36.

¹²⁵ Free Press Petition at 59.

¹²⁶ Public Knowledge *et al.* Petition at 41.

¹²⁷ AT&T Comments at 10; CWA Comments at 47; DISH Petition at 2; Free Press Petition at 61.

compete for customers across all sectors of the economy and to do so without compromising service to existing 4G LTE customers.¹²⁸ As demonstrated in Neville Ray’s declaration, aggregating the two companies’ spectrum and site portfolios will dramatically increase capacity, reduce costs, and decrease the need to split existing spectrum between LTE and 5G.¹²⁹ By themselves, neither company has the resources—spectrum, cell sites, or capital—to build a 5G network on a scale comparable to New T-Mobile.¹³⁰ This point is buttressed by a recent filing by Nokia suggesting that the merger will allow New T-Mobile to offer “a more fulsome, capable, and rapid 5G deployment than it could without the addition of the Sprint assets.”¹³¹ Similarly, the declaration of John Saw explains the limitations of Sprint’s standalone 5G network and the benefits of combining Sprint’s and T-Mobile’s network assets.¹³²

Contrary to the claims of Free Press, simply having more available capacity than carried capacity does not mean that a network has “leftover” capacity to provide enhanced services to subscribers.¹³³ Carried capacity will *always* be less than the available capacity in a wireless network.¹³⁴ As was described in extensive detail in the Ray Declaration, offered/available capacity is necessarily greater than carried capacity because:

- Network capacity is created in advance of future demand materializing, with the typical planning being 18 months ahead of demand;
- Traffic is not uniformly distributed, resulting in some sites being more loaded than others;

¹²⁸ PIS at 19.

¹²⁹ Ray Decl. at ¶40.

¹³⁰ *Id.* at ¶22; Ewens Decl. at ¶3.

¹³¹ *See Ex Parte* Presentation of Nokia, WT Docket No. 18-197, at 2 (filed Aug. 30, 2017).

¹³² Saw Decl. at ¶23-33.

¹³³ *Free Press Petition* at 59.

¹³⁴ Ray Decl. at ¶53, Tables 4 and 5.

- Capacity frequently exceeds demand locally—in lightly loaded sites or sites built for coverage, all spectrum that the radio access hardware supports is deployed regardless of the actual demand;
- Some sites are built for coverage and have only sporadic demand; and
- The need to have adequate network capacity to handle busy hour peak demand results in lower capacity utilization during non-busy hours, as customer usage is not uniformly distributed throughout the day.¹³⁵

Furthermore, as detailed in the Ewens Reply declaration, under T-Mobile’s projections of increased subscriber data usage,¹³⁶ standalone T-Mobile’s current planned OpEx and CapEx levels for 2021-2024 would be insufficient to allow the company to meet 5G customer data demands while minimizing congestion on the network and maintaining an acceptable user experience.¹³⁷ Absent the merger, T-Mobile’s financial constraints would limit the standalone company’s ability to sufficiently increase OpEx and CapEx so as to meet growing data demands.¹³⁸ With respect to CapEx, standalone T-Mobile would be unable to significantly increase expenditure levels without also sacrificing the technology upgrades and expansion of coverage necessary for long term growth and service improvement.¹³⁹

Therefore, in attempting to manage the pressures of increased subscriber data demands without compromising user experience in a way that would be harmful to its business, standalone T-Mobile would be forced to choose some combination of increased network expenditures (OpEx and CapEx) and/or network management to restrict usage (*e.g.*, constraints on video

¹³⁵ *Id.* at ¶54.

¹³⁶ T-Mobile projects subscriber demands of [REDACTED] GB/Sub/Month in 2021, [REDACTED] in 2022, [REDACTED] in 2023, and [REDACTED] in 2024. *See* Reply Declaration of Peter Ewens, Executive Vice President, Corporate Strategy, T-Mobile US, Inc., Appx. C, at ¶31, Table A (“Ewens Reply Decl.”).

¹³⁷ *Id.*

¹³⁸ *Id.* at ¶32.

¹³⁹ *Id.* at ¶32.

throughput, data limits on mobile hotspot usage, and deprioritization of traffic in congested cells).¹⁴⁰ Although managing network resources to restrict traffic in this way would likely be the best course of action open to standalone T-Mobile, it could still significantly impair the company's ability to compete effectively with other providers that would be capable of offering less restrictive data usage.¹⁴¹ The fact that standalone T-Mobile would have to pursue such a course reflects the competitive challenges it would face absent the merger.

Additionally, Public Knowledge's suggestion of a 19 to 52 percent capacity improvement for 5G compared to LTE is inaccurate.¹⁴² Spectral efficiency, as carefully explained in the Ray Declaration, is only one component of capacity.¹⁴³ The full formula for determining wireless network capacity is actually:

$$\text{Number of cell sites} \times \text{Spectrum (MHz) Deployed Per Site} \times \text{Spectral Efficiency} = \text{Capacity}$$

When the increased number of cell sites, amount of spectrum deployed per cell site and improvement in spectral efficiency are multiplied together—the actual capacity of the combined 5G New T-Mobile network will improve by much more than 19 to 52 percent.¹⁴⁴ In fact, the combined network will more than *double* 5G monthly capacity by 2021 and nearly *triple* 5G monthly capacity by 2024 when compared to the combined 5G capacities of the standalone networks, as demonstrated in the tables below:¹⁴⁵

¹⁴⁰ *Id.* at ¶34.

¹⁴¹ *Id.* at ¶35.

¹⁴² *See Public Knowledge Petition* at 41.

¹⁴³ Ray Decl. at ¶23.

¹⁴⁴ *Id.*

¹⁴⁵ Reply Declaration of Neville R. Ray, Executive Vice President and Chief Technology Officer, T-Mobile US, Inc., Appx. B, at ¶¶20, 28 (“Ray Reply Decl.”).

Entity	2021 Average 5G Throughput (Mbps)	2021 Peak 5G Throughput (Mbps)
T-Mobile	32	1000
Sprint	57	300
New T-Mobile	153	1600

Table 1: Average and Peak 5G Throughput Comparisons

Entity	2024 Average 5G Throughput (Mbps)	2024 Peak 5G Throughput (Mbps)
T-Mobile	100	2800
Sprint	116	700
New T-Mobile	451	4200

Table 2: Average and Peak 5G Throughput Comparisons

Entity	2021 5G Monthly Capacity (Exabytes)	2024 5G Monthly Capacity (Exabytes)
T-Mobile	■	■
Sprint	■	■
New T-Mobile	7.1	21

Table 3: 5G Monthly Capacity (in addition to LTE)

Entity	2021 Average LTE Throughput(Mbps)	2024 Average LTE Throughput (Mbps)
T-Mobile	■	■
Sprint	■	■
New T-Mobile	■	■

Table 4: LTE Average Throughput (Years 2021 and 2024)

Entity	2021 LTE Capacity (Exabytes)	2024 LTE Capacity (Exabytes)
T-Mobile	█	█
Sprint	█	█
New T-Mobile	█	█

Table 5: LTE Capacity Per Month¹⁴⁶

Arguments that the standalone companies can produce the level of subscriber benefits demonstrated by the tables above ignore the multiplicative effect of combining the two companies’ spectrum and network assets, as well as the merger’s substantial synergies to support investment in a significant expansion of the reach of this 5G network. The transaction also allows New T-Mobile to create a network well-grounded in low-, mid-, and high-band spectrum with depth and breadth to accommodate all 5G use cases, including in rural and underserved areas. This spectrum diversity cannot be matched by either standalone company.¹⁴⁷

2. Petitioners’ Claims Ignore the Synergies the Transaction Will Produce

Petitioners also fail to recognize that the merger will not only provide necessary sites and spectrum, but will also create cost savings that are indispensable to New T-Mobile’s business plan and network plan. New T-Mobile’s financials identify approximately \$43.6 billion net present value (“NPV”) in synergies generated by the merger. Of the \$43.6 billion, the network synergies gained by eliminating the duplication of T-Mobile’s and Sprint’s existing networks constitute the largest share, approximately █, or █, of the massive cost

¹⁴⁶ The figures in these tables have shifted slightly from the PIS as a result of additional modeling that determined that more spectrum could be refarmed to 5G services more quickly than originally planned.

¹⁴⁷ Ray Reply Decl. at ¶5.

savings. Unleashing these synergies requires investment and has a cost to achieve of [REDACTED] [REDACTED] ([REDACTED] to decommission Sprint sites; [REDACTED] in incremental network investment for integration). These synergies are critical to New T-Mobile’s future growth and investment. As noted by Mike Sievert, the synergies “will free up financial resources that can be invested back in new network technology, innovation, and operations.”¹⁴⁸ None of these cost savings would be available under the non-merger alternatives that petitioners propose.

3. T-Mobile and Sprint Do Not Have Adequate Spectrum on Their Own to Refarm to 5G as Rapidly as New T-Mobile

Some opponents have incorrectly argued that T-Mobile and Sprint do not require all of their current spectrum to serve existing customer requirements because each company has fewer subscribers per megahertz and per cell site than either AT&T or Verizon.¹⁴⁹ These opponents ignore the effects of refarming on existing customers and have provided no technical analysis or other basis to demonstrate that the standalone companies could successfully refarm their spectrum to 5G without degrading LTE network performance for existing subscribers. T-Mobile and Sprint have provided their network plans, including refarming estimates, which pale in comparison to those of New T-Mobile and the resulting increases in capacity and throughput.¹⁵⁰

Spectrum refarming requires considerable care as an overly aggressive approach would adversely affect existing subscribers, leading to increased churn.¹⁵¹ Refarming depends upon two critical factors: (1) new technology device penetration levels and (2) the ability to provide

¹⁴⁸ Sievert Decl. at ¶15.

¹⁴⁹ See *DISH Petition* at 27; *AT&T Petition* at 10.

¹⁵⁰ Ray Reply Decl. at ¶19; see also PIS at 34, Table 1.

¹⁵¹ Ray Decl. at ¶40.

service continuity to existing customers with legacy devices.¹⁵² In the ordinary course, both T-Mobile and Sprint have developed refarming plans that migrate spectrum from LTE to 5G technology over time, carefully ensuring that the LTE performance will not degrade for existing customers.¹⁵³ If either company embarked upon a more aggressive refarming approach, its current LTE customers' user experience would degrade—which in turn would lead to lower customer satisfaction and customer defections to competitors.¹⁵⁴

In addition, assertions that a smaller subscriber base produces benefits for T-Mobile and Sprint are wholly inaccurate. In reality, rather than providing any inherent benefit, the standalone companies' smaller subscriber bases actually inhibit them from rapidly driving technology device penetration for new 5G-compatible devices.¹⁵⁵ While T-Mobile would rely upon 600 MHz spectrum for its 5G build and Sprint would utilize 2.5 GHz spectrum, no other wireless providers domestically are pushing the development of 5G devices for these spectrum bands.¹⁵⁶ With this market fragmentation, it is difficult to incentivize equipment vendors to expedite the design and sale of 5G devices or obtain significant scale discounts for the devices.¹⁵⁷

In contrast, New T-Mobile will have the spectrum resources and subscriber base to more rapidly refarm from LTE to 5G without sacrificing the existing LTE network performance.¹⁵⁸ Network modeling projections demonstrate that there will be no negative effects on LTE

¹⁵² *Id.* at ¶40.

¹⁵³ Ray Reply Decl. at ¶20.

¹⁵⁴ Ray Decl. at ¶40; Saw Decl. at ¶¶22-24.

¹⁵⁵ Ray Reply Decl. at ¶48.

¹⁵⁶ *Id.* at ¶46.

¹⁵⁷ *Id.* at ¶47; Saw Decl. at ¶9.

¹⁵⁸ Ray Decl. at ¶40.

performance during the refarming process, while the 5G network will vastly exceed the standalone capabilities of either T-Mobile or Sprint.¹⁵⁹ Furthermore, the size and scale of New T-Mobile will drive its 5G-capable device penetration rates up by 10 percent, year over year, because New T-Mobile will be able to offer a better value proposition to equipment manufacturers as a result of its expanded customer base.¹⁶⁰ In turn, this more rapid transition to new 5G devices will enable New T-Mobile to refarm spectrum from LTE to 5G in a much more expeditious fashion.¹⁶¹ The spectrum efficiency gains from expeditious refarming are possible only through this merger.¹⁶²

Furthermore, T-Mobile has extensive experience in refarming spectrum, and refarming spectrum from old to new technology has been instrumental to T-Mobile's network deployment strategy. Early in its transition to LTE, T-Mobile embarked upon an ambitious process of deploying a nationwide LTE network using the AWS-1, and later PCS, spectrum bands.¹⁶³ This refarming process consisted of turning off some of T-Mobile's UMTS/HSPA and GSM carriers while simultaneously activating an LTE carrier.¹⁶⁴ T-Mobile was the first carrier to use the same band of spectrum for both LTE and UMTS in the United States.

¹⁵⁹ *Id.* at ¶62; Ray Reply Decl. at ¶29.

¹⁶⁰ Ray Decl. at ¶40.

¹⁶¹ *Id.*

¹⁶² Ray Reply Decl. at ¶59.

¹⁶³ See, Phil Goldstein, *T-Mobile shutting of HSPA+ service on its AWS spectrum market by market*, FIERCEWIRELESS (June 23, 2015), <https://www.fiercewireless.com/wireless/t-mobile-shutting-off-hspa-service-its-aws-spectrum-market-by-market>.

¹⁶⁴ *Id.*

4. New T-Mobile’s Network Will Deliver Near Term Benefits to Existing Subscribers Through a Carefully Managed Transition

DISH argues, wrongly, that the transaction will not provide near term consumer benefits that would exceed the standalone plans of T-Mobile and Sprint.¹⁶⁵ DISH and AAI also incorrectly assert that the integration of New T-Mobile will create adverse effects on the user experience and that the radio build/tower improvement process will be impractical or impossible.¹⁶⁶ These arguments ignore the significant improvements in coverage and capacity that will be delivered to T-Mobile and Sprint customers early in the transition. They also overlook that the customer migration process to be used is virtually identical to one that T-Mobile implemented with great success when it acquired MetroPCS.¹⁶⁷

As verified in great detail in the Ray Reply Declaration, benefits to customers on the New T-Mobile network will accrue rapidly.¹⁶⁸ MOCN technology will allow for the T-Mobile and Sprint core networks to be virtually merged. Sprint estimates that there are more than 37 million compatible Sprint devices capable of accessing at least one T-Mobile LTE spectrum band, including more than 26 million Sprint postpaid devices.¹⁶⁹ Every single market in the New T-Mobile network will see customer migration from Sprint’s network within the first year of the merger.¹⁷⁰ Sprint customers without compatible devices will be transitioned through regular handset upgrade cycles and dedicated handset promotions.¹⁷¹ This transition will be completed

¹⁶⁵ *DISH Petition* at 12-22.

¹⁶⁶ *Id.* at 33-34; *AAI Petition* at 18.

¹⁶⁷ Ray Reply Decl. at ¶49.

¹⁶⁸ *Id.* at ¶39.

¹⁶⁹ See Reply Declaration of John Saw, Chief Technology Officer, Sprint Corporation, Appx. D, at ¶17 (“Saw Reply Decl.”).

¹⁷⁰ Ray Reply Decl. at ¶42.

¹⁷¹ *Id.* at ¶41 n.24.

three years after the deal closes—and is consistent with the highly successful process used to migrate MetroPCS customers, including use of MOCN and anchoring to the T-Mobile wireless network.¹⁷²

Customers utilizing the New T-Mobile network will have access to greatly improved data throughput and capacity capabilities.¹⁷³ These consumer benefits are due to the increased cell site and spectrum resources that result from combining the two companies and cannot be matched by either company on a standalone basis.¹⁷⁴ DISH erroneously asserts that the gains in speed and capacity for New T-Mobile are based on deploying Sprint’s 2.5 GHz spectrum on *all* 61,000 T-Mobile sites and adding T-Mobile’s AWS-3 spectrum on *all* 11,000 retained Sprint sites by 2021.¹⁷⁵ In fact, the spectrum resources will be applied based upon network coverage, traffic and subscriber distribution of each standalone network, to select the best sites to retain or improve for New T-Mobile.¹⁷⁶ The table below demonstrates how spectrum resources from T-Mobile and Sprint will be applied to the New T-Mobile cell site infrastructure.

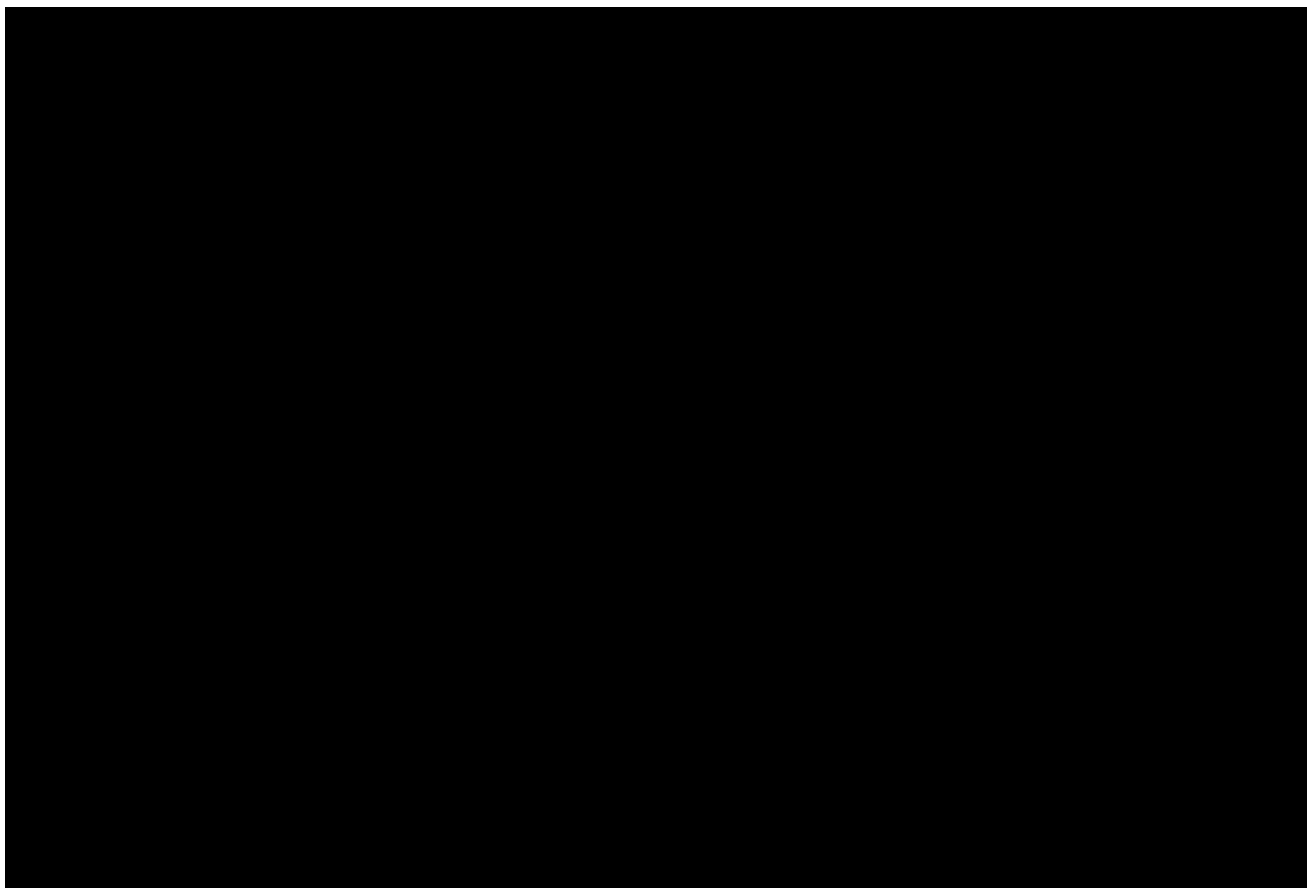
¹⁷² *Id.* at ¶49.

¹⁷³ *Id.* at ¶41.

¹⁷⁴ *Id.* at ¶43.

¹⁷⁵ *DISH Petition* at 34.

¹⁷⁶ Ray Reply Decl. at ¶33.



*Table 6: 5G Site and Spectrum Comparison (Year 2021-2024)*¹⁷⁷

DISH's misstatements lead to an overstatement of the expense associated with combining the cell sites and spectrum of the standalone companies, while simultaneously understating the efficiencies and benefits to subscribers. Contrary to the assertions made by DISH, the 2.5 GHz spectrum will be deployed for 5G at [REDACTED] sites by 2021 (not 61,000) and AWS spectrum will be deployed at [REDACTED] sites (which is predominantly AWS-1, not AWS-3 spectrum as suggested by DISH).¹⁷⁸ For the retained Sprint cell sites, 600 MHz radios will be added to nearly [REDACTED]

¹⁷⁷ *Id.* at ¶34, Table 7. These figures have shifted slightly from the PIS as additional modeling occurred that determined that more spectrum could be refarmed to 5G services more quickly.

¹⁷⁸ Notwithstanding citations included by DISH, AWS-3 spectrum was not mentioned at all in the PIS or Sievert Decl., except as spectrum that was previously auctioned and as an input to the spectrum screen. *See* PIS at 112, 133-134. It is unclear what DISH's basis is for asserting that New T-Mobile would utilize and deploy AWS-3 spectrum resources.

cell sites and 2.5 GHz radios will be added to more sites than were projected by the Sprint standalone plans (nearly [REDACTED] more cell sites will have 2.5 GHz by 2021; approximately [REDACTED] more by 2024).¹⁷⁹ The existing 2.5 GHz radio equipment installed on the retained Sprint cell sites will require electronics replacement to ensure compatibility with the New T-Mobile network.¹⁸⁰ For the existing T-Mobile cell sites, 2.5 GHz radios will be added to the majority of sites to boost capacity ([REDACTED] cell sites by 2021, [REDACTED] by 2024).¹⁸¹ For all retained sites, the AWS and PCS radio base will be upgraded (as needed) to add radios capable of supporting both LTE and 5G.¹⁸² As this cell site retention and radio base improvement will be completed on a market-by-market basis, the improvements in capacity and coverage for existing T-Mobile and Sprint customers that are in upgraded markets will occur much sooner than 2021.

a. Network Migration Will Be Based Upon a Proven Approach Used During the MetroPCS Transition

DISH challenges the appropriateness of the MetroPCS transaction as a predictive model for this merger, inaccurately arguing that the MetroPCS integration into the T-Mobile network was strictly regional and included much less spectrum and fewer tower changes than transitioning the Sprint customer base.¹⁸³ In fact, as was true for the MetroPCS transition, New T-Mobile will migrate customers on a market-by-market basis. Moreover, in many markets the

¹⁷⁹ Ray Reply Decl. at ¶35.

¹⁸⁰ The New T-Mobile network will be constructed based on a single vendor per market to ensure compatibility. Sprint's existing 2.5 GHz infrastructure has equipment from a variety of vendors that will need to be replaced to be consistent with the New T-Mobile equipment.

¹⁸¹ Ray Reply Decl. at ¶35.

¹⁸² *Id.* Radios will be upgraded as equipment is available—some spectrum bands, such as AWS, may not have vendor equipment ready in time for New T-Mobile to deploy. Moreover, some radio equipment is already compatible with both 4G LTE and 5G and will not require upgrading.

¹⁸³ *DISH Petition* at 33-34.

migration of MetroPCS customers to T-Mobile was of similar magnitude. As an example, the table below shows the number of subscribers moved from MetroPCS to T-Mobile in Florida, Los Angeles, and New York compared to Sprint subscribers in those markets.

Market	MetroPCS subscribers to migrate	Sprint subscribers to migrate
Florida	2.48 million	2.35 million
Los Angeles	1.43 million	1.46 million
New York	1.03 million	1.50 million

Table 7: Subscriber Migration Comparison

The number of subscribers that were moved from MetroPCS to T-Mobile in these areas is comparable to (and in Florida larger than) the number of subscribers to be relocated from Sprint to New T-Mobile. More importantly, the entire MetroPCS subscriber base utilized CDMA devices—meaning that most subscribers transferred to the T-Mobile GSM/LTE network needed new handsets.¹⁸⁴ In contrast, a substantial portion of the Sprint subscriber base has devices that will be compatible with the New T-Mobile network following an over-the-air software update.¹⁸⁵

In addition, the Sprint transition will be easier than the MetroPCS transition since the timing for updating the New T-Mobile radio network is well aligned with the plans for deploying 5G-capable radios. T-Mobile (the anchor network) has been deploying radio resources that are software upgradeable to 5G at many of its existing cell sites—and will continue to do so during the transition process.¹⁸⁶ These new radios are much more capable of managing broader spectrum bands for 4G and 5G and make inclusion of new spectrum resources into cell sites

¹⁸⁴ Ray Decl. at ¶¶36-37.

¹⁸⁵ *Id.* at ¶37.

¹⁸⁶ Ray Reply Decl. at ¶51.

more cost effective and efficient than prior 4G-only equipment.¹⁸⁷ Moreover, effects on existing cell sites will be minimized as New T-Mobile can replace existing antennas and radio equipment that can handle more spectrum bands and capacity without increasing the physical space or mass (weight of equipment) used at a site.¹⁸⁸ Deploying extensive new radio equipment would therefore potentially avoid new zoning approvals and likely incur only minor adjustments to existing lease payments.¹⁸⁹

Most importantly for assessing the potential impact on Sprint customers, the customer experience for both MetroPCS and T-Mobile subscribers was maintained (and in many cases improved) during that prior transaction's transition process. In fact, MetroPCS's customer base *doubled* over the 4.5 years following the close of the transaction, customer churn was reduced, and speed and quality was greatly improved for subscribers.¹⁹⁰ As will be the case in the Sprint customer migration, MetroPCS sites were not decommissioned until subscribers could be fully accommodated on the T-Mobile network. The integration playbook for New T-Mobile will be similar and utilize the expertise gained from the MetroPCS transition. In contrast to other less successful transitions mentioned by petitioners,¹⁹¹ this process will be built upon a proven methodology that delivered cost savings ahead of schedule, with synergies better than expected and without any customer disruption.¹⁹²

¹⁸⁷ *Id.*

¹⁸⁸ Ray Decl. at ¶31.

¹⁸⁹ *Id.*

¹⁹⁰ *Id.* at ¶72.

¹⁹¹ *DISH Petition* at 34; *AAI Petition* at 18.

¹⁹² Ray Decl. at ¶72.

5. There Are No Viable Alternatives for T-Mobile and Sprint to Provide a Comparably Robust, Nationwide 5G Network in the Same Timeframe

Petitioners are wrong that there are a number of alternatives to a merger available to both T-Mobile and Sprint that would provide the same benefits. Specifically, parties argue that the companies could: (1) obtain additional spectrum from the Commission;¹⁹³ (2) use technology such as massive MIMO to enhance coverage and capacity;¹⁹⁴ (3) enter into a roaming agreement;¹⁹⁵ or (4) enter into a network sharing arrangement.¹⁹⁶ Opponents have misconstrued the New T-Mobile network plan and failed to understand the fundamental assumptions associated with it. None of the proposed options raised by the petitioners would result in the same depth and breadth of capacity and coverage that will be delivered by New T-Mobile within the same timeframe.

a. There Are No Viable Near-Term Spectrum Alternatives Available

Some petitioners argue that T-Mobile and Sprint could simply participate in the upcoming millimeter wave band spectrum auctions or other not-yet-scheduled mid-band spectrum auctions to access the spectrum resources needed for 5G.¹⁹⁷ DISH goes even further, erroneously asserting that the New T-Mobile model is flawed because it does not include these additional spectrum bands,¹⁹⁸ despite those bands not being available within any defined time period. The millimeter wave band spectrum auction, while representing a valuable influx of

¹⁹³ *DISH Petition* at 28-29; *Free Press Petition* at 57; *Public Knowledge et al. Petition* at 36-39.

¹⁹⁴ *DISH Petition* at 31.

¹⁹⁵ *Id.* at 33.

¹⁹⁶ *Id.*; *Free Press Petition* at 59; *Public Knowledge et al. Petition* at 37.

¹⁹⁷ *DISH Petition* at 28-29; *Public Knowledge et al. Petition* at 38.

¹⁹⁸ *DISH Petition* at 29.

needed spectrum for dense urban deployments, would not remedy the spectrum deficits faced by either standalone company. Moreover, speculative mid-band spectrum auctions, which have not been scheduled and would not be available in the 2019 timeframe during which New T-Mobile will initiate deployment of its nationwide, wide scale 5G network, are not practical substitutions for the spectrum resources available in the transaction. The Commission should reject these flawed arguments regarding the use of alternative spectrum bands. Such bands are not viable spectrum solutions and would not enable the standalone companies to increase network capacity in the near term (or potentially ever, as the availability of almost all of this spectrum is uncertain).

For T-Mobile, viable mid-band spectrum is the missing spectrum resource it needs to meet consumer demands for more capacity.¹⁹⁹ For its part, Sprint lacks sufficient low-band spectrum needed to provide the robust, nationwide 5G coverage demanded by customers.²⁰⁰ The upcoming millimeter wave band spectrum auctions,²⁰¹ while representing a valuable influx of needed spectrum for dense urban deployments, would not remedy the spectrum deficits faced by either standalone company. While high-band spectrum will be invaluable for enhancing the capacity for 5G networks in discrete areas, and both standalone companies will consider auction participation,²⁰² this spectrum alone will not support the robust, nationwide 5G network that New

¹⁹⁹ Ray Decl. at ¶36.

²⁰⁰ PIS at 25.

²⁰¹ *See Auctions of Upper Microwave Flexible Use Licenses for Next-Generation Wireless Services*, AU Docket No. 18-85 (rel. April 17, 2018), <https://docs.fcc.gov/public/attachments/FCC-18-43A1.pdf>. *See also* Chairman Ajit Pai, *Coming Home*, FCC Blog (July 11, 2018), <https://www.fcc.gov/news-events/blog/2018/07/11/coming-home>.

²⁰² Ray Reply Decl. at ¶54. *See also* Mike Dano, *Sprint: Millimeter wave spectrum is ‘important part of our strategy going forward’*, FIERCEWIRELESS (May 3, 2018),

T-Mobile intends to deliver.²⁰³ Millimeter wave band spectrum can be used for short range, high capacity services, but will not serve users that require more wide-area wireless offerings—the short range associated with this spectrum makes it cost prohibitive to cover large geographic areas.²⁰⁴ In addition, there can be no assurance that either standalone company would be successful in obtaining needed spectrum in this (or any other future) auction.

Other parties suggest that there are a number of alternative mid-band spectrum bands for 5G that could be used by either company on a standalone basis to provide a comparable customer experience.²⁰⁵ Future mid-band spectrum auctions have not been scheduled, however, and such mid-band spectrum would not be available in the 2019 timeframe during which New T-Mobile will initiate deployment of its nationwide, wide scale 5G network. Accordingly, these bands are not practical substitutes for the spectrum resources involved in the transaction and cannot be relied upon for standalone development of a robust 5G network. In fact, the lack of available mid-band spectrum for 5G was highlighted by FCC Chairman Ajit Pai in testimony before the House Energy and Commerce Committee: “As you are well aware, there are no greenfield mid-

<https://www.fiercewireless.com/5g/sprint-millimeter-wave-spectrum-important-part-our-strategy-going-forward>.

²⁰³ Ray Reply Decl. at ¶54.

²⁰⁴ *Id.*

²⁰⁵ See *DISH Petition* at 28-29 (arguing that the Applicants ignore 200 megahertz of mid-band spectrum to be released in the next few years); *Public Knowledge et al. Petition* at 36-38 (suggesting the 3700-4200 MHz band and the 3.5 GHz CBRS spectrum).

band frequencies available for 5G.”²⁰⁶ This mid-band shortage is further demonstrated by the table that DISH provided in its petition:²⁰⁷

Table 6: Spectrum Pipeline

Band [1]	Frequencies [2]	Quantity [3]	Auction Date [4]
Mid-Band Spectrum			
3.5 GHz CBRS	3550 - 3700 MHz	Max 70 MHz licensed	Est. Late 2019 - Beyond
2.5 GHz EBS	2496 - 2690 MHz	18-114 MHz	Est. 2020 - Beyond
3.5 GHz	3450 - 3550 MHz	100 MHz	Est. 2020 - Beyond
C Band	3700 - 4200 MHz	100+ MHz	Est. 2021
NOAA Meteorological Spectrum	1675 - 1680 MHz	5 MHz	Beyond 2020
<i>Sub-total Mid-Band Spectrum</i>		293-389 MHz	
High-Band Spectrum			
28 GHz Band	27.5 - 28.35 GHz	850 MHz	November 2018
24 GHz Band	24.25 - 24.45 GHz 24.75 - 25.25 GHz	700 MHz	Est. Late 1Q 2019/2Q 2019
37 GHz Band	37.6 - 38.6 GHz	1,000 MHz	Est. Late 2019 - Beyond
47 GHz Band	47.2 - 48.2 GHz	1,000 MHz	Est. Late 2019 - Beyond
39 GHz Band	38.6 - 40.0 GHz	1,400 MHz	Est. 2020 - Beyond
42 GHz Band	42.0- 42.5 GHz	500 MHz	Est. 2020 - Beyond
<i>Sub-total High-Band Spectrum</i>		5,450 MHz	

At the earliest, there *may* be an auction of 70 megahertz of 3.5 GHz CBRS spectrum in late 2019, but the Commission has set no date and this auction might not occur until well after that.²⁰⁸ Assuming *arguendo* that the auction occurs in late 2019, which it may not, the auction itself is likely to take weeks or even months to complete. Following completion of the auction, winning bidders would be required to file applications and participate in a lengthy licensing

²⁰⁶ Testimony of Chairman Ajit Pai, *Oversight of the Federal Communications Commission*, U.S. House of Representatives, Committee on Energy and Commerce, Subcommittee on Communications and Technology (July 25, 2018), <https://docs.fcc.gov/public/attachments/DOC-352944A1.pdf>.

²⁰⁷ *DISH Petition* at Exhibit B, Table 6.

²⁰⁸ The 3.5 GHz CBRS spectrum has an active proceeding that has not been completed. See *Promoting Investment in the 3550-3700 MHz Band*, Notice of Proposed Rulemaking, 32 FCC Rcd 8071 (2017).

process before receiving authority to operate. In a very best case scenario, the 3.5 GHz CBRS spectrum *might* be available in the mid- to late-2020 timeframe. Standardization and handset development will also require time, further delaying use of this spectrum. As Applicants explained in the PIS, assuming the transaction closes sometime in 2019, New T-Mobile would initiate operations in its mid-band spectrum (and in other spectrum bands) shortly thereafter, well before any 3.5 GHz CBRS spectrum would be available.

More importantly, the 3.5 GHz CBRS spectrum suffers from a number of significant drawbacks: (1) this band has significant power restrictions that will inhibit a wireless provider from deploying this spectrum for a wide scale 5G coverage layer;²⁰⁹ (2) there are substantial sharing requirements with Federal and commercial incumbents that inhibit full deployment of the spectrum for 5G;²¹⁰ (3) the small geographic license areas limit 5G deployment;²¹¹ (4) there is no ability for a licensee to have a sufficient license term with a settled renewal expectancy under the current rules;²¹² (5) the technology development for this band has been focused on LTE, not 5G;²¹³ and (6) there is only 70 megahertz of total spectrum available for licensing (with only 40 megahertz available to a single licensee in a license area).²¹⁴ Therefore, the 3.5 GHz CBRS band is not a near-term viable spectrum alternative option for T-Mobile or Sprint for 5G network operations in the near term (or likely at any time, given the limitations of the spectrum band).

²⁰⁹ 47 C.F.R. §96.41(b).

²¹⁰ 47 C.F.R. §§96.15, 96.17, 96.21.

²¹¹ *See e.g., Ex Parte* Presentation of T-Mobile, GN Docket No. 17-258, at 1 (filed April 25, 2018).

²¹² 47 C.F.R. §96.25(b)(3).

²¹³ *See e.g.,* CBRS Alliance, *Introducing OnGo*, <https://www.cbrsalliance.org/> (heralding the use of CBRS spectrum for secure, cost-effective LTE coverage indoors and private LTE networks).

²¹⁴ 47 C.F.R. §§96.13, 96.31.

The remaining spectrum bands identified by petitioners, including the 3700-4200 MHz band, the EBS band, and the 3450-3550 MHz band, are all in preliminary stages of consideration for repurposing to 5G services.²¹⁵ DISH makes this abundantly clear in its helpful table. It estimates that the *earliest* any Commission auction could occur in these bands would be sometime in 2020, but also notes that such auctions could occur well “beyond” that date.²¹⁶ In contrast, New T-Mobile will deploy a substantial portion of its 5G network in advance of this 2020 timeframe, assuming the transaction is approved.²¹⁷ If the Commission wants a cutting-edge, nationwide, robust 5G mobile network deployed in the United States before in other countries, it should not rely upon the speculative availability of other mid-band spectrum. Nor could T-Mobile and Sprint assume the availability of this additional spectrum into their ordinary course business plans, given the uncertain availability of that spectrum.

The best way to provide a robust 5G network is to utilize spectrum across all bands—low-, mid-, and high—with sufficient cell site density to deliver the multiplicative capacity increase needed for a robust 5G deployment.²¹⁸ This spectrum combination ensures a comprehensive band portfolio that accommodates all use cases, supporting full coverage and mobility on low-band spectrum and high or extremely high throughput and low latency on mid- or high-band spectrum.²¹⁹ By combining T-Mobile’s low- and high-band spectrum with Sprint’s mid-band spectrum, along with access to a dense cell site infrastructure,²²⁰ the transaction will

²¹⁵ *DISH Petition* at Exhibit B, Table 6; *Public Knowledge et al. Petition* at 36-38.

²¹⁶ *DISH Petition* at Exhibit B, Table 6.

²¹⁷ Ray Reply Decl. at ¶15.

²¹⁸ Ray Decl. at ¶52; PIS at 48.

²¹⁹ *Id.*

²²⁰ *Id.*

enable New T-Mobile to deploy a robust, nationwide 5G network with the full array of features and improvements promised by that standard.²²¹

b. Massive MIMO Will Not Address the Challenges Facing Sprint

DISH incorrectly suggests that massive MIMO technology could significantly enhance capacity and coverage for Sprint in a manner sufficient to close existing gaps.²²² However, DISH appears to have ignored the extensive discussion by Sprint’s Chief Technology Officer, John Saw, on this precise subject.²²³ Dr. Saw provided detailed background on Sprint’s intention to deploy this technology on a standalone basis, but simultaneously explained the inherent limitations of its massive MIMO deployment.²²⁴ While areas with massive MIMO deployed will have markedly improved network performance, Sprint would still have coverage gaps and a less consistent data experience than a similar network built with low-band spectrum.²²⁵ Building out 2.5 GHz alone densely enough to support a ubiquitous nationwide 5G network would be financially impractical for Sprint or any other wireless company.²²⁶ And, without sufficient customer scale or population density to justify investment, the 2.5 GHz spectrum also cannot adequately provide for a ubiquitous 5G network coverage layer.²²⁷ Dr. Saw also explains in his Reply Declaration why potentially utilizing both 1.9 GHz and 2.5 GHz spectrum in Sprint’s massive MIMO deployment, as suggested by DISH, would not be a practical solution and would

²²¹ *Id.*

²²² *DISH Petition* at 31.

²²³ Saw Decl. at ¶¶20-23.

²²⁴ *Id.*

²²⁵ *Id.* at ¶23.

²²⁶ *Id.*

²²⁷ *Id.*

not achieve the benefits of the transaction.²²⁸ Moreover, the network engineering model utilized to model both the standalone performance of Sprint as well as New T-Mobile fully considered the use of massive MIMO—and still produced an overwhelmingly better result for New T-Mobile’s 5G network as compared to the capacity and throughput for Sprint’s standalone 5G network.²²⁹ Therefore, massive MIMO, while an important part of 5G deployment, would not enable Sprint to match the coverage and capacity of New T-Mobile.

c. Roaming Agreements Are Limited as Compared to a Full Network Integration

DISH suggests wrongly that roaming arrangements, either transitional or long-term, could maximize the use of the total capacity offered across the two networks.²³⁰ Roaming agreements have significant inherent technical and business limitations and are not a substitute that could accomplish the benefits of the transaction.

First, the customer experience cannot be guaranteed to be consistent for a roaming subscriber. This is because roaming would require handoffs to another network provider that may or may not support the features that are on the home network and these handoffs (from one network to another) may not always occur seamlessly. The data throughput experience would likely be different as there are significant costs associated with allowing a subscriber to roam on another network. And, such costs will increase based on the amount of data used. Furthermore, customers may suffer from being blocked from or throttled on the network on which they are roaming if traffic reached certain congestion thresholds.

²²⁸ Saw Reply Decl. at ¶11.

²²⁹ Ray Reply Decl. at ¶61; Saw Decl. at ¶11.

²³⁰ *DISH Petition* at 33.

Second, a roaming agreement would not achieve the network efficiencies of a transaction like the proposed merger. Most importantly, it would not achieve the multiplicative effect from combining the spectrum and sites of the Applicants and increasing the amount of spectrum deployed per site. Because of the continued separate interests of roaming partners, there would also be no incentive to invest in upgraded radios, as is necessary in the case of network integration following a merger. In addition, a roaming agreement does not allow for carrier aggregation or core network efficiencies, and does not offer the prospect of improved spectral efficiency because of the continued inability to refarm spectrum to new technology (like 5G) due to the need to avoid disruption of prior technology service (like LTE).

Third, a roaming agreement would not achieve the non-network efficiencies of a transaction like the proposed merger (*e.g.*, lower dealer commissions and equipment cost savings, which require increased scale). T-Mobile and Sprint have already entered into a limited roaming agreement that allows compatible Sprint devices to roam on T-Mobile's network.²³¹ This agreement illustrates the shortcomings of a roaming agreement as compared to network integration. The roaming agreement limits the amount of traffic Sprint can put on the T-Mobile network based on congestion.²³² The roaming agreement includes LTE data only (*i.e.*, no voice, VoLTE or 5G).²³³ Moreover, because the standalone companies are both limited in their spectrum resources for 5G,²³⁴ the roaming agreement between the two entities does not allow for an expansion of coverage and capacity. It also does not deliver the synergies that the transaction

²³¹ Saw Decl. at ¶34.

²³² *Id.*

²³³ *Id.*

²³⁴ Ray Decl. at ¶18; Saw Decl. at ¶24.

will provide, which will allow for additional investment in more capacity and coverage. In sum, a roaming arrangement cannot replicate the benefits that the merger will produce.

d. Network Sharing Would Not Provide the Synergies and Efficiencies Available to the Combined Company

Some petitioners argue erroneously that T-Mobile and Sprint could simply enter into a network sharing agreement to provide the same benefits as a merger.²³⁵ Some merger opponents argue that the companies can simply share network facilities and infrastructure to generate synergies and save 5G buildout costs, achieving a better 5G network than the standalones could, but without having to merge.²³⁶ These arguments fail to recognize the practical limitations, costs, and inadequacies of network sharing arrangements.

As discussed in detail in the Ewens Reply Declaration, network sharing would preclude the network-specific and non-network synergies associated with the transaction, eliminating many of the potential benefits created by the deal.²³⁷ In particular, network sharing agreement participants must maintain existing infrastructure because the potential for unwinding limits the incentive to permanently refarm spectrum or become overly dependent on shared facilities. The necessary maintenance of redundant assets translates into significant additional costs. In addition, network sharing would require the parties to invest in ensuring equipment interoperability and carrier integration.²³⁸ In other words, a substantial amount of the costs of combining two networks (and possibly more) would be incurred, without fully realizing the efficiencies that could be achieved through a merger. Network sharing would introduce

²³⁵ See, e.g., *DISH Petition* at 33; *Free Press Petition* at 59; *Public Knowledge et al. Petition* at 37.

²³⁶ *Id.*

²³⁷ Ewens Reply Decl. at ¶¶4-6.

²³⁸ *Id.* at ¶7.

additional inefficiencies because capacity is allocated on a prearranged basis instead of based on user requirements.²³⁹ Moreover, it would inhibit the ability of the sharing companies to respond to market changes in an expeditious fashion.²⁴⁰ Additionally, network sharing would introduce substantial administrative issues that are unwieldy and costly.²⁴¹ Finally, given that the benefits of a network sharing agreement are shared by a competing carrier, network sharing agreements reduce the incentive to invest, and coordination of the best technology path going forward may be difficult.²⁴² The consequence of such reduced and slower paced innovation is a comparatively lower ability to challenge market leaders in the dynamic wireless market.

Merger opponents do not provide any compelling evidence for how network sharing would overcome its many drawbacks, and not be detrimental to T-Mobile or Sprint on a standalone basis, or come close to providing network performance comparable to what New T-Mobile will deliver. The merger of T-Mobile and Sprint will not suffer from the limitations of network sharing. Instead, it will create massive efficiencies and position the combined company to significantly invest in rolling out the first robust, nationwide 5G network. Indeed, it will allow New T-Mobile to make business decisions in its own interest, not limited by a pre-negotiated operating structure that may not anticipate future technological or market changes, or permit each party to execute its own business and marketing strategies.

²³⁹ *Id.* at ¶8.

²⁴⁰ *Id.* at ¶9.

²⁴¹ *Id.* at ¶12.

²⁴² *Id.* at ¶10.

B. The Merger Will Provide Broadband Choice for Millions of Consumers and Save Consumers Billions

The PIS demonstrates that New T-Mobile will provide a *bona fide* alternative to current broadband choices—both as a new, in-home broadband option for millions of households and as a genuine wireless alternative to traditional in-home broadband providers—and that the resulting broadband competition will create significant benefits and savings for consumers. A few opponents ask the Commission to ignore these benefits and savings, incorrectly arguing that they are too speculative for the Commission to consider or are not merger-specific.²⁴³ As discussed more fully below, the Commission must reject these arguments as the consumer benefits are tangible and directly related to consummation of the transaction.

In addition, Dr. Harold Furchtgott-Roth has quantified the benefits from: (1) customers purchasing New T-Mobile’s in-home wireless broadband offering; (2) customers who “cord cut” and substitute New T-Mobile mobile 5G broadband service for fixed broadband providers; (3) new broadband customers taking service; and (4) competitive responses of incumbent fixed broadband providers. The cumulative consumer welfare benefits will be as much as \$13.65 billion in 2024.

²⁴³ See *CWA Comments* at 47-51; *Public Knowledge et al. Petition* at 40-42. Contrary to the ample discussion in the PIS of the public interest and consumer welfare benefits arising from increased broadband competition, these opponents also question whether the benefits from New T-Mobile’s in-home fixed wireless broadband service and broadband substitution from New T-Mobile’s 5G mobile services described in the PIS are overstated. See *id.* Others claim that the PIS contained no discussion of where New T-Mobile will provide in-home services, whether the network will have capacity to handle such uses, and what the actual demand will be at the anticipated prices. See *Console Enterprises Comments* at 4. Each of these points is discussed below.

1. New T-Mobile Will Offer In-Home Broadband Services as a Replacement for, and in Competition with, Traditional Offerings

The uncompetitive in-home, wired broadband marketplace is in need of disruption by an aggressive and consumer-friendly broadband provider. The Commission itself has noted the lack of true broadband competition in many geographic areas. According to a recent study of FCC data, 48 percent of U.S. households lack any competitive choice for in-home broadband service exceeding 25 Mbps.²⁴⁴ Approximately 79 percent of U.S. households lack a competitive choice in service providers delivering high-speed broadband with speeds exceeding 100 Mbps.²⁴⁵ The lack of competitive alternatives is also reflected in the poor customer satisfaction rates for broadband providers. The sector ranks the lowest out of 43 industries for customer satisfaction as most consumers remain extremely dissatisfied with its high prices and terrible customer service.²⁴⁶ New T-Mobile's 5G network will allow it to offer in-home and mobile broadband offerings that will change this competitive dynamic, providing customers with consumer-friendly services and high-quality customer care.

As noted in the declaration of Mike Sievert, executives of both T-Mobile and Sprint have dedicated significant effort to analyzing the competitive nature of the combined company's in-home wireless broadband offering and reviewing anticipated customer subscription rates. This effort has confirmed the huge market that will exist for the new offering at the anticipated pricing

²⁴⁴ Hal Singer, Economists Incorporated, and Ed Naef and Alex King, CMA Strategy Consulting, *Assessing the Impact of Removing Regulatory Barriers on Next Generation Wireless and Wireline Broadband Infrastructure Investment* (June 2017) at 10-11, <http://ei.com/wp-content/uploads/2017/06/SingerAssessingImpact6.17.pdf> (using FCC Form 477 data from June 2016).

²⁴⁵ *Id.*

²⁴⁶ See Aaron Pressman, *The Cable TV Industry is Getting Even Less Popular*, FORTUNE (May 25, 2017), <http://fortune.com/2017/05/25/cable-tv-comcast-verizon>.

and service levels. The wireless in-home broadband service will be deployed where the available capacity exceeds mobile requirements and is sufficient to support the in-home services. Based on these criteria, New T-Mobile is expected to offer this service in over 52 percent of zip codes across the county. By 2024, New T-Mobile is expected to cover 64 percent of Charter’s territory and 68 percent of Comcast territory with its in-home broadband services.²⁴⁷ In addition, New T-Mobile will use caching and other network optimization techniques to increase the number of households that can be served.

In total, the Applicants expect that New T-Mobile will acquire 1.9 million customers for its in-home wireless broadband service by 2021 and 9.5 million customers by 2024.²⁴⁸ Based on current customer figures, this would make New T-Mobile the fourth largest in-home Internet service provider (“ISP”) in the United States in 2024. Of particular importance, T-Mobile estimates that 20-25 percent of these customers will be located in rural areas where there is currently limited broadband availability.²⁴⁹ Rural consumers should be particularly attracted to New T-Mobile’s broadband offerings, given the high prices and limited competition for broadband services in rural areas today.²⁵⁰

New T-Mobile also will provide its in-home wireless broadband offering consistent with T-Mobile’s Un-carrier approach, which eliminated extended service contracts and strict monthly

²⁴⁷ Reply Declaration of G. Michael Sievert, President and Chief Operating Officer, T-Mobile US, Inc., at ¶6 (“Sievert Reply Decl.”).

²⁴⁸ *Id.* at ¶7.

²⁴⁹ *Id.*

²⁵⁰ Also, as noted in the PIS, the massive capacity and coverage resulting from the merger will allow New T-Mobile to provide high-quality video content to in-home and mobile locations across the country, including many rural areas. The availability of these services will allow consumers to forego the video offerings of legacy cable providers, providing consumers with more innovative services and price savings, and additional benefits that accompany increased competition for video service customers.

data caps for mobile wireless services. Unlike other in-home broadband offerings, the wireless nature of the offering will empower customers to avoid installation appointments and related charges as they will be able to self-provision the necessary in-home equipment. New T-Mobile will extend the Un-carrier customer care model to in-home fixed wireless broadband services, providing consumers with high-quality 24-7 customer support.²⁵¹ This care model should force traditional providers to improve the poor customer service that has plagued the in-home broadband marketplace for many years.

New T-Mobile’s in-home wireless broadband offering will provide consumers across the country with average in-home download speeds of 100 Mbps. By 2024, New T-Mobile will be able to cover more than 250 million people with data rates greater than 300 Mbps and more than 200 million people at greater than 500 Mbps.²⁵² As noted in the PIS, these speeds far exceed those contemplated by Verizon or AT&T for their proposed 5G services and match or exceed the offerings of most traditional ISPs.²⁵³ The planned service area of New T-Mobile’s broadband services will also dwarf the limited service areas of wired broadband providers. These speeds and coverage areas will be offered at a significant discount to the prices of traditional broadband providers, with monthly prices planned to be generally [REDACTED] lower than traditional

²⁵¹ J.D. Power recently announced that T-Mobile’s customer care service received the highest score of any company ever surveyed. *See J.D. Power U.S. Wireless Customer Care Full-Service Study—Volume 2* (2018).

²⁵² *See* PIS at 27. Opponents mistakenly argue that the network will not have the capacity or speeds to provide broadband services that rival those of wired broadband providers. They further claim that even if the combined company can offer broadband speeds and capacity to consumers, the 5G network will not be able to support a large broadband customer base in many areas of the country. *See DISH Petition* at 39-40; *Public Knowledge Petition* at 40. As detailed in Section II.A, New T-Mobile’s 5G network will have the capacity and speed to support the broadband services offered by the company.

²⁵³ *See* PIS at 45-50.

services.²⁵⁴ When coupled with the anticipated market penetration by 2021, Dr. Furchtgott-Roth estimates that these prices will result in [REDACTED] in monthly consumer savings and [REDACTED] in annual savings. By 2024, New T-Mobile's in-home offering will result in [REDACTED] in monthly consumer savings and [REDACTED] in annual savings.²⁵⁵

2. Customers Will Substitute New T-Mobile's Mobile Broadband Services for Their In-Home Broadband Needs

Substantial consumer savings will also result from the millions of consumers who eliminate their in-home wireline or cable broadband service altogether and rely exclusively on New T-Mobile's broadband wireless services for their in-home needs. T-Mobile has estimated that 5.8 million households will eliminate their traditional wireline in-home broadband service in favor of New T-Mobile's 5G mobile services by 2021 and a total of 6.3 million households by 2024.²⁵⁶ Many of these subscribers will be value-conscious consumers who would recognize the benefit of saving the significant costs of their monthly in-home broadband service. Dr. Furchtgott-Roth conservatively estimates this amount to be [REDACTED] per month, resulting in aggregate monthly savings of [REDACTED] million by 2024.²⁵⁷ In terms of annual savings, the substitution of New T-Mobile's broadband services will save consumers [REDACTED] in the aggregate by 2024.²⁵⁸ Those are substantial numbers that will make a significant difference to millions of consumers.

²⁵⁴ Sievert Reply Decl. at ¶9.

²⁵⁵ Declaration of Dr. Harold Furchtgott-Roth, Appx. J, at 4 ("Furchtgott-Roth Decl.").

²⁵⁶ Sievert Reply Decl. at ¶10.

²⁵⁷ Furchtgott-Roth Decl. at 11.

²⁵⁸ *Id.* at 6.

Merger opponents incorrectly claim that the parties have overestimated the competitive threat of customers who will substitute 5G wireless services for traditional in-home broadband.²⁵⁹ These opponents cite recent studies, including one by *New Street Research* that purportedly found a declining rate of wireless substitution, to argue that New T-Mobile’s 5G mobile services will have a more limited impact on traditional wired offerings than the companies project.²⁶⁰ As discussed below, these arguments misconstrue the competitive dynamics of the broadband marketplace and the nature of New T-Mobile’s broadband offerings.

Contrary to the claims of some merger opponents, consumers are increasingly turning to mobile broadband services for high-speed Internet access. A recent report by the Internet Innovation Alliance (“IIA”) found that most consumers have no clear preference for how they access the Internet. Almost as many consumers prefer mobile wireless Internet services (23 percent) to wired services (26 percent)—and 20 percent of consumers have no preference for the technology they use to access the Internet.²⁶¹ IIA’s research confirms that service infrastructure distinctions no longer matter to U.S. consumers, and mobile and fixed broadband services are viewed as “functional substitutes” for each other.²⁶²

²⁵⁹ See, e.g., *Public Knowledge Petition* at 39-42 (asserting that “5G still exists largely in the realm of marketing hype, and there is healthy skepticism that the dawn of mobile 5G will deliver more than an incremental improvement over the capabilities of current LTE networks . . .”).

²⁶⁰ See *CWA Comments* at 54.

²⁶¹ See *Consumer Preferences for Internet Access and Online Activities Market Research Report*, INTERNET INNOVATION ALLIANCE (June 27, 2018), https://internetinnovation.org/wp-content/uploads/Civic-Sciences-2018-Report_Final.pdf.

²⁶² Customers are also increasingly using their mobile broadband services to enhance their in-home viewing experiences. Using various technologies, including Google’s Chromecast or Apple’s Airplay, customers are now mirroring the content on their mobile devices to their in-home television screens. New T-Mobile’s 5G network will make availability of these innovative services more accessible as it will support higher grade mirroring and screen casting technologies. See *How to Beam your Phone or PC Screen to the TV*, TECHHIVE,

3. Incumbent Wireline Broadband Providers Will Respond with Lower Prices and Increased Investments

The consumer savings produced by New T-Mobile's broadband services will not be limited to consumers who subscribe to the combined company's offerings. Savings will also flow to customers of traditional wireline broadband providers. As detailed in the Furchtgott-Roth Declaration, large traditional broadband providers are likely to respond to New T-Mobile's market entry by lowering their prices and improving their services to meet this new competitive threat. Because New T-Mobile will offer its in-home and mobile broadband offerings in many areas across the country, these providers would need to lower prices in all markets. The Furchtgott-Roth Declaration notes that there will be 82 million U.S. households that subscribe to in-home broadband services in a few years.²⁶³ If the 66.2 million households not using New T-Mobile's in-home broadband offering or its mobile 5G service for their in-home broadband needs see an average price reduction of \$10, it would lead to \$662 million in monthly savings and \$7.9 billion annually across these households.²⁶⁴

In addition to price reductions, the availability of New T-Mobile's fixed wireless broadband services will force traditional ISPs to invest in their networks and improve their services to keep up with New T-Mobile. As noted above, New T-Mobile will be able to cover more than 250 million people with data rates greater than 300 Mbps and more than 200 million people with data rates in excess of 500 Mbps.²⁶⁵ Wired broadband providers, particularly those in rural areas, thus will need to increase significantly the speeds they offer to customers to

<https://www.techhive.com/article/2999070/streaming-hardware/chromecast-mirroring-explained-how-to-beam-your-phone-or-pc-screen-to-the-tv.html>. (last visited Sept. 16, 2018).

²⁶³ Furchtgott-Roth Decl. at 7.

²⁶⁴ *Id.*

²⁶⁵ Sievert Reply Decl. at ¶9.

compete against the in-home broadband services offered by New T-Mobile. These providers will also need to increase their Wi-Fi and burgeoning wireless deployments to compete against the ubiquitous wireless broadband coverage that New T-Mobile will provide.

4. New T-Mobile's Broadband Offerings Will Increase Adoption of Broadband Services

The substantial and widespread consumer savings resulting from New T-Mobile's broadband services will promote the broader consumer welfare by leading to increased adoption of broadband services across the country. According to the Furchtgott-Roth Declaration, reduced prices for in-home broadband services will attract new customers—some for New T-Mobile, some for other providers—who previously had found broadband unaffordable. Other customers will be attracted to the higher quality broadband services that result from the increased marketplace competition. Overall, the Furchtgott-Roth Declaration concludes that the merger will attract millions of new broadband customers to the marketplace.²⁶⁶ The merger and the broadband services that New T-Mobile will deploy thus present a unique opportunity. The combined company will help close the digital divide by driving further adoption of broadband services to ensure that all Americans experience the transformational benefits of broadband technology.

5. Consumers Benefits Are Estimated to Range from \$7.197 Billion to \$13.65 Billion in 2024

To assist with the quantification of the consumer benefits and savings, Dr. Harold Furchtgott-Roth conducted a study based on the following assumptions: (1) customers purchasing New T-Mobile's in-home wireless broadband offering are generally expected to pay

²⁶⁶ Furchtgott-Roth Decl. at 2-3.

less per month than they would have absent the proposed merger;²⁶⁷ (2) customers who substitute New T-Mobile mobile 5G broadband service for the in-home fixed broadband services of other providers will save up to \$50 per month though elimination of in-home broadband service altogether;²⁶⁸ and (3) other in-home broadband customers who do not switch to either the in-home New T-Mobile broadband offering or cord cut to use the New T-Mobile wireless service will pay \$5-\$10 less per month than they would have absent the proposed merger.²⁶⁹ As discussed below, Dr. Furchtgott-Roth's assumptions are supported by the companies' actual business plans.

Based on these assumptions, his study concludes that the annual consumer savings by 2024 could be as high as:

- for the 9.5 million consumers switching to New T-Mobile's in-home wireless broadband offering;
- \$195-\$780 million for an estimated 6.5-13 million new in-home broadband customers;
- for the New T-Mobile mobile broadband customers who unsubscribe from fixed in-home broadband services altogether; and
- \$3.972-\$7.944 billion for the 66.2 million in-home fixed broadband consumers not switching to New T-Mobile service but benefitting from the competitive response of other in-home broadband providers.²⁷⁰

Dr. Furchtgott-Roth thus estimates that these consumer surplus combined values are between \$7.197-\$13.65 billion annually.²⁷¹

²⁶⁷ *Id.* at 4.

²⁶⁸ *Id.* at 5-6.

²⁶⁹ *Id.* at 7.

²⁷⁰ *Id.* at 2.

²⁷¹ *Id.*

C. Customers on Prepaid Plans—Like All Other Customers—Will Benefit from Lower Costs, Higher Quality and Increased Competition

As discussed in the PIS and more fully below, all customers of New T-Mobile—whether on prepaid or postpaid plans—will benefit from the transaction. All customers will be on the same network and all customers will benefit from the massive increase in network capacity though broader coverage, higher speeds and lower costs. Customers on prepaid plans stand to benefit as much as, if not more than, those on postpaid plans from this capacity increase through lower costs and more innovative service features. In fact, the capacity increases resulting from the transaction thus will further blur any remaining distinctions between prepaid and postpaid services.

1. There Is No Separate “Market” for Mobile Wireless Services Sold Via Advance Payment

A number of petitioners ignore these facts and suggest that the Commission should consider prepaid and postpaid plans as separate product markets when analyzing the merger.²⁷² Yet, the petitioners fail to provide any concrete factual support or serious economic analysis to support these requests, which are contrary to long-standing Commission precedent.²⁷³ The Commission has consistently found that both prepaid and postpaid wireless services fall within a

²⁷² *CWA Comments* at 9; *DISH Petition* at 53-54. See also *Public Knowledge et al. Petition* at 28 (noting an “effectively separate market for prepaid service”); *Free Press Petition* at 13-14 (highlighting distinct impact of transaction to prepaid market segment).

²⁷³ The Commission traditionally reviews wireless transactions “using a combined ‘mobile telephony/broadband services’ product market,” recognizing that all providers offer distinct but mutually competitive services. See *AT&T/Centennial Order*, 24 FCC Rcd at 13932 ¶ 37; *Applications of Celco Partnership d/b/a Verizon Wireless and Atlantis Holdings LLC For Consent to Transfer Control of Licenses, Authorizations, and Spectrum Manager and De Facto Transfer Leasing Arrangements and Petition for Declaratory Ruling that the Transaction is Consistent with Section 310(b)(4) of the Communications Act*, Memorandum Opinion and Order and Declaratory Ruling, 23 FCC Rcd 17444, 17470 ¶ 46 (2008) (“*Verizon/Alltel Order*”).

combined mobile telephony/broadband services product market.²⁷⁴ An “all wireless” analysis is also consistent with judicial decisions that have repeatedly rejected efforts to define markets by price variances or product quality variances.”²⁷⁵ Because the Petitioners failed to provide any support for their claims, the Commission should disregard these arguments without any further review.

But even if the Commission were to consider the petitioners’ claims, it should reject them as contrary to recent marketplace developments. Prepaid plans now offer many of the same features as postpaid plans, such as smartphones, high-speed data, and advanced functionality. Many prepaid service plans include unlimited usage and multi-line family features, with the ability to share minutes and data across members of the family. Economist Dr. Glenn Woroch observes in his attached declaration that postpaid service plans have also adopted characteristics of prepaid services—most notably, the elimination of long-term service contracts. As Dr. Woroch explains, “[t]he disappearance of the long-term contract not only makes postpaid and prepaid plans more similar to a consumer signing up for the first time, but it also makes it easier

²⁷⁴ See, e.g., *Applications of Cricket License Company, LLC, et al., Leap Wireless International, Inc., and AT&T Inc. for Consent to Transfer Control of Authorizations*, Memorandum Opinion and Order, 29 FCC Rcd 2735, 2747-48 ¶26 (2014) (“AT&T/Leap Order”). See also *AT&T/Qualcomm Order*, 26 FCC Rcd at 17603 ¶33. The Commission has previously determined that there are separate relevant product markets for interconnected mobile voice and data services, and also for residential and enterprise services, but found it reasonable to analyze all of these services under a combined mobile telephony/broadband services product market. See, e.g., *Applications of Cellco Partnership d/b/a Verizon Wireless and SpectrumCo LLC and Cox TMI, LLC for Consent to Assign AWS-1 Licenses*, Memorandum Opinion and Order, 27 FCC Rcd 10698, 10717 ¶ 53 n.119 (2012) (“Verizon Wireless/SpectrumCo Order”); *AT&T/Qualcomm Order*, 26 FCC Rcd at 17603 ¶33.

²⁷⁵ *Murrow Furniture Galleries, Inc. v. Thomasville Furniture Indus., Inc.*, 889 F.2d 524, 528 (4th Cir. 1989) (internal quotation marks omitted). See also *AD/SAT v. Associated Press*, 181 F.3d 216, 228 (2d Cir. 1999) (“significant price differences do not always indicate distinct markets”); 2A Phillip E. Areeda, *et al.*, *Antitrust Law* ¶ 562c, at 262 (2007) (“Products can be near-perfect substitutes even when their prices or qualities differ.”).

for an existing subscriber to switch from a postpaid plan.²⁷⁶ Finally, the pricing gap between prepaid and postpaid plans—one of the traditional differentiators between the services—has narrowed in recent years.²⁷⁷ Dr. Woroch confirms in his declaration that “the ARPU of prepaid and postpaid subscriptions are converging because the features of the two plan types are converging.”²⁷⁸ These converging ARPUs are not the result of prepaid rate increases but, instead, result from the features implemented for prepaid plans that traditionally were a hallmark of postpaid plans (*e.g.*, unlimited data, etc.).²⁷⁹

Much of the narrowing between the features and prices of prepaid and postpaid plans has been due to T-Mobile’s industry-leading Un-carrier approach, which takes the best features from prepaid and postpaid models. T-Mobile’s introduction of “Contract Freedom” eliminated long-term service contracts for postpaid plans and replaced them with a transparent pricing model, spurring other providers to do the same. T-Mobile also borrowed a successful attribute of its prepaid plans to improve the value proposition of its postpaid plans. Its “Taxes and Fees Included” program introduced “what you see is what you pay” plans that bundle all monthly taxes, surcharges, and fees up front, giving subscribers consistent bill certainty comparable to prepaid offerings. Finally, T-Mobile pioneered separation of phone subsidies and phone payment plans from mobile rate plans to create greater bill certainty for customers on postpaid plans. Dr. Woroch concludes in his declaration that these Un-carrier initiatives helped make

²⁷⁶ Declaration of Dr. Glenn A. Woroch, Appx. I, at 6 (“Woroch Decl.”).

²⁷⁷ MoffettNathanson has observed that “the price distinction between the two has narrowed, in part because, well, there’s just not that much difference anymore.” See Colin Gibbs, *T-Mobile and AT&T are killing the gap between prepaid and postpaid*, Fierce Wireless (May 4, 2016), at <https://www.fiercewireless.com/wireless/t-mobile-and-at-t-are-killing-gap-between-prepaid-and-postpaid>.

²⁷⁸ Woroch Decl. at 11.

²⁷⁹ *Id.* at 8-11.

prepaid and postpaid offerings “more similar” and eroded the distinctions between traditional prepaid and postpaid plans.²⁸⁰

Sprint also has been part of the movement to greater substitutability between prepaid and postpaid pricing plans. Boost launched the BoostUP! program last year to provide postpaid phone loans to Boost’s existing prepaid customers as a way of fostering higher consumer satisfaction and reducing Boost’s churn rate.²⁸¹ Obtaining the offered loan does not require a credit check because the customer’s own history of on-time payments is the only criterion used in deciding whether to allow the customer to participate in the plan.²⁸² Also, last year the Sprint postpaid brand began offering rate plans with free lines 3/4/5 at a price point around \$100.²⁸³ This is similar to many current prepaid offers by Boost, MetroPCS, and Cricket, which have recently offered plans at 3/\$100 and 4/\$100.²⁸⁴ This has the effect of blurring the pricing distinction that once existed between prepaid and postpaid plans, even though the individual plan features may be different.

As a result of the convergence in service features and pricing, consumers now largely view prepaid and postpaid offerings as substitutable.²⁸⁵ These perceptions have been

²⁸⁰ *Id.* at 8.

²⁸¹ Draper Reply Decl. at 17.

²⁸² *Id.*

²⁸³ *Id.*

²⁸⁴ *Id.*

²⁸⁵ The Commission itself has observed that prepaid and postpaid offerings are substitutable: “[a]s postpaid offerings have shifted away from term contracts and equipment subsidies, service providers have adopted pricing plans and promotions for their high-end prepaid monthly service offerings that are similar to those they have for postpaid offerings.” *See e.g., Annual Report and Analysis of Competitive Market Conditions with Respect to Mobile Wireless, Including Commercial Mobile Services*, Twentieth Report, 32 FCC Rcd 8968, 9005 ¶54 (2017) (“*Twentieth Mobile Wireless Competition Report*”).

underscored by the ease with which consumers can change services. Because manufacturers have removed device features that traditionally limited changing carriers, customers can now easily switch between plans or carriers without getting a new phone. Most carriers also have eliminated phone locking restrictions, enabling a customer to purchase a handset from one carrier and continue to use it when they switch to a new carrier. These developments have led to significant switching between services. In the fourth quarter of 2017, the wireless industry saw a total of almost two million retail postpaid subscriber additions, while experiencing a decline of over 400,000 retail prepaid additions from the previous year.²⁸⁶ Several analysts attributed this decrease to “a significant shift from prepaid to postpaid,”²⁸⁷ recognizing the “unusually outsized prepaid to postpaid migration.”²⁸⁸ This trend continued in 2018, with 135,000 T-Mobile prepaid subscribers migrating to postpaid plans, 71,000 Sprint prepaid subscribers moving to postpaid plans, and 41,000 AT&T prepaid subscribers transitioning to postpaid plans.²⁸⁹

2. The Merger Will Intensify, Not Diminish, Competition for Customers that Prefer Prepaid Plans

As explained in the PIS and above, customers electing to receive service through prepaid plans will benefit significantly from the merger in the same ways as postpaid customers. Prepaid customers of both T-Mobile and Sprint will enjoy lower costs, higher speeds, and expanded coverage from the combined company’s nationwide 5G network. More broadly, prepaid

²⁸⁶ Mike Dano, *The curious case of the industry’s 2M postpaid customer additions in Q4*, FIERCE WIRELESS (Feb. 2, 2018), <https://www.fiercewireless.com/wireless/curious-case-industry-s-2m-postpaid-customer-additions-q4>.

²⁸⁷ *Id.*

²⁸⁸ *Id.*

²⁸⁹ Philip Cusick, Richard Choe, Sebastiano Petti, *2Q18 Wireless Scorecard: Strong Postpaid New Adds Continue in 2Q; Still Look for Cable Share of Adds to Grow*, JPMORGAN (Aug. 8, 2018) (“JPMorgan 2Q18 Wireless Scorecard”).

customers of other carriers will benefit from the increased competition facilitated by the merger as Verizon, AT&T, TracFone, and others respond to New T-Mobile with lower prices, increased investment, and enhanced service offerings.

A few petitioners question the merger's benefits for prepaid consumers, incorrectly claiming that prepaid users will have fewer competitive plan options following the merger.²⁹⁰ Public Knowledge argues that the merger will diminish competition among prepaid offerings because New T-Mobile allegedly will consolidate Boost Mobile, Virgin Mobile USA, and MetroPCS into a single brand, effectively eliminating two aggressive challengers.²⁹¹ According to petitioners, this reduction in competition and the number of challengers will lead to consumer harm and higher prices.

As an initial matter, T-Mobile has stated publicly that the merged company will maintain the Boost Mobile, Virgin Mobile USA, and MetroPCS brands as separate brands post-consummation.²⁹² Petitioners' claims also ignore the massive capacity gains that will result from deployment of New T-Mobile's 5G network. Rather than decreasing supply as petitioners claim, the merger actually will increase the supply of network capacity. The significant increase in network capacity will put substantial downward pressure on prices for all wireless services, including for prepaid services.

More broadly, petitioners' arguments fail to recognize the substantial competition that will continue to exist among prepaid plans after the transaction from a host of MVNOs and

²⁹⁰ *DISH Petition* at 54-55; *Public Knowledge et al. Petition* at 27; *CWA Comments* at 18-20.

²⁹¹ *Public Knowledge et al. Petition* at 27.

²⁹² Testimony of John Legere, CEO, T-Mobile US Inc., Senate Committee on the Judiciary, Subcommittee on Antitrust, Competition Policy, and Consumer Rights (June 27, 2018), <https://www.judiciary.senate.gov/imo/media/doc/06-27-18%20Legere%20Testimony.pdf>. See also Sievert Reply Decl. at ¶11.

facilities-based carriers. Dr. Woroch concludes in his declaration that “any attempt by New T-Mobile to raise prepaid prices would be defeated by consumer behavior and competitors’ responses.”²⁹³ Petitioners disregard the intense competitive pressure from MVNOs—many of whom offer highly attractive prepaid plans—by wrongly attributing MVNO subscriber numbers to their underlying wholesale carriers. As explained in the PIS, the Commission itself has rejected this approach by assessing “the competitive effect of [MVNOs] and resellers.”²⁹⁴ MVNOs generally are able to offer prepaid wireless plans at highly competitive prices because they can avoid many of the costs associated with facilities-based service. Further, the flexibility they enjoy “makes it easier for them to mark down prices, and it allows them to offer convenience and a more enhanced customer experience.”²⁹⁵

MVNOs offering prepaid will exert significant competitive pressure in the marketplace after the transaction. TracFone currently operates as the nation’s largest provider of prepaid plans, accounting for approximately 31 percent of total prepaid customers. As an MVNO, TracFone holds wholesale agreements with AT&T, Verizon, T-Mobile, Sprint, and U.S. Cellular and offers wireless services under multiple prepaid brands, including TracFone, NET10 Wireless, Total Wireless, Straight Talk, SafeLink Wireless, Telcel América, SIMPLE Mobile,

²⁹³ Woroch Decl. at 11.

²⁹⁴ *AT&T/Leap Order*, 29 FCC Rcd at 2751 ¶35. The Commission has recognized that “[t]he strategic partnerships between MVNOs and facilities-based providers increase competition and consumer welfare by providing service to various market segments using the capacity of the hosting facilities-based provider and the marketing strategy and distribution network of the MVNO.” *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*, Sixteenth Report, 28 FCC Rcd 3700, 3741 ¶ 35 (2013).

²⁹⁵ Jon Mikow, *How MVNOs Are Challenging the Competition*, FORTEGA (July 14, 2017), <http://blog.fortegra.com/how-mvnos-are-challenging-the-competition>.

Page Plus, GoSmart Mobile, and Walmart Family Mobile.²⁹⁶ Dozens of additional MVNOs offering prepaid plans also compete across multiple value propositions and in every conceivable channel, accounting for over six million prepaid subscribers.²⁹⁷ For example, Google Project Fi and Republic Wireless reduce customer costs by automatically offloading traffic to free WiFi hot spots, where possible, while carriers like Mint Mobile, FreedomPop, and PagePlus appeal to extremely value conscious consumers.

Petitioners also incorrectly discount competition for prepaid plans from large facilities-based carriers such as AT&T and Verizon. These companies have taken on an important and growing role in the competitive prepaid offerings, and will need to respond to the massive capacity gains and lower prices offered by New T-Mobile. AT&T's prepaid offerings, and, in particular those of its Cricket brand, have been a significant driver of growth over the past few years. Since the beginning of 2016, AT&T's branded prepaid wireless customer base has increased almost 50 percent, jumping from 11.5 million²⁹⁸ to 16.2 million subscribers.²⁹⁹ Cricket alone has more than doubled its subscriber base over the past four years, now accounting for over nine million subscribers.³⁰⁰ In the second quarter of 2018, AT&T reported 453,000 net

²⁹⁶ TracFone, *Brands*, <http://www.tracfonewirelessinc.com/en/brands/> (last visited Sept. 16, 2018).

²⁹⁷ As discussed below, New T-Mobile will continue to partner with MVNOs and they will benefit from the lower costs and better quality of the merged companies' network, ensuring that MVNOs will continue to be a competitive force in offering prepaid plans. *See infra* Section II.D.

²⁹⁸ *AT&T 2015 10-K* (Feb. 10, 2016), <https://otp.tools.investis.com/clients/us/atnt2/sec/sec-show.aspx?FilingId=11194496&Cik=0000732717&Type=PDF&hasPdf=1>.

²⁹⁹ *2018 AT&T Earnings: Investor Briefing* at 14 (July 24, 2018), https://investors.att.com/~media/Files/A/ATT-IR/financial-reports/quarterly-earnings/2018/2q-2018/IB_2Q2018.pdf.

³⁰⁰ *Id.* at 16.

prepaid adds for its strongest quarter in over two years.³⁰¹ This growth has been the result of AT&T's renewed focus on the segment and the steady improvements it has made to its prepaid offerings, including offering unlimited data and HD video streaming, developments that have largely eliminated the differences between the carrier's prepaid and postpaid offerings.³⁰²

Verizon historically has outsourced its prepaid offering to TracFone's StraightTalk brand.³⁰³ However, that appears to be changing as Verizon added a net total of 158,000 prepaid customers in the second and third quarters of 2017 and has rekindled its interest in the prepaid segment.³⁰⁴ Verizon has increased its promotional offerings to current prepaid customers, recently offering twice the data at the same price point,³⁰⁵ and also launched a no-contract prepaid option called Visible. Under this offering, subscribers can receive unlimited calls, texts, and data on Verizon's 4G LTE network for \$40 a month.³⁰⁶ While currently offered only on a limited basis, Visible has stated that it will be "a true blurring of the lines between prepaid and postpaid," by approaching prepaid "from a completely different angle," and not "fit[ting] into the

³⁰¹ JPMorgan 2Q18 Wireless Scorecard.

³⁰² Matthew Humphries, *AT&T Improves its Prepaid Phone Plans*, PC MAGAZINE (Apr. 20, 2018), <https://www.pcmag.com/news/360557/at-t-improves-its-prepaid-phone-plans>.

³⁰³ Colin Gibbs, *Verizon's Shammo: TracFone is "Our Prepaid Product"*, FIERCE WIRELESS (Apr. 21, 2016), <https://www.fiercewireless.com/wireless/verizon-s-shammo-tracfone-our-prepaid-product>.

³⁰⁴ Colin Gibbs, *Verizon Gaining Ground in a Prepaid Market It Once Ignored*, FIERCE WIRELESS (Oct. 20, 2017), <https://www.fiercewireless.com/wireless/verizon-gaining-ground-a-prepaid-market-it-once-ignored>.

³⁰⁵ Christine Torralba-Canencia, *Verizon Prepaid's Double Data for Life Promotion Now Available Online and In Stores*, PREPAID PHONE NEWS (June 27, 2018), <https://www.prepaidphonenews.com/2018/06/verizon-prepays-double-data-for-life-promotion.html>.

³⁰⁶ Rick Broida, *What is Verizon Visible and is it a Good Deal?*, C-NET (May 11, 2018), <https://www.cnet.com/how-to/what-is-verizon-visible-and-is-it-a-good-deal/>.

strict and traditional model of prepaid.”³⁰⁷ Thus, Verizon, like AT&T, will provide competition in the prepaid sectors, preventing New T-Mobile from increasing prices or reducing services for prepaid customers.

3. Customers with Prepaid Plans Will Receive Better Service for the Same or Lower Prices as a Result of the Merger, Like Other Wireless Customers

As documented in the PIS, all New T-Mobile customers—whether on prepaid or postpaid plans—will enjoy the increased capacity, higher speeds and service improvements of the combined company’s network. Sprint customers with compatible handsets, including many on the Boost Mobile and Virgin Mobile USA brands, will see immediate, significant benefits in network quality. More than 7 million Boost devices are compatible with the T-Mobile LTE network. These subscribers will quickly experience significant improvements in coverage on the New T-Mobile network, as Sprint’s prepaid customers with compatible handsets will for the first time enjoy domestic data roaming that fills in coverage gaps.³⁰⁸ Finally, Boost subscribers will benefit from access to a deeper and much larger (approaching ten times greater) handset ecosystem that will provide better functionality at the same price, or the same functionality at the same or lower prices.

In addition, the massive increase in capacity of the New T-Mobile network will provide significant benefits for all customers, including those on prepaid plans. The increased capacity will reduce substantially the cost per GB of delivering service to consumers. This will allow

³⁰⁷ Mike Dano, *Verizon’s Visible Hints at Strategy and Direction: Expect a “Completely Different Angle,”* FIERCE WIRELESS (July 9, 2018), <https://www.fiercewireless.com/wireless/verizon-s-visible-hints-at-strategy-and-direction-expect-a-completely-different-angle>.

³⁰⁸ Boost customers do not currently receive roaming services and so are limited to the footprint of the Sprint network.

New T-Mobile to price services more aggressively to attract customers, regardless of whether they are using prepaid or postpaid offerings. The merger is expected to create a number of other non-network efficiencies that will reduce New T-Mobile’s marginal costs by generating cost savings that could not be realized absent the transaction, likely resulting in an additional savings for prepaid customers.³⁰⁹ Customers on prepaid plans thus stand to benefit as much as, if not more than, those on postpaid plans from this capacity increase and corresponding lower cost. As prepaid carrier Mint Mobile recently noted, the merger will allow it to “get more data for less money and pass the savings on to” its subscribers.³¹⁰

Petitioners’ additional claim that New T-Mobile could raise prices indiscriminately exhibits a fundamental misunderstanding of the prepaid segment.³¹¹ Raising prepaid plan prices is a recipe for rapidly losing customers, given the ease by which prepaid customers can switch providers. CTIA has calculated an annual industry-wide voluntary churn rate of 57.5 percent for customers on prepaid plans and a monthly churn rate of 4.79 percent, compared to 26.3 percent annually and a 2.21 percent monthly across all plans.³¹² More recently, Verizon reported monthly prepaid churn of 5.9 percent, and AT&T of 5.24 percent.³¹³ Conversely, T-Mobile’s

³⁰⁹ Compass Lexecon Decl. at 74-77.

³¹⁰ Mint Mobile Twitter Account (July 26, 2018), <https://twitter.com/MintMobile/status/1022540191989420032> (“How can Mint Mobile keep offering wireless plans as f*!ing low as \$15/month (we said foxing)? By crushing better deals in the market! If @TMobile and @Sprint merge, Mint Mobile can get more data for less money and pass the savings on to you. #MintMobile #ShopClever #mvno.”).

³¹¹ *DISH Petition* at 54-55; Petition to Deny of The Greenlining Institute, WT Docket No. 18-197, at 7 (filed Aug. 27, 2018) (“*Greenlining Petition*”); *Public Knowledge et al. Petition* at 25-26, 28-29. See also Comments of the California Public Utilities Commission, WT Docket No. 18-197, at 3 (filed Aug. 27, 2018) (noting that California will examine the transaction’s impact on low-income communities and the Lifeline program throughout the state).

³¹² *Twentieth Mobile Wireless Competition Report*, 32 FCC Rcd at 8984-85 ¶27.

³¹³ JPMorgan 2Q18 Wireless Scorecard.

approach to prepaid offerings has limited churn among its prepaid subscribers, evidenced by a low monthly churn rate of 3.81 percent in the second quarter of 2018.³¹⁴ As Peter Ewens has noted,

[t]he Un-carrier movement is one of T-Mobile’s core assets. Actions that consumers view as reneging on the consumer-centric tenets of T-Mobile’s brand promise will greatly diminish the value of the Un-carrier brand. . . . Simply put, squandering such a successful Un-carrier business strategy for small incremental profits would be a financial and business disaster for the long-term success of New T-Mobile.³¹⁵

If New T-Mobile were to raise the price of its prepaid plans, other carriers would aggressively pursue and could easily handle the migration of prepaid customers.³¹⁶ As noted above, AT&T and Verizon have already increased their focus on the prepaid segment, and will have an even greater incentive to do so when they expand capacity in their networks to maintain pace with New T-Mobile. Dr. Woroch explains in his declaration that “AT&T and Verizon have the ability and incentive to accommodate the prepaid customers who leave New T-Mobile in response to a price hike.”³¹⁷ MVNOs that focus on prepaid offerings would be sure to compete aggressively for these customers as well and some already have begun to gain prepaid customers from T-Mobile. Given the low barriers to entry, other competitors such as the new wireless entrants from the cable industry could easily enter the prepaid segment if New T-Mobile were to raise prices.³¹⁸ As Dr. Woroch notes, “newcomers Comcast’s Xfinity Mobile and Charter’s

³¹⁴ *Id.*

³¹⁵ Ewens Decl. at ¶10.

³¹⁶ Woroch Decl. at 12-14.

³¹⁷ *Id.* at 13.

³¹⁸ Michelle Connolly, *Competition in Wireless Telecommunications: The Role of MVNOs and Cable’s Entry into Wireless*, at 40-42 (Sept. 2018).

Spectrum Mobile are also in position to accommodate switchers from New T-Mobile.”³¹⁹ To that end, from an economic and business perspective, it will be in New T-Mobile’s business interest to offer all of its prepaid subscribers more access to a variety of service plans and options at attractive prices.

D. MVNOs Will Benefit from Improved Network Capabilities, Lower Costs, and Increased Competition

The merger will benefit MVNOs and their subscribers by creating a new, nationwide 5G network with massive capacity and lower operational costs that will allow New T-Mobile to lower wholesale prices. New T-Mobile’s combination of coverage and capacity also will provide a significantly more attractive mobile network operator (“MNO”) option for MVNOs,³²⁰ intensifying competition for wholesale services. The increased competition for the provision of wholesale services will spur Verizon and AT&T—currently the predominant wholesale providers for MVNOs—to lower prices to maintain MVNO relationships and further invest in their networks to keep pace with New T-Mobile. Ultimately, MVNO subscribers across the industry will benefit from improved service quality and lower prices.

³¹⁹ Woroch Decl. at 14.

³²⁰ MNOs lease capacity on their network and use of their licensed spectrum to MVNOs that resell those services. Rather than acquire the necessary spectrum and building a standalone network, MVNOs choose among wholesale offerings (principally offered by the four major, national carriers) differentiated in terms of: (i) technology of the wholesale network (*e.g.*, 4G vs. 4G LTE vs. 4G LTE Advanced), (ii) geographic coverage and capacity of the network, and (iii) speed and reliability of the network. MVNOs contribute other necessary services to their wholesale purchases to complete the retail services they provide their customers (customer care, billing, repair, retail stores). Geographically, host MNOs can offer wholesale services over some or all of the footprint covered by their networks.

1. Today, T-Mobile and Sprint Lack the Network and Capabilities to Provide Robust Wholesale Services

While T-Mobile and Sprint enjoy mutually beneficial partnerships with a wide range of MVNOs today, neither company individually possesses the extensive network necessary to fully compete for partnerships with MVNOs. As demonstrated by Dr. Woroch's research, most MVNOs acquire some or all of their wholesale services from AT&T and Verizon.³²¹ The current standalone networks of T-Mobile and Sprint, as well as their future 5G deployment plans, do not have the combination of coverage and capacity to respond to changing consumer preferences for greater speeds and data in all areas of the country. Naturally, these limitations render T-Mobile and Sprint less attractive MNO partners for MVNOs.

As explained in the PIS and above, T-Mobile has already begun deploying a standalone nationwide 5G network using its 600 MHz spectrum. However, this spectrum will only be able to provide a thin layer of 5G, as it lacks the bandwidth to deliver the full data rate and capacity gains possible for 5G that New T-Mobile will be able to provide.³²² Thus, even after completing deployment of this network, T-Mobile would not have the same capacity incentives to enable MVNOs, particularly in rural areas. T-Mobile's near-term lack of access to significant, unused mid-band spectrum and large amounts of high-band millimeter wave spectrum across the entire U.S. will continue to limit its ability to support the most demanding, high-capacity 5G applications.³²³

Sprint, for its part, has a 5G standalone plan that does not include extending network services to large parts of the country, as its lack of sufficient low-band spectrum inhibits its

³²¹ Woroch Decl. at 25-26.

³²² PIS at 22.

³²³ *Id.*

ability to provide widespread geographic coverage.³²⁴ Sprint’s current coverage is particularly limited in rural areas where it is difficult to justify incremental network investment due to limited population density and challenges associated with building out 2.5 GHz spectrum.³²⁵

Thus, both T-Mobile and Sprint on a standalone basis lack the network to deliver the combination of coverage and quality of service that New T-Mobile could provide. Moreover, T-Mobile and Sprint’s reliance on roaming in certain parts of the country makes them less attractive options for MVNOs looking to offer their customers nationwide coverage. As Dr. Woroch observes, “[t]oday, it is essential that MVNOs offer their customers a national service footprint.”³²⁶

MVNOs have expressly highlighted the shortcomings of the T-Mobile and Sprint networks. Ultra Mobile and Mint Mobile observe that “[n]either T-Mobile nor Sprint can compete as effectively as standalone companies as New T-Mobile could, and their 5G networks would not have . . . nearly the same coverage, throughput, capacity, or latency without the combination.”³²⁷ Additionally, TracFone explains that it “[i]n rural areas, T-Mobile and Sprint historically have not offered sufficient coverage and/or speeds in these geographic pockets of the United States. Comparatively, AT&T and Verizon have been the primary suppliers for these wholesale market segments.”³²⁸ By way of example, StraightTalk, TracFone’s flagship brand, is largely distributed by Walmart, which has an extensive network of stores in rural and small

³²⁴ PIS at 66.

³²⁵ *Id.* at 66-67.

³²⁶ Woroch Decl. at 20.

³²⁷ Comments of Ultra Mobile and Mint Mobile, WT Docket No. 18-197, at 2 (filed Aug. 28, 2018) (“*Ultra Mobile/Mint Mobile Comments*”).

³²⁸ Comments of TracFone Wireless, Inc., WT Docket No. 18-197, at 3 (filed Sept. 13, 2018) (“*TracFone Comments*”).

communities.³²⁹ T-Mobile has historically been unable to compete for StraightTalk business due to its lack of coverage in these areas, particularly since Walmart desires a single, national solution that it can retail in all its stores.³³⁰

2. New T-Mobile’s Decreased Capacity Costs Will Result in Lower Wholesale Costs for MVNOs and Their Subscribers

Some petitioners express concern that the transaction will lead to higher prices for wholesale access.³³¹ However, build-out of the New T-Mobile 5G network will create significant capacity gains—approximately triple the total 5G capacity of standalone T-Mobile and Sprint combined by 2024.³³² As mentioned above, no petitioner challenges this enormous capacity expansion resulting from the merger. The same basic economic principles of supply and demand that apply to the retail context also apply to wholesale prices and MVNOs—New T-Mobile’s additional network capacity and lower per unit costs will create an incentive for the combined company to lower wholesale prices to MVNOs in order to ensure that the new network capacity is not wasted by sitting idle. Thus, MVNOs will benefit not only from the capabilities of the New T-Mobile network, but also the unprecedented capacity and lower cost per GB, which will translate into lower wholesale costs, and, ultimately, lower prices for MVNO subscribers.

As outlined in the PIS, an economic analysis conducted by Dr. Evans shows that the transaction would substantially lower the price per GB of data. Dr. Evans’ findings are further

³²⁹ Ewens Reply Decl. at ¶17.

³³⁰ *Id.*

³³¹ *C Spire Petition* at 11-13; Comments of the Digital Policy Institute, WT Docket No. 18-197, at 2 (filed Aug. 27, 2018); *DISH Petition* at 57; *Free Press Petition* at 24-27; *Public Knowledge et al. Petition* at 28.

³³² PIS at 42-44.

supported by the merger simulation conducted by Compass Lexecon. This analysis indicates that the merger will enable New T-Mobile to achieve lower marginal costs of providing services and offer higher quality services than would either party operating on its own.³³³ Because of the lower marginal costs and higher product quality, customers—including wholesale customers—will benefit from New T-Mobile’s economic incentives to offer better and cheaper services, as well as from the competitive pressures created for rival service providers to reduce prices and improve their services in response.³³⁴

Dr. Woroch similarly underscores that MVNO wholesale rates will not increase as a result of the merger. He notes that New T-Mobile will initially have limited flexibility to raise rates because T-Mobile and Sprint have existing multi-year wholesale agreements with MVNOs that must be honored after the merger.³³⁵ New T-Mobile will continue T-Mobile and Sprint’s positive relationships and contractual commitments with MVNOs, including Altice, and, as described above, will be motivated to do so due to the massive capacity gains resulting from the merger. Dr. Woroch further observes that when these agreements expire New T-Mobile will continue to be constrained in its ability to raise wholesale prices.³³⁶

Consequently, the existing fundamental, mutually beneficial nature of the MNO/MVNO relationship will remain after the merger—and, in fact, will be made even stronger. As economist Dr. Woroch explains, wholesale agreements are a positive-sum transaction for both

³³³ Compass Lexecon Decl. at 43.

³³⁴ *Id.* at 4-7. The vGUPPI analysis undertaken by DISH’s paid consultants contends that “New T-Mobile would have significant increases in its incentives to raise the wholesale prices on TracFone’s wholesale contracts.” *See* Harrington/Brattle Decl at 56. As explained above this examination is flawed in several respects. *See supra* Section I.C.

³³⁵ Woroch Decl. at 25.

³³⁶ *Id.* at 25-26.

MNOs and MVNOs. For example, the opportunity cost for a MNO to supply a MVNO with wholesale services is particularly small when the MNO has idle capacity on its network, as will be the case for New T-Mobile.³³⁷ Additionally,

[w]hen capacity is leased to an MVNO, the MVNO must contribute the necessary retail services to support the business. Those services include billing and collections, customer care, technical support, advertising, sales commissions, and retail stores or distributor payments. When the carrier uses the capacity internally, it must do the retailing and incur these expenses.³³⁸

While the resulting massive capacity gains from the merger will lower wholesale costs and incentivize New T-Mobile to partner with MVNOs, MVNOs also will benefit from the decreased roaming costs made possible by the New T-Mobile network. Rural areas—where Verizon and AT&T are the only meaningful wholesale options today—will specifically benefit from the extensive coverage of the New T-Mobile network, rendering roaming agreements to reach these areas unnecessary. TracFone underscores this point, observing that “[t]he resulting excess capacity would be available for MVNOs in [rural] areas as a third option that has not been available in the current marketplace.”³³⁹ MVNO subscribers will further benefit by not having roaming costs passed along in the form of higher rates, enabling them to enjoy the full capabilities of the New T-Mobile network without having their service throttled as a cost-savings measure. Moreover, pricing for many MVNOs, including TracFone’s Simple Mobile brand and GoogleFi, are benchmarked off of retail prices.³⁴⁰ Thus, as T-Mobile branded subscribers benefit

³³⁷ *Id.* at 21-22.

³³⁸ *Id.* at 22.

³³⁹ *TracFone Comments* at 3.

³⁴⁰ Ewens Reply Decl. at ¶16.

from lower pricing enabled by the merger's capacity gains, subscribers of many MVNOs also will benefit from lower pricing.³⁴¹

3. New T-Mobile Will Provide Increased Competition for Wholesale Services

Petitioners are wrong that the transaction will decrease wholesale competition.³⁴² To the contrary, the merger will provide a robust MNO option for MVNOs seeking wholesale services. The reality today is that many MNVOs that want high-quality network options can only partner with Verizon and AT&T in many parts of the country, particularly in rural areas. As TracFone highlights, "the existing four nationwide MNO's from which TracFone can purchase network capacity are not equivalent in all markets."³⁴³

With New T-Mobile's combination of coverage and capacity allowing it to go toe-to-toe with Verizon and AT&T, MVNOs and their subscribers will benefit not only from the increased capabilities and lower costs offered by New T-Mobile, but also from more competition among MNOs.³⁴⁴ New T-Mobile's network will deliver immediate benefits in the form of broader national coverage to MVNOs that have a wholesale agreement with either or both carriers. Moreover, MVNOs that do not currently partner with T-Mobile or Sprint due to coverage or quality concerns will now look to New T-Mobile as a new competitive option. Thus, not only will the transaction expand network choices for MVNOs, but Verizon and AT&T are likely to respond by making attractive offers to MVNO partners.³⁴⁵ Indeed, AT&T and Verizon already

³⁴¹ *Id.*

³⁴² *AAI Petition* at 10; *Altice Petition* at 11; *DISH Petition* at 57; *Free Press Petition* at 26; *Public Knowledge et al. Petition* at 28; *RWA Petition* at 6.

³⁴³ *TracFone Comments* at 3.

³⁴⁴ Woroch Decl. at 28.

³⁴⁵ *Id.* at 26.

have the contracts in place to undercut any price increases by New T-Mobile.³⁴⁶ As such, MVNOs relying on the Verizon and AT&T networks will benefit from the transaction as well, and overall competition for MVNOs will increase, not decrease.

The benefits of the merger for MVNOs are expressly confirmed by the supporting comments of a number of MVNOs:

- **TracFone:** “New T-Mobile will increase the MNO wholesale competition for TracFone’s business and thus reduce wholesale costs.”³⁴⁷
- **Ultra Mobile and Mint Mobile:** The merger “will help create networks with better coverage, more capacity, greater throughput, and lower latency than would otherwise be available” and “will drive down prices, reducing wireless connectivity costs for both the MVNOs and U.S. consumers they serve.”³⁴⁸
- **Prepaid Wireless Group:** The network investment New T-Mobile will make as a result of the merger “will promote MVNO competition in the near term with improved 4G coverage and lead to a competitive 5G market going forward across the entire nation, including in rural areas.”³⁴⁹
- **Republic Wireless:** “A stronger and more affordable third network, run by leaders with a strong track record of openness towards partnering with new entrants, will provide the necessary foundation for the development and delivery of next-generation mobile products and services.”³⁵⁰

4. Merger Conditions Are Unnecessary to Ensure Competition for Wholesale Services

The Applicants have demonstrated that the myriad network, competition, and consumer benefits resulting from the merger, particularly with respect to wholesale services, are clear and convincing. Thus, as the Free State Foundation observes, the Commission should not impose conditions just “to manage, prop up, or protect the agency’s or any competitor’s vision of how

³⁴⁶ *Id.*

³⁴⁷ *TracFone Comments* at 3.

³⁴⁸ *Ultra Mobile/Mint Mobile Comments* at 1.

³⁴⁹ Comments of Prepaid Wireless Group, WT Docket No. 18-197, at 3 (filed Aug. 28, 2018).

³⁵⁰ Comments of Republic Wireless, WT Docket No. 18-197, at 4-5 (filed Sept. 7, 2018).

wholesaler or MNVO segments should operate.”³⁵¹ In view of the foregoing, there is no basis for imposing any of the conditions proposed by commenters to further the public interest.³⁵²

E. Rural Americans Will Benefit from Improved Broadband Service and Rural Carriers Will Receive Continued Roaming and Technical Assistance

New T-Mobile will bring broadband and advanced 5G services to millions of rural Americans. The merger will enable improved indoor and outdoor mobile services, high speed fixed wireless in-home services, and new video services, and the benefits that the National Rural Education Service cites in support of the transaction.³⁵³ It will also result in the addition of over 600 new stores and new customer care facilities to serve consumers in small towns and rural areas. Rural consumers have limited alternatives for wireless services today. In many areas, the options are largely Verizon, AT&T, or a carrier roaming on their networks. The merger will provide expanded and improved choices. Indeed, by building a truly nationwide and world-leading 5G network, New T-Mobile will bring the benefits of expanded network capacity, broadband speeds, and heightened competition to rural America.

Contrary to the assertion of some petitioners,³⁵⁴ New T-Mobile will continue the T-Mobile and Sprint traditions of working with rural carriers to serve rural Americans. This will take the form of roaming and technical assistance that benefits rural consumers and partnering through attractive roaming agreements. The transaction will increase competition in rural areas

³⁵¹ Comments of The Free State Foundation, WT Docket No. 18-197, at 19 (Aug. 27, 2018).

³⁵² See *Altice Petition* at 20-21; *C Spire Petition* at 22.

³⁵³ Letter from Allen Pratt, National Rural Education Association, WT Docket No. 18-197 (filed Sept. 11, 2018).

³⁵⁴ See, e.g., *Union Tel. et al. Petition* at 40; *Greenlining Petition* at 8; *RWA Petition* at 7.

both directly and through sparking a competitive response from Verizon and AT&T. Numerous commenters agree that rural America will benefit immensely from New T-Mobile.³⁵⁵

1. The Merger Will Deliver High-Speed, Un-Carrier Options to Consumers in Rural Areas, Increasing Competition

Today, T-Mobile’s and Sprint’s networks do not cover many small towns and rural areas of the country and Sprint, in particular, depends on roaming agreements to cover non-urban geographies. Consumers in numerous rural areas have only two choices for wireless service—Verizon and AT&T. The transaction, however, will produce significant incentives for New T-Mobile to build out the 5G network, which will enable the merged company to provide robust high-speed service to rural Americans, bringing more reliable and higher quality services and a fierce new competitor to these areas.³⁵⁶ Contrary to the allegations of some petitioners, the merger will increase, not reduce, competition in rural areas.

The PIS details how New T-Mobile will expand outdoor coverage to 59.4 million rural residents, and indoor coverage to 31 million rural residents. The merged company will offer improved signal quality and reliability, as well as significant network capacity, to support a broad spectrum of data-rich services. The new network will deliver mobile broadband service of at least 10 Mbps to 45.9 million rural consumers, accounting for 74 percent of rural residents. New T-Mobile also will offer fixed in-home broadband services of at least 25/3 Mbps to 52.2 million rural residents and covering 2.4 million square miles, which constitutes over 84.2 percent

³⁵⁵ See, e.g., Letter from Betsy E. Huber, President, National Grange, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 18-197, at 2 (filed Sept. 12, 2018); Letter from Matthew Kandrach, President, and Gerard Scimeca, Vice President, Consumer Action for a Strong Economy, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 18-197, at 2-3 (filed Aug. 30, 2018); Letter from Sean D. Reyes, Utah Attorney General, and Hector Balderas, New Mexico Attorney General, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 18-197, at 2 (filed Aug. 24, 2018).

³⁵⁶ PIS at 66.

of rural residents.³⁵⁷ New T-Mobile will focus on rural America as an additional revenue opportunity that will benefit rural customers.

While some petitioners question New T-Mobile’s financial incentive to expand service in rural areas,³⁵⁸ the combined company’s plans make perfect business sense. As detailed in the PIS, New T-Mobile’s enormous capacity will provide it with strong incentives to maximize its number of customers, because excess capacity means lost revenue and wasted resources.³⁵⁹ T-Mobile’s and Sprint’s customers are located primarily in urban areas. One of the merged company’s main opportunities for adding significant customer share is in rural areas and small towns—where neither T-Mobile nor Sprint has much of a presence today.³⁶⁰ New T-Mobile will have the scale to spread the cost of a new cell site or splitting an existing site—or deploying more spectrum on a tower—across a broader base of customers, justifying the cost of expanding and improving its rural network.³⁶¹

T-Mobile’s 600 MHz spectrum gives it the base frequencies to serve these areas—and T-Mobile has begun to build it out. However, combining the existing build with Sprint’s 2.5 GHz spectrum will allow New T-Mobile to deliver greater coverage and quality of service to these areas. Simply put, the merger synergies, the combined company’s complementary spectrum, and larger scale make New T-Mobile’s expanded investment in rural areas a sound business decision. As a result of this investment, the transaction will produce tangible benefits for rural consumers

³⁵⁷ *Id.*

³⁵⁸ See *DISH Petition* at 45; *NTCA Petition* at 7-8; *RSOC Petition* at 2-3, 5-7; *RWA Petition* at 8; *Union Tel. et al. Petition* at 40.

³⁵⁹ PIS at 64.

³⁶⁰ Ewens Decl. at ¶27.

³⁶¹ PIS at 65.

through faster and higher quality broadband and voice services, as well as expanded physical retail presence.³⁶² Rural consumers will also experience increased competition and gain the benefits competition brings due to the expanded presence of a new maverick competitor.

2. The Combination of 600 MHz and 2.5 GHz Spectrum Will Allow for Greater Broadband Services to Rural Areas

NTCA and DISH allege that the PIS is self-contradictory in stating both: 1) that Sprint’s 2.5 GHz spectrum does not have sufficient propagation characteristics to serve rural areas, and 2) that New T-Mobile will use 2.5 GHz spectrum to serve rural areas. Both opponents misread the PIS. Figure 12 of the PIS confirms that Sprint’s ability on a standalone basis to provide 5G services in rural America is “constrained” (*i.e.*, limited or restricted) because of the limited propagation characteristics of 2.5 GHz spectrum.³⁶³

The combination of 600 MHz spectrum along with 2.5 GHz spectrum will allow for deeper and better broadband services to rural areas than either company could provide on its own. The PIS states that, when the 2.5 GHz spectrum is combined with T-Mobile’s 600 MHz spectrum (which has better propagation characteristics) across the Applicants’ complementary sites, broadband can be provided to significantly greater geographic areas in rural America than would be possible by only deploying 2.5 GHz spectrum on existing Sprint towers.³⁶⁴ The merger synergies associated with the transaction allow for more radios with 2.5 GHz capabilities to be

³⁶² Public Knowledge and the Greenlining Institute raise doubts as to whether the offer to add 600 new retail stores in small towns will actually come to fruition because the specific locations are not identified. *See Public Knowledge et al. Petition* at 46; *Greenlining Petition* at 9. New T-Mobile is committed to deploy these new stores in the locations that make economic sense as determined by customer need. The specific locations will be identified as the combined company integrates the two companies’ separate operations. Articulating them now is not necessary for the Commission to credit the increased rural retail presence as a merger benefit.

³⁶³ PIS at 67.

³⁶⁴ *Id.* at 66-67.

added to more sites throughout the New T-Mobile network. In 2021, 2.5 GHz radios will be on nearly [REDACTED] more cell sites for the New T-Mobile 5G network ([REDACTED] sites for New T-Mobile as compared to [REDACTED] sites for standalone Sprint).³⁶⁵ By 2024, this difference will balloon to approximately [REDACTED] more cell sites ([REDACTED] sites for New T-Mobile as compared to [REDACTED] sites for standalone Sprint).³⁶⁶

New T-Mobile will be positioned to install radios at many more cell sites because, unlike Sprint standalone, the combined company will deploy low-band 600 MHz radios to drive better 5G coverage. Since the company will already be adding radios to these sites and providing coverage where Sprint would not on a standalone basis, the incremental cost of adding not just a 600 MHz radio but also a 2.5 GHz radio at the same time will be greatly reduced. The greater subscriber scale of New T-Mobile also allows for this incremental network investment to be spread over a larger customer base, improving the financial basis for adding 2.5 GHz radios to more towers in more areas. Through the combination of Sprint’s 2.5 GHz spectrum and T-Mobile’s 600 MHz spectrum, New T-Mobile will be able to provide a broad and deep coverage, including in rural areas. Finally, as discussed in the PIS, New T-Mobile will make a significant economic investment in the future of rural America—adding new retail and customer care operations to serve small towns and rural communities. With this greater rural presence, New T-Mobile will provide better broadband capabilities to these communities.

³⁶⁵ Ray Reply Decl. at ¶35.

³⁶⁶ *Id.*

3. The CDMA Transition Affords Ample Transition Time

Some petitioners request a merger condition mandating that Sprint’s CDMA network continue to be operated for a minimum period of time.³⁶⁷ Any concern about a rapid termination of the CDMA network is misplaced. Termination of the CDMA network will vary by geography, but is not expected to commence prior to January 1, 2021. New T-Mobile will implement a seamless transition plan to migrate CDMA customers on the New T-Mobile network, most likely through the availability of VoLTE service. In addition, New T-Mobile will work with rural carriers as part of that process so that Sprint’s CDMA roaming customers can be accommodated as part of the transition. Any further government mandate that an outdated network be maintained would not be in the public interest, and would impose unreasonably heavy costs on New T-Mobile. It would also risk diverting funds required for upgrading the network to support newer technologies, which would be inconsistent with Commission policies and harm consumers.³⁶⁸

4. The Proposed Merger Will Be Beneficial to Rural Roaming Partners

T-Mobile and Sprint have a long history of partnering with other carriers to further wireless deployments in rural areas. As explained in the PIS, New T-Mobile will offer to be the preferred roaming partner for rural carriers and to provide long-term roaming access to the robust New T-Mobile network on industry-leading terms. This will include a roaming program that offers carriers with existing roaming agreements with either T-Mobile or Sprint to determine

³⁶⁷ *Union Tel. et al. Petition* at 2; *C Spire Petition* at 24.

³⁶⁸ *See, e.g., Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies*, First Report and Order, 29 FCC Rcd 12865, 12867-89 ¶¶4-9 (2014); *Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment*, First Report & Order, Declaratory Ruling, & Further Notice of Proposed Rulemaking, 32 FCC Rcd 11128, 11129-30 ¶3 (2017).

which rates will govern their relationship with New T-Mobile.³⁶⁹ Moreover, New T-Mobile will cooperate with rural partners on their 5G roll-out, including providing technical assistance and advice on 5G deployments.³⁷⁰

GCI has made clear its support of the merger precisely because of its ability to be a preferred roaming partner, which allows it to “offer competitive wireless broadband service to GCI customers when they travel outside” Alaska.³⁷¹ Eric Graham, Senior Vice President of Strategic Relations for C Spire, even tweeted his favorable reaction to the merger announcement based on his belief that the merger could “benefit millions of consumers, including customers of other competitive wireless carriers.”³⁷² Against this backdrop, DISH, NTCA, and C Spire’s concerns that the merger will reduce competition in the “roaming/wholesale market,”³⁷³ causing roaming rates to rise, are misplaced and not founded in fact.³⁷⁴

³⁶⁹ The offer to permit a roaming partner to select either the Sprint or T-Mobile rates completely address RWA’s assertion that Sprint’s rates are 1/20th of T-Mobile’s roaming rates.

³⁷⁰ PIS at 69. Of course, that offer only applies where the partner’s network is technically compatible with T-Mobile’s 5G network.

³⁷¹ Letter from Ronald Duncan, GCI Communication Corp., to Senator Mike Lee and Senator Amy Klobuchar, WT Docket No. 18-197 (filed Aug. 1, 2018).

³⁷² Eric Graham Twitter Account, C Spire Senior Vice President (Aug. 30, 2018), <https://twitter.com/EricBGraham/status/991006614432960512> (“@Sprint is an ally of mid-sized and smaller carriers in the wireless industry. A combined @TMobile & Sprint might benefit millions of consumers, including customers of other competitive wireless carriers. @CSpire looks forward to learning more about the proposed transaction.”).

³⁷³ The Commission does not treat wholesale wireless and roaming as separate relevant product markets. As discussed in Section II.C, the Commission traditionally reviews wireless transaction using a combined mobile telephone/mobile broadband services product market. See *AT&T/Centennial Order*, 24 FCC Rcd at 13932 ¶37; *Verizon/Alltel Order*, 23 FCC Rcd at 17470 ¶46. This “all wireless” analysis encompasses differentiated services, including wholesale and roaming services, because distinguishing between such services would be unnecessary to analyze the potential effects of the proposed transaction. See, e.g., *AT&T/Leap Order*, 29 FCC Rcd at 2747-48 ¶26. Therefore, petitioners’ attempt to evaluate the transaction using these markets is inconsistent with precedent and should be rejected.

³⁷⁴ *DISH Petition* at 57; *C Spire Petition* at 12-13; *NTCA Petition* at 1-2.

T-Mobile and Sprint have demonstrated that the transaction will enhance retail competition and that other wireless providers will continue to exist and flourish. As noted above, New T-Mobile will maintain T-Mobile's and Sprint's existing roaming arrangements and offer new long-term roaming access to small rural carriers. Going forward, the merged network's expanded capacity and low cost per GB will enable New T-Mobile to offer appealing terms to roaming partners. And, unlike T-Mobile and Sprint as standalone companies, New T-Mobile will have an industry-leading network and larger nationwide footprint, enabling it to be a very desirable roaming alternative to AT&T and Verizon. Rather than reduce attractive roaming options for rural carriers, the transaction increases them.

RWA argues that current T-Mobile roaming arrangements are unfavorable because they do not provide that T-Mobile customers may roam on rural wireless carrier networks.³⁷⁵ RWA alleges that Sprint, on the other hand, has agreed to reciprocal roaming arrangements.³⁷⁶ The Commission's data roaming rule requires a facilities-based CMRS carrier to negotiate in good faith to permit data service customers to roam on their networks in accordance with commercially reasonable terms.³⁷⁷ There is no requirement that a facilities-based carrier also negotiate roaming agreements for its customers to roam on another carrier's network.

There is good reason for this distinction. Where a facilities-based carrier has built out its network, there is no reason to permit its customers to roam on another network, and to force such an arrangement would be anti-competitive, undermine investment incentives, and possibly cause

³⁷⁵ *RWA Petition* at 7.

³⁷⁶ *Id.*

³⁷⁷ 47 C.F.R. § 20.12(e).

other technical problems.³⁷⁸ In addition, in a competitive environment where New T-Mobile will be competing vigorously with a number of carriers, including Verizon and AT&T, there is no need for such a requirement because New T-Mobile is motivated to provide quality service to its customers.³⁷⁹

The roaming conditions requested by opponents are unnecessary and unjustified.³⁸⁰ New T-Mobile will continue T-Mobile's and Sprint's long histories of partnering with rural carriers to further wireless deployments in rural areas. New T-Mobile will offer to become the preferred roaming partner for rural carrier partners, providing long-term roaming access to the robust New T-Mobile network, at industry-leading terms.³⁸¹ Commission rules mandate all CMRS carriers to offer automatic roaming at reasonable rates,³⁸² and facilities-based CMRS carriers to offer data roaming on commercially reasonable terms, subject to certain limitations.³⁸³ Both roaming

³⁷⁸ See, e.g., *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers and Other Providers of Mobile Data Services*, Second Report & Order, 26 FCC Rcd 5411, ¶ 21 (2011) (“*Data Roaming 2d R&O*”). RWA states it is concerned that New T-Mobile will not enter into a reciprocal roaming agreement even in areas where New T-Mobile has no network. *RWA Petition* at 7. It further argues that T-Mobile has a history of not allowing its own customers to roam on rural carrier networks even where it does not have a network. *Id.* at 11. This assertion is unsupported by a declaration and therefore must be rejected.

³⁷⁹ In its Petition, RWA expresses concern that current Sprint spectrum leases will not be renewed after the merger. *RWA Petition* at 7-8. New T-Mobile will honor, in accordance with the terms thereof, spectrum leasing agreements that either T-Mobile or Sprint have with third parties that are in effect at the time the transaction closes. In any event, as noted by Neville Ray, New T-Mobile will be using its full spectrum portfolio as part of its plan to provide new and improved services, but will continue spectrum sales and leases where economically justified. *See Ray Decl.* at 17-22.

³⁸⁰ *Union Tel. et al. Petition* at 43-44; *C Spire Petition* at 22-25.

³⁸¹ PIS at 69.

³⁸² 47 C.F.R. § 201.12(d).

³⁸³ 47 C.F.R. § 20.12(e).

rules permit wireless providers to negotiate rates, subject to Commission oversight.³⁸⁴ In fact, the Commission adopted the data roaming rule over the objections of AT&T and Verizon to address the possibility that wireless industry consolidation might reduce the motivation to enter into a roaming agreement.³⁸⁵ For the foregoing reasons, there is no basis to impose a roaming condition.³⁸⁶

F. The Merger Will Create New Competition and Consumer Benefits in the Enterprise Segment

As detailed in the PIS, the New T-Mobile 5G network will provide much more capacity and drastically better network quality and coverage as compared to the standalones. These improvements will enable New T-Mobile to meet or exceed the stringent technical requirements of enterprise customers and provide new and better services at lower prices, creating competition

³⁸⁴ 47 U.S.C. § 208 (voice roaming); 47 C.F.R. § 20.12(e)(2) (data roaming). As justification for a roaming condition, Union Telephone notes that because data roaming is an information service, it is not held to the prohibition against unreasonable practice or discrimination standards under Sections 201 and 202 of the Act, respectively. *Union Tel. Petition* at 43. This argument is not merger-specific, and in any event, New T-Mobile must comply with the existing rules and Section 20.12(e)(2) does permit data roaming complaints to be filed alleging that the rates and terms are not commercially reasonable.

³⁸⁵ *Data Roaming 2d R&O*, 26 FCC Rcd at 5426-27 ¶ 27. *See also Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers and Other Providers of Mobile Data Services*, Order on Reconsideration & Second Further Notice of Proposed Rulemaking, 25 FCC Rcd 4181, 4195-96 ¶ 29 (2010) (consolidation used to justify rules for automatic voice roaming).

³⁸⁶ The Commission has appropriately left rate and term regulation to carriers' good faith negotiations in order to promote availability of data roaming, protect investment incentives by providers of host networks, and promote the pro-competitive benefits of service differentiation. *Data Roaming Second R&O*, 26 FCC Rcd at 5426-27 ¶ 27. Contract terms appropriate for one network or technology may not be appropriate for another. Therefore, each party should be allowed to enter into good faith negotiations to develop an agreement appropriate to the particular arrangement. Notwithstanding, Applicants are committed to working with carriers to allow roaming on the New T-Mobile 5G network in accordance with Commission rules.

in the segment³⁸⁷ by enabling New T-Mobile to claim a greater share of enterprise business from Verizon and AT&T than either T-Mobile or Sprint could achieve on its own.

Petitioners’ claims to the contrary are unfounded. DISH asserts that, because both T-Mobile and Sprint are “starting to make inroads” into the enterprise segment today, the merger’s impact on the segment is not merger-specific and cannot be credited to the transaction.³⁸⁸ This claim, however, ignores New T-Mobile’s greater ability to compete in the enterprise segment than either standalone T-Mobile or Sprint described above. It also ignores the substantially improved enterprise products and services that the New T-Mobile 5G network will enable. For example, today T-Mobile and Sprint have approximately a 9 percent combined share of the enterprise segment.³⁸⁹ Verizon and AT&T dominate the segment with a combined share of approximately 90 percent.³⁹⁰ However, Applicants project that, with the benefit of the merger, New T-Mobile will quickly double T-Mobile’s and Sprint’s combined existing business to claim 20 percent of the business segment by 2024.³⁹¹

³⁸⁷ There is no consensus industry-wide definition of the “enterprise segment.” However, Applicants are defining it as comprised of services to businesses with corporate liable billing accounts with 25 subscriber lines or more and government/public sector customers.

³⁸⁸ See *DISH Petition* at 40-41.

³⁸⁹ In the business portion of the segment, T-Mobile and Sprint have current market shares of approximately ■ and ■ percent, respectively, for a combined share of approximately 9 percent. In the government/public sector portion, T-Mobile and Sprint have market shares of ■ and ■ percent, respectively, for a combined share of approximately 6 percent. The total combined T-Mobile and Sprint share of the entire enterprise segment is approximately 9 percent. See Ewens Reply Decl. at n.1.

³⁹⁰ *Id.* at ¶21.

³⁹¹ *Id.*

1. The Powerful New T-Mobile Network Will Provide Improved Options and Innovative Products for Enterprise Customers

The merger-specific benefits to enterprise customers start with the powerful New T-Mobile 5G network. As discussed in the PIS, enterprise customers are highly sensitive to differences in network quality, prioritizing perceived quality above other factors when selecting providers and setting stringent technical and safety requirements for networks.³⁹² New T-Mobile's nationwide 5G network will provide dramatic quality and coverage improvements, and its drastically increased capacity will also enable New T-Mobile to offer more competitive prices and attractive features for businesses of all sizes. The merger will enable New T-Mobile to deliver services and features that businesses demand today, but with Un-carrier benefits.

Enterprise customers also value a broad portfolio of products and solutions to address all their mobility, globalization, and digitalization requirements. Providers offering the full portfolio of solutions have an inherent advantage. Standalone T-Mobile and Sprint lack the network, sales and support, and technology platforms to offer competitive services across the breadth of the enterprise segment.³⁹³ Combining the companies' assets will provide the network improvements, sales force expansion, and investments in technology solutions, to offer enterprise customers a full portfolio of 5G wireless, wireline, and IoT solutions and bring strong competition to the segment.³⁹⁴

³⁹² PIS at 11.

³⁹³ Ewens Reply Decl. at ¶23.

³⁹⁴ *Id.*

a. The 5G Network Will Enable New Wireless Solutions to Old Wireline Problems

New T-Mobile intends to break Verizon's and AT&T's grip on the enterprise business segment and present a viable alternative to the more limited and expensive offerings of the segment leaders. New T-Mobile's wireless solutions could serve the in-office needs of enterprise customers far better with a range of options, including mobile devices, than traditional wireline products. New T-Mobile will provide enterprise customers with a strong, well-capitalized player in the marketplace with sufficient scale to compete with Verizon and AT&T.

One enterprise opportunity the Applicants are evaluating is replacing landline desk phones with wireless alternatives. Landline desk phones represent a multi-billion business within the enterprise segment today. Desk phone options and features have lagged far behind wireless advances for years. The merger will create a significant, new opportunity for New T-Mobile to break into the desk phone business with more advanced and adaptable wireless alternatives. The Applicants project that, with its 5G network, New T-Mobile can provide a wireless product that will better meet the voice needs of enterprise customers.³⁹⁵

Another enterprise service that could be revolutionized by New T-Mobile's 5G network is the provisioning of software-defined wide-area networks (SD-WANs).³⁹⁶ Today, SD-WANs are predominantly serviced by fixed line Internet service providers. The New T-Mobile network could open a range of opportunities in the SD-WAN space. For example, though most SD-WANs are fixed line, there is an opportunity for New T-Mobile to use its network to provide network redundancy for enterprise clients through a wireless backup option.³⁹⁷ Furthermore,

³⁹⁵ *Id.* at ¶24.

³⁹⁶ *Id.* at ¶25.

³⁹⁷ *Id.*

because this backup function would require enterprise hardware to have integrated radios capable of operating on the New T-Mobile network, these devices could also serve as in-building licensed “hotspots,” leveraging New T-Mobile’s licensed spectrum to improve network coverage indoors.³⁹⁸ Eventually, New T-Mobile could even provide primary SD-WAN services.³⁹⁹ This could involve using software to “slice” the 5G network and designate reliable, high-quality, capacity to individual enterprise customers to effectively serve as their internal network and connect offices, data centers, retail locations, workforces, etc. over large geographic distances. New T-Mobile will have strong incentives to leverage its world-leading robust, nationwide 5G network’s capacity to open up innovative new wireless possibilities in this space.⁴⁰⁰

b. The Merger Will Enable Improved Competitiveness in Commercial IoT

DISH asserts that the merger is not necessary to enable many new IoT use cases and that IoT could be provided on a standalone basis.⁴⁰¹ IoT is not homogeneous and, therefore, different use cases require different network capabilities. Accordingly, there are IoT use cases that T-Mobile and Sprint can, and are, serving with their existing assets. However, the heterogeneity of IoT is the very reason that the merger will increase the merged company’s ability to compete in IoT services. For example, IoT services such as fleet management, remote sensing, and Unmanned Aerial Systems (“UAS”) may not require high bandwidth or capacity but do require a degree of geographic range for which the standalone Sprint network is ill-suited. Some smart building/campus/city solutions may not require geographic ubiquity but could require capacity

³⁹⁸ *Id.*

³⁹⁹ *Id.*

⁴⁰⁰ *Id.*

⁴⁰¹ *DISH Petition* at 41.

beyond the capabilities of the standalone T-Mobile network. And some IoT solutions, such as autonomous vehicle services require both capacity and geographic ubiquity. Therefore, the combined capacity and ubiquity of New T-Mobile's 5G network will enable new enterprise IoT solutions that neither or only one of T-Mobile or Sprint can offer alone. Furthermore, the combination of T-Mobile and Sprint will meld an Un-carrier approach with the scale and complementary assets required to enable strong competition with Verizon and AT&T, offering enterprise customers a truly competitive alternative.⁴⁰²

Finally, there are countless potential IoT applications that are yet to be developed but that the Applicants reasonably expect will require the combined coverage and capacity of the New T-Mobile 5G network. Criticisms that the standalone T-Mobile and Sprint 5G networks each would be adequate to meet some of today's IoT needs completely fails to recognize the fast-moving nature of the telecommunications industry and the necessary choices that wireless carriers make every day to invest today's dollars in anticipation of tomorrow's needs.

c. Sprint Provides Valuable Wireline Assets that Will Enable New T-Mobile to Compete More Effectively in Enterprise

Although New T-Mobile's greatest strength in the enterprise segment will be the power of its 5G network, Sprint holds wireline assets with features that when combined with the New T-Mobile network, could strengthen the New T-Mobile portfolio and help meet the needs of enterprise customers in more than 155 countries on 6 continents.⁴⁰³ Sprint operates one of the world's largest global Tier-1 IP networks in the world and delivers its IP based services via

⁴⁰² Ewens Reply Decl. at ¶26.

⁴⁰³ See, generally, Sprint Business, <https://business.sprint.com/network/> (last visited Sept. 16, 2018); Sprint Corp. Form 10-K for the Fiscal Year Ended March 31, 2018, at 46, <http://d18rn0p25nwr6d.cloudfront.net/CIK-0000101830/f87fb089-cbf4-415a-accf-2122a5b0323f.pdf>.

facilities-based fiber-optic backbone, managing an IP/Ethernet access footprint with facilities in 32 countries and the ability to reach an additional 123 countries via network partners and access providers.⁴⁰⁴ The assets and customer relationships provided by Sprint’s wireline business provide New T-Mobile with an international reach that would otherwise be difficult to attain. The services will provide critical products and services vital to New T-Mobile’s enterprise wireless customers.

Also, Sprint’s IP backbone architecture and engineering principles provide world-class network performance, redundancy and security, thus ensuring the highest levels of Quality of Service and industry-leading Service Level Agreements. The Sprint Global IP Network is an all IP-based network supported by advanced network management tools and fully redundant Network Operations Centers providing enterprise customers with a degree of reliability and performance among the best in the industry. Sprint’s network and IP products provide a full suite of managed network solutions including IP/MPLS, SD-WAN as well as a range of fully managed and integrated security solutions.⁴⁰⁵ Customers can also access Sprint Global SIP voice network and unified communications solutions with the ability to manage their experience through a customer web portal.⁴⁰⁶ These services can be integrated into the larger New T-Mobile business to provide superior options for both wireless and wireline customers. When combined with the New T-Mobile 5G network, these assets and services create far greater value for enterprise customers than could be achieved by Sprint as a standalone company.

⁴⁰⁴ See e.g., Sean Buckley, *Sprint expands Ethernet offering with new copper, DOCSIS options*, FIERCEWIRELESS (Jan. 4 2017), <https://www.fiercetelecom.com/telecom/sprint-expands-ethernet-offering-new-copper-docsis-options>.

⁴⁰⁵ See Sprint Corp. Form 10-K for the Fiscal Year Ended March 31, 2018, at 46.

⁴⁰⁶ See My Sprint Business, <http://ecenter.sprint.com/mysprint/jsp/landingPage/wireline.jsp> (last visited Sept. 16, 2018).

d. The Merger Enables New Bundled Service Offerings that Create Business Options and Consumer Welfare

On their own, each of New T-Mobile's enterprise services and features detailed above would be valuable to enterprise customers. However, with additional services, New T-Mobile will be able to offer more attractive combinations of wireless, landline-replacement, SD-WAN, wireline, or IoT services into single plans. By doing so, New T-Mobile will be able to manage and balance pricing and costs across multiple offerings to more economically provide appealing services to business customers.

Finally, expanding New T-Mobile's share in the enterprise segment will take more than a superior network or better, cheaper products. It will also take marketing and salespeople. Therefore, as more fully discussed below, the New T-Mobile enterprise story is also a jobs story. With the merger, New T-Mobile plans to add approximately 1,000 employees to the enterprise workforce to reduce the gap and bring increased competition to the sector.⁴⁰⁷

G. The Merger Will Create American Jobs at New T-Mobile and in the Broader U.S. Economy

The merger will grow U.S. jobs from day one and for the foreseeable future. T-Mobile's business plan shows that, within three years of closing, New T-Mobile will employ 9,600 more direct internal and external employees than the standalone companies would have employed combined.⁴⁰⁸ An independent, third-party jobs analysis performed by Dr. Jeffrey Eisenach of NERA Economic Consulting confirms job growth—finding the merger will result in transaction-specific direct and indirect employment increases, particularly within the first three years

⁴⁰⁷ Ewens Reply Decl. at ¶28.

⁴⁰⁸ Sievert Decl. at ¶19.

following the transaction.⁴⁰⁹ By accelerating the construction of a nationwide 5G network years faster than otherwise possible, New T-Mobile will stimulate a virtuous cycle of U.S. economic growth, which Dr. Eisenach projected will result in a *net job gain* of nearly 125,000 additional job-years, or an average of more than 24,000 jobs in each year between 2019 and 2023.⁴¹⁰

Moreover, Dr. Eisenach’s initial analysis likely *underestimated* the employment gains attributable to the merger. As reflected in his supplemental declaration, Dr. Eisenach revisited the coefficients estimated by Drs. Robert Shapiro and Kevin Hassett for the effect of adopting new wireless technology on employment.⁴¹¹ Dr. Eisenach concluded that the optimal coefficient under the Shapiro-Hassett methodology is not the change in the level of penetration resulting from the merger, but rather the change in the increase in penetration from quarter to quarter. Applying the most reasonable coefficient to his prior analysis leads Dr. Eisenach to conclude that the merger will contribute 168,600 job-years to the U.S. economy between 2019 and 2023 or, stated differently, 33,720 additional jobs over the five-year study period.⁴¹² The demonstrable, transaction-specific job growth at New T-Mobile and in the broader American economy represents a key public-interest benefit of the merger.⁴¹³

⁴⁰⁹ Eisenach Decl. at ¶11.

⁴¹⁰ *Id.* at ¶12.

⁴¹¹ Supplemental Declaration of Dr. Jeffery A. Eisenach, Appx. K at ¶¶2-3 (“Eisenach Supp. Decl.”).

⁴¹² *Id.* at ¶56.

⁴¹³ *See, e.g., Applications of Comcast Corporation, General Electric Company, and NBC Universal for Consent to Assign Licenses and Transfer Control of Licenses*, Memorandum Opinion and Order, 26 FCC Red 4238, 4330 ¶224 (2011); *AT&T Inc. and BellSouth Corporation Application for Transfer of Control*, Memorandum and Opinion and Order, 22 FCC Red 5662, Appendix F (2007); *Applications of Puerto Rico Telephone Authority and GTE Holdings (Puerto Rico) for Consent to Transfer Control of Licenses and Authorizations*, Memorandum Opinion and Order, 14 FCC Red 3122, 3148 ¶¶57-58 (1999); *Application of Ameritech Corp. and SBC*

In response, CWA and others have predicted approximately 28,000 job losses.⁴¹⁴ CWA’s analysis is incomplete and cannot be relied upon. It disregards New T-Mobile’s planned incremental capital expenditures and expansion of services. CWA has a history of making unsupported job claims that the Commission has repeatedly rejected in its merger review proceedings.⁴¹⁵ CWA’s latest effort here is no different, and the Commission should again reject its claims.

1. CWA Ignores New T-Mobile’s Business Plans to Hire More Employees

On its face, CWA’s prediction of 28,000 job losses strains credulity because Sprint has approximately that many employees total today.⁴¹⁶ New T-Mobile could not support the

Communications Inc., for Consent to Transfer Control of Corporations Holding Commission Licenses and Lines, Memorandum and Order, 14 FCC Red 14712, 14947 ¶567 (1999).

⁴¹⁴ CWA Comments at 61; DISH Petition at 42-43.

⁴¹⁵ See, e.g., *Applications Filed by Altice N.V. and Cablevision Systems Corporation to Transfer Control of Authorizations from Cablevision Systems Corporation to Altice N.V.*, Memorandum Opinion and Order, 31 FCC Rcd 4365, 4377-78 (2016) (“We conclude that CWA’s claims that Applicants will finance the transaction by job cuts are speculative”); *Applications of Deutsche Telekom AG, T-Mobile USA, Inc., and MetroPCS Communications, Inc.*, Memorandum Opinion and Order and Declaratory Ruling, 28 FCC Rcd 2322, 2351-52 (2013) (“*T-Mobile-MetroPCS Order*”) (“Based on our careful review of the record, we are not persuaded by the commenters’ arguments that any employment effects of the transaction warrants the imposition of the conditions requested.”); *Applications of Softbank Corp., Starburst II, Inc., Sprint Nextel Corporation, and Clearwire Corporation*, Memorandum Opinion and Order, Declaratory Ruling, and Order on Reconsideration, 28 FCC Rcd 9642, 9670 (2013) (“*Sprint-Softbank Order*”) (rejecting as “speculative and unsubstantiated” CWA’s claims that the transaction would not lead to significant job creation); *Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. for Consent to Assign Licenses and Transfer Control of Licensees*, Memorandum Opinion and Order, 26 FCC Rcd 4238, 4327-30 (2011) (rejecting CWA’s requests to place employment- and labor-related conditions on applicants’ merger application); *Applications Filed for the Transfer of Certain Spectrum Licenses and Section 214 Authorizations in the States of Maine, New Hampshire, and Vermont from Verizon Communications Inc. and its Subsidiaries to FairPoint Communications, Inc.*, Memorandum Opinion and Order, 23 FCC Rcd 514, 539 (2007) (rejecting CWA’s concerns regarding job losses as “speculative” and “not supported by the record.”).

⁴¹⁶ See Sprint Corp., *2017 Annual Report: Form 10-K*, at 9 (Mar. 24, 2018).

combined company’s business—much less the anticipated growth in customers following the combination—by terminating that number of employees. Achieving New T-Mobile’s business objectives will require hiring more—not fewer—employees than the two stand-alone companies have today.

CWA’s illogical conclusion results from focusing only on potential employment reductions, while ignoring demonstrable employment gains. CWA does not acknowledge, let alone address, the net job gains projected in New T-Mobile’s business plan, which are further substantiated by Dr. Eisenach’s report. As the table below shows, CWA cherry-picks categories showing job losses, while avoiding those that demonstrate job growth:

Job Category	CWA’s Jobs Analysis	Real-World Job Effects
Retail employees	Included (partially)	Included
Call Center employees	Excluded ⁴¹⁷	Included
Headquarters	Included	Included
Employees needed for new lines of business (e.g. corporate clients, fixed broadband, IoT, etc.)	Excluded	Included
Employees associated with additional network buildout and network integration	Excluded	Included
Induced employment in the US economy due to incremental merger-specific investment	Excluded	Included
Additional employment in the US economy due to speed up of 5G deployment	Excluded	Included

By selectively excluding categories of employment from its analysis, CWA fails to account for the Applicants’ plan for significant incremental capital investment integrating network infrastructure, expanding and updating retail stores, conducting new advertising campaigns, and enhancing customer care.⁴¹⁸ More investment means more American jobs. New

⁴¹⁷ The CWA study mentions call centers, but incorrectly assumes no job growth.

⁴¹⁸ Eisenach Decl. at ¶22.

T-Mobile will create approximately 1,800 new jobs dedicated to transitioning the companies' networks in rural areas and expanding rural coverage.⁴¹⁹ New T-Mobile will also add approximately 1,000 new jobs to take advantage of New T-Mobile's enhanced competitiveness in the enterprise sector.⁴²⁰ And New T-Mobile will open five new technologically advanced Customer Experience Centers in small towns and rural communities to implement the company's innovative "Team of Experts" customer care and business model, which will directly create approximately 5,600 new jobs.⁴²¹ In total, New T-Mobile will create more than 12,000 new jobs to serve small towns and rural communities as a direct result of the transaction.⁴²²

Even within categories where New T-Mobile may realize net employment synergies, CWA overstates their effect by tallying the job losses without considering offsetting job gains. For example, CWA predicts 26,000 headcount reductions based on store closures at the retail level.⁴²³ But CWA ignores how New T-Mobile will need to expand the size of its remaining stores, increasing staffing to compensate for the additional traffic associated with serving a larger customer base. Moreover, New T-Mobile intends to open 600 new stores (500 dealer stores and 100 corporate stores) to serve small towns and rural communities where neither company has a meaningful retail presence today.⁴²⁴ This geographic expansion will require the New T-Mobile

⁴¹⁹ Sievert Decl. at ¶17.

⁴²⁰ *Id.*

⁴²¹ *Id.*

⁴²² *Id.* at ¶12.

⁴²³ *CWA Comments* at 62.

⁴²⁴ Sievert Decl. at ¶17.

to hire at least 5,000 more retail employees by 2021 than the standalone companies have planned.⁴²⁵

CWA also misstates the extent of retail job reductions by incorrectly assuming that New T-Mobile will eliminate half of all Boost Mobile stores by combining them with MetroPCS stores.⁴²⁶ As John Legere explained in response to questions from Congress, “New T-Mobile does not plan to combine nearby MetroPCS and Boost stores.”⁴²⁷ To the contrary, New T-Mobile’s business plan calls for retaining both the MetroPCS and the Boost Mobile brands because each brand has its own identity and caters to somewhat different customer segments.⁴²⁸

Moreover, the Applicants have demonstrated each of their claims of merger-specific job growth in the PIS.⁴²⁹ In addition, the companies have provided information and documentation in response to the Commission’s request for “all plans, analyses, and reports discussing the creation or loss of jobs if the Proposed Transaction were to be consummated.”⁴³⁰ Finally, the companies have independently verified the employment projections in New T-Mobile’s business

⁴²⁵ *Id.*

⁴²⁶ *CWA Comments* at 64-65; *DISH Petition* at 42-43 (asserting that 2,750 prepaid stores would be closed as a result of the merger).

⁴²⁷ U.S. Senate, Subcommittee on Antitrust, Competition Policy, and Consumer Rights, Hearing, *Game of Phones: Examining the Competitive Impact of the T-Mobile – Sprint Transaction* (June 27, 2018), https://www.judiciary.senate.gov/meetings/game-of-phones-examining-the-competitive-impact-of-the-t-mobile_sprint-transaction.

⁴²⁸ Sievert Reply Decl. at ¶11.

⁴²⁹ *See, e.g., Application of Nevada Wireless for a License to Provide 800 MHz Specialized Mobile Radio Serv. in the Farmington, Nm-Co Econ. Area (EA 155) Frequency Band A*, Memorandum Opinion and Order, 13 FCC Rcd 11973 (1998) (dismissing a petition to deny for failing to rebut sworn statements by license applicants).

⁴³⁰ Federal Communications Commission, WT Docket No. 18-197, General Information and Document Request for T-Mobile, at Spec. 45 (Aug. 15, 2018).

plans through the expert report of Dr. Eisenach. Simply put, CWA’s argument that the companies have failed to meet their burden is meritless.

2. Dr. Eisenach’s Independent Findings of Job Growth Confirm the Projections in New T-Mobile’s Business Plans

Dr. Eisenach’s report independently confirms the job growth projections set forth by the Applicants in New T-Mobile’s business plans. As a threshold matter, Dr. Eisenach’s study contradicts CWA’s misstatement that New T-Mobile’s job growth plans are unverifiable.⁴³¹ Based on the transaction-specific changes in both operating and capital expenditures at New T-Mobile, Dr. Eisenach estimates that the direct, indirect, and induced employment effects of the changes in spending and output resulting from the merger will contribute 51,200 additional “job-years” to the U.S. economy between 2019 and 2023.⁴³²

Dr. Eisenach’s study further quantifies the job creation that the merger would bring to the broader U.S. economy.⁴³³ These merger-specific benefits would come from the creation of an enhanced 5G broadband network years ahead of schedule. Dr. Eisenach initially estimated that accelerated 5G deployment and adoption would result in an additional 73,600 job-years from 2021 through 2023.⁴³⁴ His supplemental analysis finds that this earlier estimate did not account for the preferred application of change coefficients under the Shapiro-Hassett model. Applying coefficients that reflect changes in the increase in penetration from quarter to quarter leads Dr. Eisenach to conclude that accelerated 5G deployment and adoption will in fact produce 117,500

⁴³¹ CWA Comments at 55.

⁴³² Eisenach Decl. at ¶34.

⁴³³ Contrary to the claims of DISH, Dr. Eisenach never assumes 5G deployment will not occur without the merger. See *DISH Petition* at 42. Rather, Dr. Eisenach’s analysis of post-merger employment effects is based in part upon *accelerated* 5G deployment that will result from the merger. Eisenach Decl. ¶56.

⁴³⁴ Eisenach Decl. ¶56.

additional job-years from 2021 through 2023.⁴³⁵ This finding—together with the direct, indirect, and induced employment effects of the changes in spending and output resulting from the merger—means the transaction will contribute 168,600 job-years in the five years following consummation. In terms of job increases, this represents an annual average of 33,720 new American jobs over five years.

3. CWA Has a Long History of Making Discredited Jobs Claims

The massive job growth after T-Mobile’s acquisition of MetroPCS further highlights CWA’s lack of credibility in predicting post-merger jobs effects. During the FCC’s review of that transaction in 2012, CWA predicted up to 10,000 employee layoffs and advocated for onerous employment-related conditions.⁴³⁶ The Commission rejected CWA’s speculative predictions and instead found more credible T-Mobile’s demonstrable commitment to creating American jobs.⁴³⁷ The Commission got it right, and CWA’s projections never transpired. After acquiring MetroPCS, T-Mobile’s total workforce increased by more than 30 percent in the following three years, accounting for an increase of more than 12,000 jobs.⁴³⁸

Unsurprisingly, CWA urges the Commission to disregard the MetroPCS acquisition. CWA says the MetroPCS success story is irrelevant because that transaction presented “the growth of opportunity of expanding into new geographies”⁴³⁹—the implication being that the

⁴³⁵ Eisenach Supp. Decl. at ¶56.

⁴³⁶ *T-Mobile-MetroPCS Order*, 28 FCC Rcd at 2349-51 ¶76.

⁴³⁷ *Id.* ¶80.

⁴³⁸ Sievert Reply Decl. at ¶20.

⁴³⁹ *CWA Comments* at 58. Instead, CWA urges the Commission to focus on alleged job cuts when T-Mobile purchased the remaining interest in Iowa Wireless. *CWA Comments* at 59. However, Iowa Wireless is distinguishable because T-Mobile did not forecast job growth resulting from that transaction. In contrast, in MetroPCS and in this transaction, T-Mobile’s business plan is one of growth and expanded employment.

merger of T-Mobile and Sprint does not. CWA is wrong about the relevance of the MetroPCS transaction. One of the public interest benefits of the merger is precisely the type of “growth opportunity of expanding into new geographies” that occurred after the MetroPCS transaction. As noted above, New T-Mobile plans to extend its coverage to rural areas and open 600 new stores, largely in sparsely populated regions of the United States where neither Sprint nor T-Mobile has a meaningful retail presence today. The undeniable success of the MetroPCS acquisition is an on-point and compelling example of merger-specific job growth.

The selective, results-driven nature of CWA’s analysis becomes even more apparent in view of the position CWA adopted in 2011 during the proposed merger of AT&T and T-Mobile. In that proceeding, CWA endorsed a completely different methodology when it touted a study by the Economic Policy Institute (“EPI”) to claim that the acquisition of T-Mobile by the unionized company, which CWA supported, would create 96,000 new jobs based on the assumption that the transaction would increase capital expenditures by \$8 billion.⁴⁴⁰ The Bureau correctly rejected the EPI study because AT&T’s business plans provided no support for an \$8 billion increase of incremental capital expenditures.⁴⁴¹ Indeed, AT&T’s internal documents projected a net loss of jobs.⁴⁴² Despite CWA’s reliance on drastically different methodologies here than it used in support of AT&T’s proposed merger, CWA committed the same underlying error in both instances—there, as here, CWA ignored the incremental capital expenditures from the companies’ *actual* business plans.

⁴⁴⁰ *Application of AT&T and Deutsche Telekom AG*, Order and Staff Analysis and Findings, 26 FCC Rcd 16184, 16293 ¶¶259-265 (2011) (“AT&T Staff Findings”).

⁴⁴¹ *See id.* ¶264 n.690.

⁴⁴² *See id.* at ¶263.

III. NEW T-MOBILE WILL OPERATE CONSISTENT WITH NATIONAL SECURITY AND NON-U.S. OWNERSHIP CONSIDERATIONS

T-Mobile and Sprint have operated consistent with national security and non-U.S. ownership considerations for decades and New T-Mobile will continue to do so. As discussed below, the statements of CWA and RWA are incorrect as a matter of fact, law and policy and they ignore the track records of two U.S. companies who today serve Americans and the U.S. Government.

A. The Foreign Ownership in New T-Mobile Is Consistent with Commission Precedent and Policy

The FCC has repeatedly reviewed and approved both Deutsche Telekom AG (“DT”) and SoftBank Group Corp. (“SoftBank”) to hold their existing ownership interests in T-Mobile and Sprint, respectively. These approved ownership interests are much larger stakes than each of the entities would hold in the combined company. In fact, the Commission several times has authorized up to 100 percent ownership of T-Mobile and its subsidiaries by DT and its identified subsidiaries.⁴⁴³ The FCC similarly authorized SoftBank to hold up to a 100 percent ownership stake in Sprint and its licensed subsidiaries.⁴⁴⁴ There is no evidence or reason to believe that DT or SoftBank, as non-U.S. companies, will be less careful stewards of New T-Mobile than they have been of T-Mobile and Sprint—both of which have strong compliance records and strong relationships with U.S. government partners.

⁴⁴³ See Section 214 *Applications and International Authorizations Granted*, Public Notice, 29 FCC Rcd 1797, 1803 (Feb. 19, 2014); *Section 214 Applications and International Authorizations Granted*, Public Notice, 28 FCC Rcd 8006, 8008 (May 30, 2013); *T-Mobile-MetroPCS Order*, 28 FCC Rcd at 2359 ¶96; *Applications of Voicestream Wireless Corporation, Powertel, Inc. and Deutsche Telekom AG*, Memorandum Opinion and Order, 16 FCC Rcd 9779 (2001).

⁴⁴⁴ See, e.g., *Section 214 Applications and International Authorizations Granted*, Public Notice, 31 FCC Rcd 7743, 7744 (July 21, 2016); *Sprint-Softbank Order*, 28 FCC Rcd at 9693 ¶124.

Contrary to Petitioners’ claims, the contemplated foreign ownership of New T-Mobile is fully consistent with the standards set forth in Section 310(b)(4) of the Communications Act, the Commission’s non-U.S. ownership rules, and prior Commission precedent.⁴⁴⁵ The Commission repeatedly has concluded that allowing foreign investment in common carrier licenses promotes competition in the U.S. market. The Commission affirmed this long-standing policy in its 2013 *Foreign Ownership Policies Second Report and Order*, stating that “foreign investment has been and will continue to be an important source of financing for U.S. telecommunications companies, fostering technical innovation, economic growth, and job creation.”⁴⁴⁶

B. The Commission Should Follow Its Established Precedent and Defer to Separate National Security Reviews

Some petitioners raise additional concerns that the transaction could pose national security threats arising from foreign ownership of the country’s first nationwide 5G provider and request that the Commission impose various conditions on its approval of the transaction, including New T-Mobile’s commitment not to use certain infrastructure equipment in the combined company’s networks. However, these concerns raise issues that are misplaced and are otherwise being addressed in separate national security reviews.

The proposed transaction will strengthen U.S. national security by better positioning the United States to lead in the 5G era. The Commission has made clear its goals of quickly deploying 5G networks and services as a means to advance U.S. technological leadership. This leadership will ensure that the development of next-generation services and applications occurs

⁴⁴⁵ See *Rules and Policies on Foreign Participation in the U.S. Telecommunication Market*, Report and Order and Order on Reconsideration, 12 FCC Rcd 23891, 23940 ¶111 (1997) (“*Foreign Participation Order*”).

⁴⁴⁶ *Review of Foreign Ownership Policies for Common Carrier and Aeronautical Radio Licenses Under Section 310(b)(4) of the Communications Act of 1934, As Amended*, Second Report and Order, 26 FCC Rcd 5741 ¶3 (2013).

within the United States. By combining the spectrum, sites, and resources of T-Mobile and Sprint, the combined company will not only be able to accelerate its deployment of the first nationwide mobile 5G network, but also increase competitive pressure on Verizon and AT&T to accelerate their own 5G investments. The resulting strengthened competition among U.S. telecommunications companies will advance U.S. technological leadership and national security, placing the country at the forefront of the enormous technological and economic benefits of the 5G era.

There are well-established regulatory processes for addressing national security concerns for this type of transaction. As noted in the PIS, given their existing non-U.S. ownership, both Sprint and T-Mobile have operated for many years pursuant to separate security agreements with certain U.S. government agencies.⁴⁴⁷ The “Team Telecom” Executive Branch agencies have intervened in this proceeding and commenced their national security review.⁴⁴⁸ Closing of the transaction is also subject to review by the Committee on Foreign Investment in the United States (“CFIUS”), which conducts its own parallel national security review. Applicants currently

⁴⁴⁷ See *DT-VoiceStream Order*, 16 FCC Rcd at 9853, Appx. B (including the Deutsche Telekom AG National Security Agreement); Sprint-Nextel Corporation, Form 8K, at Item 8.01 (May 29, 2013), <https://www.sec.gov/Archives/edgar/data/101830/000119312513238554/d545797d8k.htm> (describing the National Security Agreement entered into by Sprint as a condition for approval of SoftBank merger). See also *Applications of T-Mobile USA, Inc. and SunCom Wireless Holdings, Inc. for Consent to Transfer Control of Licenses and Authorizations and Petition for Declaratory Ruling that the Transaction Is Consistent with Section 310(b)(4) of the Communications Act*, Memorandum Opinion and Order, 23 FCC Rcd 2515, 2529-37, Appx. B (2008) (amending the DT NSA); *T-Mobile-MetroPCS Order*, 28 FCC Rcd at 2363-72, Appx. B (further amending the DT NSA).

⁴⁴⁸ See Letter from Debbie Wheeler, Telecommunications Analyst, National Security Division, U.S. Department of Justice, to Marlene H. Dortch, Secretary, Federal Communications Commission (dated July 25, 2018) (asking the FCC to defer ruling on this transaction until after Team Telecom completes its review for national security, law enforcement, and public safety concerns).

are working with the Team Telecom and CFIUS agencies to resolve any concerns they may have regarding the transaction and expect that those reviews will result in a new security agreement for the combined company. The Commission repeatedly has stated that it “accords an appropriate level of deference” to the Team Telecom and CFIUS reviews to resolve any national security, law enforcement or public safety issues presented by a transaction.⁴⁴⁹ Petitioners have raised no issues that justify departure from this long-standing practice and the Commission should allow these reviews to continue without intervention.

IV. THE COMMISSION SHOULD DISMISS UNRELATED CLAIMS AND ASSOCIATED PROPOSED MERGER CONDITIONS

A number of petitioners and commenters have raised private contractual disputes or legal actions that do not bear on the merits of the transaction itself. Their particular details and issues aside, none of these disputes are appropriate for consideration in the context of the present proceeding.

A. Rural Call Completion Disputes Are Unrelated and Should Be Dismissed

Some petitioners argue that T-Mobile is engaged in certain practices that disadvantage rural subscribers. NTCA, RWA, and CarrierX d/b/a freeconferencecall.com (“Free Conferencing”) assert that the license transfer applications should be denied because the merger will somehow exacerbate call routing and traffic exchange patterns that they allege are contrary to the public interest. NTCA and RWA point to an FCC consent order addressing past T-Mobile rural call completion rule violations,⁴⁵⁰ but provide no basis for concluding such incidents would

⁴⁴⁹ See, e.g., *Sprint-SoftBank Order*, 28 FCC Rcd at 9693-94 ¶125 (“[T]he Commission accords an appropriate level of deference to Executive Branch agencies’ unique expertise on national security and law enforcement issues.”). See also *Foreign Participation Order*, 12 FCC Rcd at 23919 ¶62.

⁴⁵⁰ *NTCA Petition* at 10-12; *RWA Petition* at 9-11.

occur in the future or that the merger would in any way contribute to their re-occurrence. Such allegations are consistently dismissed by the Commission in merger reviews.⁴⁵¹ Free Conferencing inappropriately seeks to advance its litigation claims in this proceeding.⁴⁵² It is well-established that “the purpose of the [Communications] Act is to protect the public interest rather than provide a forum for the settlement of private disputes.”⁴⁵³ The Commission has repeatedly stated that it is not the proper forum for the resolution of private disputes, noting that these matters are appropriately left to the courts or to other fora that have the jurisdiction to

⁴⁵¹ See, e.g., *Verizon/Alltel* Order, 23 FCC Rcd at 17463 ¶29; see also *Applications for Approval of Transfer of Control of Verizon Communications Inc. and MCI, Inc.*, Memorandum Opinion and Order, 23 FCC Rcd 18433, 18446 ¶19 (2005) (to be a proper subject of consideration on review of a transaction, an alleged harm must directly “arise from the transaction”); *IT&E Overseas, Inc., Transferor, and PTI Pacifica Inc., Transferee*, Memorandum Opinion and Order and Declaratory Ruling, 24 FCC Rcd 5466, 5474 ¶14 (WCB, WTB, IB 2009); *Applications for Consent to the Assignment and/or Transfer of Control of Licenses Time Warner Inc. and Its Subsidiaries, Assignor/Transferor to Time Warner Cable Inc., and Its Subsidiaries, Assignee/Transferee*, Memorandum Opinion and Order, 24 FCC Rcd 879, 887 ¶13 (MB, WCB, WTB, IB 2009); *SBC Communications Inc. and AT&T Corp. Applications for Approval of Transfer of Control*, Memorandum Opinion and Order, 20 FCC Rcd 18290, 18303 ¶20 (2005).

⁴⁵² See generally *Petition to Deny of CarrierX, LLC, d/b/a freeconferencecall.com*, WT Docket No. 18-197, (filed Aug. 27, 2018) (“*Free Conferencing Petition*”). To the extent that Free Conferencing is alleging an FCC rule violation, its claims against T-Mobile are baseless.

⁴⁵³ *PCS 2000, L.P.*, 12 FCC Rcd 1681, 1691 (1997) (quoting *United Tel. Co. of Carolinas v. FCC*, 599 F.2d 720, 732 (D.C. Cir. 1977)). See also *Regents of University System of Georgia v. Carroll*, 338 U.S. 586, 602 (1950) (stating that the Commission is not the proper forum to litigate contract disputes between licensees and others); *Listeners’ Guild v. FCC*, 813 F.2d 465, 469 (D.C. Cir. 1987) (confirming “the Commission’s long-standing policy of refusing to adjudicate private contract law questions.”).

resolve them.⁴⁵⁴ To the extent that Free Conferencing is seeking a rule modification or clarification, this proceeding is equally inappropriate.⁴⁵⁵

B. The Commission Should Reject Petitioners’ Effort to Use the Merger Proceeding to Challenge Sprint’s Approved 2.5 GHz Spectrum Holdings

The concerns expressed by certain petitioners about the post-merger 2.5 GHz spectrum interests of the combined company are irrelevant to this proceeding.⁴⁵⁶ This issue is not merger-specific and is thus irrelevant to the Commission’s consideration of the proposed transaction. T-Mobile has no licensed or leased 2.5 GHz spectrum and, following approval, New T-Mobile will have the same spectrum holdings in this band as Sprint does today.⁴⁵⁷ Notably, Sprint’s 2.5 GHz holdings fully comply with the Commission’s spectrum aggregation rules and policies, and are

⁴⁵⁴ See *Applications of Nextel Communications, Inc. and Sprint Corporation*, Memorandum Opinion and Order, 20 FCC Rcd. 13967, 14034, ¶181 (2005). See also *Pueblo MSA Ltd Partnership*, Memorandum Opinion and Order, 15 FCC Rcd 5439, 5441 ¶4 (2000); *Applications of AT&T Wireless Services, Inc., Transferor, and Cingular Wireless, Corp., Transferee*, Memorandum Opinion and Order, 19 FCC Rcd 21522, 21551 n.222 (2004) (citing *Vodafone AirTouch, PLC, and Bell Atlantic Corp.*, Memorandum Opinion and Order, 15 FCC Rcd 16507, 16511-12 ¶ 12 (WTB, IB 2000); *Applications of Centel Corp. and Sprint Corp.*, Memorandum Opinion and Order, 8 FCC Rcd 1829, 1831 ¶10 (CCB 1993)).

⁴⁵⁵ See, e.g., *General Motors Corporation and Hughes Electronics Corporation, Transferors and the News Corporation Limited, Transferee, for Authority to Transfer Control*, Memorandum Opinion and Order, 19 FCC Rcd 473, 534 ¶131 (2004) (“An application for a transfer of control of Commission licenses is not an opportunity to correct any and all perceived imbalances in the industry. Those are best left to broader industry-wide proceedings.”); see also *Applications of Craig O. McCaw and Am. Tel. & Tel. Co. for Consent to the Transfer of Control of McCaw Cellular Commc’ns and Its Subsidiaries*, Memorandum Opinion and Order, 9 FCC Rcd 5836, 5904 ¶123 (1994) (the Commission’s policy is to “not consider arguments in [transaction] proceedings[s] that are better addressed in other Commission proceedings.”).

⁴⁵⁶ See *BDC Petition* at 5-7; *RSOC Petition* at 4-6; *Voqal Petition* at 11-14.

⁴⁵⁷ Even if T-Mobile held spectrum at 2.5 GHz—which it does not—it would contradict established policy and precedent for the Commission to focus on the competitive landscape specifically at 2.5 GHz or adopt remedies (such as divestitures) that target alleged competitive issues in this band. Contrary to these petitioners’ claims, wireless services in the 2.5 GHz band do not constitute a distinct product market.

the result of Commission approval of prior transactions.⁴⁵⁸ The Commission should reject petitioners’ attempt to use the instant merger proceeding as a vehicle for reexamining Sprint’s existing 2.5 GHz license and lease interests.⁴⁵⁹

C. Other Unrelated Petitions Should Similarly be Dismissed

Atif Khan, President of Unlimited Arena, Inc., filed a petition in opposition to the merger that centers on a lawsuit against T-Mobile/MetroPCS filed in the District Court of Harris County, Texas.⁴⁶⁰ Additionally, Stanley D. Besecker filed a conditional petition to deny, voicing concerns about the merger’s impact on an agreement between Sprint and Shenandoah Telecommunications Company (Shentel) in the event of a merger between Sprint and another

⁴⁵⁸ See *Applications of Nextel Communications, Inc. and Sprint Corporation for Consent to Transfer Control of Licenses and Authorizations*, Memorandum Opinion and Order, 20 FCC Rcd 5666 (2005) (“*Sprint-Nextel Order*”); *Sprint-SoftBank Order*, 28 FCC Rcd at 9672 ¶74; *Sprint Nextel Corporation and Clearwire Corporation Applications For Consent to Transfer Control of Licenses, Leases, and Authorizations*, Memorandum Opinion and Order, 23 FCC Rcd 17570 (2008).

⁴⁵⁹ See *Sprint-SoftBank Order*, 28 FCC Rcd at 9672 ¶74 (“We find that the issues that the two EBS Petitioners raise are not transaction-specific, and therefore deny their challenge. . . . The Commission generally will not impose conditions to remedy pre-existing harms unrelated to the transaction at issue.”). Significantly, divestitures of 2.5 GHz spectrum would disrupt the broadband wireless data services that Sprint is currently providing to millions of customers, including the educational entities from whom Sprint leases EBS spectrum. Today, Sprint meets the educational use obligations associated with EBS licenses by supplying local schools and other educational partners with mobile broadband devices and working cooperatively with local educational programming committees. Divestitures would disrupt these well-established relationships, threaten educational access to wireless equipment and services, and jeopardize the benefits that Sprint has long provided the educational community. See *Sprint-Nextel Order* ¶61 (“[A]ny divestiture of spectrum in this band could result in the termination of certain leases that Applicants have entered into with EBS licensees. Such termination of leases could significantly disrupt EBS operations . . . Any disruption [of educational services] could be greatly detrimental to the communities served by EBS.”).

⁴⁶⁰ Petition and Comments Against the Proposed Transfer of Atif Khan, WT Docket No. 18-197 (filed Aug. 23, 2018).

entity.⁴⁶¹ For the reasons noted above, these claims relating to private disputes are not relevant to the Commission’s public interest analysis and should be rejected.

Iowa Network Services, Inc., d/b/a Aureon Network Services (“Aureon”) seeks to inject into this merger review proceeding various disputes with Sprint that are currently pending in federal court.⁴⁶² The disputes clearly have nothing to do with the merits of the proposed transaction. Rather, they are a transparent effort by Aureon to use the Commission’s proceeding to gain an advantage in the pending litigation.⁴⁶³ Consistent with its actions in previous merger proceedings, the Commission should preserve the integrity of its review process and summarily dismiss Aureon’s petition.

V. CONCLUSION

In the PIS, T-Mobile and Sprint documented verifiable merger-specific benefits and demonstrated the absence of merger harms. Applicants have demonstrated how the transaction will result in a massive increase in capacity, speed and coverage to the benefit of consumers and competition. In response to petitions to deny and comments, this Opposition and its attached declarations provide definitive substantiation of those benefits and the absence of any alleged harms. Indeed, the only economic showing submitted by a merger opponent actually serves to

⁴⁶¹ Conditional Petition to Deny of Stanley D. Besecker, WT Docket No. 18-197 (filed Aug. 27, 2018).

⁴⁶² See Petition to Deny, or in the Alternative, Request to Condition Approval of Iowa Network Services, Inc., d/b/a Aureon Network Services, WT Docket No. 18-197 (Aug. 27, 2018).

⁴⁶³ Aureon’s pleading also fundamentally mischaracterizes the underlying dispute between the parties. As Sprint has made clear in its pleadings in the pending federal court litigation, the tariff that forms the basis of Aureon’s complaint is unlawful and, consequently, the access charges that Aureon seeks to recover from Sprint pursuant to that tariff are also unlawful assessments. See First Amended Counterclaim of Sprint Communications Company, LP, *Iowa Network Services vs. Sprint Communications Company, LP, et al.*, Case No. 4:10-CV-102 (S.D. Ia) (October 13, 2017); see also *Iowa Network Access Division, Tariff FCC No. 1*, Memorandum Opinion and Order, FCC 18-160 (July 31, 2018).

confirm—not refute—that the transaction enhances consumer welfare. With these submissions, the Applicants have not only completed the record upon which they rely, but also have provided thorough refutations of the allegations by opponents. Accordingly, T-Mobile and Sprint request rapid approval of their applications for transfers of control.

Respectfully submitted,

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