

**STATEMENT OF
COMMISSIONER BRENDAN CARR**

Re: *Applications of T-Mobile US, Inc., and Sprint Corporation For Consent To Transfer Control of Licenses and Authorizations, Applications of American H Block Wireless L.L.C., DBSD Corporation, Gamma Acquisition L.L.C., and Manifest Wireless L.L.C. for Extension of Time,* WT Docket No. 18-197

Advancing 5G in the United States has been a leading focus of this Commission. In our monthly Commission meetings in the past year alone, the FCC has approved more than 10 major items aimed at providing more spectrum, modernized infrastructure rules, and greater flexibility so that providers can connect Americans to 5G.¹

We have made 5G our priority for at least two reasons.

First, robust 5G networks will be the platforms upon which the next wave of our economy's jobs and services will be created. All of the life-changing technologies we hear about—from autonomous cars to smart cities, from remote surgery to virtual reality—won't work or won't work well without 5G. The truth is that as impactful as this first wave of inventions built on 5G will be, they only scratch the surface of what is to come for American families. When the U.S. upgraded from 3G to 4G, few predicted the rise of Uber, Airbnb, or Venmo. Entrepreneurs and inventors created trillions of dollars of value on America's world-leading 4G networks. With 5G's capabilities, we expect the resulting economic growth to surpass the previous generations of wireless. 5G therefore is a national priority beyond mere communications. If it is deployed quickly and robustly it promises to give the U.S. an edge in economics, security, education, and other dimensions that are vital to Americans' lives.

Second, 5G accelerates competition in the communications marketplace. As regulators bent on realizing more choice for the Americans we serve, we delight in competition between previously siloed industries. Deregulation and technological progress brought down long-distance phone rates to a point where today many young people never have heard of such charges. Cable companies first provided quality and competitive video alternatives to broadcast, they were later challenged by satellite providers, and they all now face myriad competitors that deliver video over-the-top of Internet connections. Wireless companies are battling cable companies and others to provide Americans broadband access. Indeed, cable companies now are adding more wireless subscribers each quarter than some of the largest wireless companies.²

¹ *Auction of Priority Access Licenses for the 3550-3650 MHz Band*, AU Docket No. 19-244, Public Notice, 2019 WL 4785555 (2019); *Transforming the 2.5 GHz Band*, WT Docket No. 18-120, Report and Order, 34 FCC Rcd 5446 (2019); *Incentive Auction of Upper Microwave Flexible Use Service Licenses in the Upper 37 GHz, 39 GHz, and 47 GHz Bands for Next-Generation Wireless Services*, AU Docket No. 19-59, Public Notice, 34 FCC Rcd 5532 (2019); *Allocation and Service Rules for the 1675-1680 MHz Band*, WT Docket No. 19-116, Notice of Proposed Rulemaking and Order, 34 FCC Rcd 3552 (2019); *Incentive Auction of Upper Microwave Flexible Use Service Licenses in the Upper 37 GHz, 39 GHz, and 47 GHz Bands for Next-Generation Wireless Services*, AU Docket No. 19-59, Public Notice, 34 FCC Rcd 2656 (2019); *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services*, GN Docket No. 14-177, Fifth Report and Order, 34 FCC Rcd 2556 (2019); *Updating the Commission's Rule for Over-the-Air Reception Devices*, WT Docket No. 19-71, Notice of Proposed Rulemaking, 34 FCC Rcd 2695 (2019); *FCC Opens Spectrum Horizons for New Services & Technologies*, ET Docket No. 18-21, First Report and Order, 34 FCC Rcd 1605 (2019); *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services*, GN Docket No. 14-177, Fourth Report and Order, 33 FCC Rcd 12168 (2018); *Unlicensed Use of the 6 GHz Band*, ET Docket No. 18-295, GN Docket No. 17-183, Notice of Proposed Rulemaking, 33 FCC Rcd 10496 (2018); *Promoting Investment in the 3550-3700 MHz Band*, GN Docket No. 17-258, Report and Order, 33 FCC Rcd 10598 (2018).

² See News Release, Comcast, Comcast Reports 3rd Quarter 2019 Results, (Oct. 24, 2019), <https://www.cmcsa.com/news-releases/news-release-details/comcast-reports-3rd-quarter-2019-results> (announcing (continued....))

5G's performance characteristics will greatly expand the head-to-head competition for Americans' broadband dollars. If an operator can offer fast Internet access ubiquitously, it does not matter to the consumer whether the operator calls itself a cable company or a wireless company. As to investment and network engineering, it does not matter much whether the operator places itself into the cable silo, the wireless silo, or neither—it will have to build small cells connected to fiber, regardless. What does matter to consumers and companies alike is the disruptive competition that we are about to witness. For consumers, next-gen connectivity will mean more choice, which we know will decrease prices and improve quality. For companies, it will mean new markets to address—and greater pressure on resources, performance, and agility.

The merger of T-Mobile and Sprint, our country's smallest nationwide wireless providers, comes to us at this moment of immense transition. To judge whether the transaction is in the public interest then, the Commission must rely on our experience with regulating not only the wireless industry but other industries that will compete against wireless companies for Americans' broadband dollars.

The analysis begins with 5G's impact on demand for data and services. It turns to understanding how our wireless providers are positioned to meet that demand based on the detailed engineering and financial models we have studied over the last year. Finally, to keep pace with the industries we regulate, we must pull back from a cramped, backward-looking view of wireless and take account of the way 5G will rearrange the field of competition.

I. The 5G Data Demand Boom

We know from our experience with regulating wireless carriers in the 4G era that demand for data will surge with 5G. As more bandwidth is available to content creators and app makers, more bandwidth will be used. And as these data-rich services proliferate, consumers' hunger for data tends to increase. We observed this trend in the upgrade from 3G to 4G.³ One measurement of users who have upgraded from 4G to 5G thus far shows an immediate 260 percent spike in data consumption to 24 GB per user per month.⁴ Early indicators suggest that the capacity pressure from the 5G upgrade will dwarf the upgrade from 3G to 4G.

In conducting our demand analysis, the Commission obtained data forecasts from T-Mobile, Sprint, and other wireless providers, as well as those that are publicly available. We display the range of forecasts in the Technical Appendix at Fig. A16.

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that Comcast added 204,000 wireless lines in the third quarter of 2019); Earnings Release, Charter Communications, Charter Announces Third Quarter 2019 Results (Oct. 25, 2019), <https://ir.charter.com/static-files/76cf320f-4610-448b-9768-c1a27f2d2c2e> (announcing that Charter added 276,000 mobile lines in the third quarter of 2019).

³ See Calum Dewar, *4G driving data usage but not all markets are reaping the rewards*, GSMA INTELLIGENCE (Jan. 20, 2014), <https://www.gsmainelligence.com/research/2014/01/4g-driving-data-usage-but-not-all-markets-reaping-the-rewards/412/> (reporting in the early adoption of 4G that “4G users typically consum[ed] twice as much data per month as other users”).

⁴ See Philip Kendall, *5G Data Use Surges in South Korea*, STRATEGY ANALYTICS (Aug. 1, 2019), <https://www.strategyanalytics.com/strategy-analytics/blogs/service-providers/mobile-operators/service-providers/2019/08/01/5g-data-use-surges-in-south-korea>; Mike Dano, *Early Usage of 5G Off the Charts, but Profits May Not Be*, LIGHT READING (Oct. 25, 2019), <https://www.lightreading.com/mobile/5g/early-usage-of-5g-off-the-charts-but-profits-may-not-be/a/d-id/755136> (explaining that Sprint's 5G customers “are consuming three to five times more data than its 4G LTE customers”).

Several common features emerge from the forecasts. They all show data growth accelerating from 4G to 5G; not only does the quantity of data increase, but the rate of the increase increases. Among the 5G networks and the networks with a mix of standards, the forecasts have remarkably similar growth rates. With the exceptions of the low forecast [BEGIN HIGHLY CONF. INFO.]

[END HIGHLY CONF. INFO.] and the high forecast [BEGIN HIGHLY CONF. INFO.] [END HIGHLY CONF. INFO.], the forecasts show compound annual growth rates of between [BEGIN HIGHLY CONF. INFO.] [END HIGHLY CONF. INFO.] percent and [BEGIN HIGHLY CONF. INFO.] [END HIGHLY CONF. INFO.] percent, with the majority in the low [BEGIN HIGHLY CONF. INFO.] [END HIGHLY CONF. INFO.]. The forecasts produce different projected data demands in the out years less because of differing views on growth rates than because they make different assumptions about base year demand.

Our record strongly indicates that actual demand in the out years will be on the high end of the Technical Appendix's forecasts. The base year figures from [BEGIN HIGHLY CONF. INFO.] [END HIGHLY CONF. INFO.], Cisco, and Ericsson are estimates of the usage on various networks in 2016 or 2017. We need not rely on base year estimates, however, because we know what T-Mobile and Sprint customers actually used. In 2017, Sprint customers used an average of [BEGIN HIGHLY CONF. INFO.] [END HIGHLY CONF. INFO.] GB of data per month, and the average was [BEGIN HIGHLY CONF. INFO.] [END HIGHLY CONF. INFO.] GB for T-Mobile customers. [BEGIN HIGHLY CONF. INFO.]

[END HIGHLY CONF. INFO.]. Forecasting off of the companies' actual usage—as opposed to an estimate or an average of other networks' usages—produces striking results. If we take 2017 as our base year, assume usage to be the average between T-Mobile and Sprint's actual usage in that year ([BEGIN HIGHLY CONF. INFO.] [END HIGHLY CONF. INFO.] GB), and apply the median compound annual growth rate of the 5G and mixed network forecasts ([BEGIN HIGHLY CONF. INFO.] [END HIGHLY CONF. INFO.] percent), we come to a forecast of [BEGIN HIGHLY CONF. INFO.] [END HIGHLY CONF. INFO.] GB in 2024. That is [BEGIN HIGHLY CONF. INFO.] [END HIGHLY CONF. INFO.] GB higher than the demand we used to model marginal cost savings in Figs. 3a and 3b and more than [BEGIN HIGHLY CONF. INFO.] [END HIGHLY CONF. INFO.] the demand used to model Fig. 3c.

II. The Wireless Industry's Options to Meet Demand

Americans' immense 5G data demand is a critical challenge to the wireless industry, and it is the core of the present transaction. For the wireless industry, the status quo is not an option. The assets and business plans that carriers have used to meet 4G data demand will not be enough in this new 5G era.

Wireless providers have a few options to cope with consumers' inexorable demand for more and more data. They could cap customers' data consumption. This is, in fact, what providers experimented with when 4G was nascent and data use skyrocketed under preexisting unlimited plans. Consumers hated caps, and T-Mobile capitalized on their distaste by being among the first to reintroduce unlimited data plans.⁵ If we want 5G to hasten the breakdown of old industry silos and challenge traditionally wired services, it will have to do so with data offerings on par with those services.

Another route is to allow quality to dip during busy hours. Wireless networks are built to peak usage—to provide at least a minimum level of service during data's rush hour. A provider could

⁵ See Richard Feloni, *The T-Mobile CEO who calls his competition 'dumb and dumber' explains how he doubled customers in 4 years, and how a group of employees made him cry*, BUS. INSIDER (Oct. 7, 2016, 8:30 AM), <https://www.businessinsider.com/t-mobile-ceo-john-legere-interview-2016-10> (“The biggest pain point that a million customers told me about is that they hate data buckets. And we . . . wanted to turn our company into somebody that's selling a monthly subscription to the internet, all in, unlimited.”).

underinvest for a time, thinking that customers would accept degraded service during busy hours. But some argue that a strategy of underinvestment is what led to Sprint's subscriber losses and other business challenges, and few would claim that underinvestment in infrastructure is a public interest benefit.

Providers' other solution to their 5G data demand problem—and the one that yields the greatest quality and choice for consumers—is to expand their networks' capacity. For the most part, this has been the providers' strategy in the lead up to 5G. In the last year, the industry made capital investments of over \$27 billion, bringing the total private sector investment since the advent of 4G to an astounding quarter trillion dollars.⁶ And yet while investment has increased, prices have decreased. "Subscriber saturation and increasing commoditization have limited market growth despite a significant increase in data demand," according to an international consulting firm.⁷ In the last four years, the key average revenue metrics have fallen at all of the nationwide providers: by 15 percent at Verizon,⁸ 9.1 percent at AT&T,⁹ 4.3 percent at T-Mobile,¹⁰ and 10.1 percent at Sprint.¹¹

III. T-Mobile and Sprint Cannot Meet Demand like the Market Leaders

To build out enough capacity to meet Americans' needs, T-Mobile and Sprint each bring some strengths and some weaknesses relative to the two largest nationwide providers, Verizon and AT&T. T-Mobile has executed a high-data, low-cost strategy that has been popular with consumers. In the last four years, T-Mobile added more than 24 million customers, at a time when the rest of the industry experienced moderate growth.¹² Sprint has rights to about 160 MHz of 2.5 GHz spectrum in the top 100 markets,¹³ which is extremely useful for deploying mobile 5G.¹⁴ This national asset, however, has not

⁶ 2019 Annual Survey Highlights, CTIA (June 20, 2019), <https://www.ctia.org/news/2019-annual-survey-highlights>.

⁷ RAWIA ABDEL SAMAD, FLORIAN GRÖNE & UDAYAN GUPT, GRASPING AT DIFFERENTIATED STRAWS: COMMODITIZATION IN THE WIRELESS TELECOM INDUSTRY 39 (2018) (calculating a -2.7% compound annual growth rate in U.S. wireless revenue from 2011 to 2016).

⁸ VERIZON COMMUNICATIONS INC., CONDENSED CONSOLIDATED STATEMENTS OF INCOME 5 (2015), https://www.verizon.com/about/file/7833/download?token=9F_EILJS; VERIZON COMMUNICATIONS INC., CONDENSED CONSOLIDATED STATEMENTS OF INCOME 5 (2019), <https://www.verizon.com/about/file/36119/download?token=WXIhckLH>.

⁹ Phil Goldstein, *AT&T adds fewer postpaid subs in Q2 than expected as it loses 322K postpaid phone customers*, FIERCEWIRELESS (July 23, 2015, 5:37 PM), <https://www.fiercewireless.com/wireless/at-t-adds-fewer-postpaid-subs-q2-than-expected-as-it-loses-322k-postpaid-phone-customers>; AT&T INC., AT&T 2Q19 HIGHLIGHTS 2 (2019), https://investors.att.com/~media/Files/A/ATT-IR/financial-reports/quarterly-earnings/2019/2q-2019/2Q19_Highlights.pdf.

¹⁰ *T-Mobile Reports Double-Digit Revenue Growth and Strong Profitability in Q2*, T-MOBILE (July 29, 2015), <https://www.t-mobile.com/news/q2-earnings-2015>; T-MOBILE US, INC., T-MOBILE SETS MORE RECORDS IN Q2: STRONGEST Q2 CUSTOMER GROWTH IN YEARS, RECORD-LOW CHURN AND RECORD FINANCIAL RESULTS 3 (2019), https://s22.q4cdn.com/194431217/files/doc_financials/2019/Q2/TMUS-06_30_2019-Earnings-release.pdf.

¹¹ News Release, Sprint Corp., Sprint Reports Continued Progress in its Turnaround During the First Fiscal Quarter of 2015 (Aug. 4, 2015), https://s21.q4cdn.com/487940486/files/doc_financials/quarterly/2015/1500074514.PDF; News Release, Sprint Corp., Sprint Reports Fiscal Year 2019 First Quarter Results (Aug. 2, 2019), https://s21.q4cdn.com/487940486/files/doc_financials/quarterly/2019/q1/01_Fiscal-1Q19-Earnings-Release-FINAL.pdf.

¹² T-MOBILE US, INC., 2ND QUARTER 2015 FINANCIAL RESULTS, SUPPLEMENTARY DATA AND NON-GAAP RECONCILIATIONS 3 (2015), https://s22.q4cdn.com/194431217/files/doc_financials/2015/q2/1500074333.pdf; T-MOBILE US, INC., Q2 2019: FINANCIAL RESULTS, SUPPLEMENTARY DATA, NON-GAAP RECONCILIATIONS, RECONCILIATION OF OPERATING MEASURES 5 (2019), https://s22.q4cdn.com/194431217/files/doc_financials/2019/Q2/Financial-Results-PDF.pdf.

¹³ See Technical Appendix, para. 35.

been very widely deployed because of Sprint’s precarious financial position. There are so many signs of this stress: the company’s inability to turn a consistent profit, its more than \$30 billion of net liabilities, its repeated goodwill impairments that value the company at little more than parts plus debt.¹⁵ Sprint simply does not have the resources to build the physical infrastructure necessary to provide robust 2.5 GHz coverage, and “our technical analysis predicts that on a standalone basis it would fail to cover nearly half of the country with 5G services on its 2.5 GHz spectrum, even assuming it has the financial ability to reach its previously planned deployment level.”¹⁶

T-Mobile, on the other hand, lacks the assets to continue its aggressive growth trajectory into 5G. Verizon and AT&T have larger infrastructure builds, stronger balance sheets, deeper spectrum portfolios, and greater scale. These advantages position the market leaders to serve 5G demand in ways stand-alone T-Mobile cannot. T-Mobile’s Network Build Model attests to this disadvantage. As demand increases, stand-alone T-Mobile has to squeeze more data capacity out of its limited spectrum portfolio. The more data it needs to deliver, the more costly the physical infrastructure becomes, until ultimately the company is forced to build numerous new towers at [BEGIN HIGHLY CONF. INFO.] [END HIGHLY CONF. INFO.] a piece.¹⁷ Our staff’s marginal cost savings runs shed some light on how this would impair stand-alone T-Mobile. At [BEGIN HIGHLY CONF. INFO.] [END HIGHLY CONF. INFO.] GB of usage in 2024, the cost of adding a post-paid customer to stand-alone T-Mobile would be [BEGIN HIGHLY CONF. INFO.] [END HIGHLY CONF. INFO.] higher per month than the new company’s cost.¹⁸

There are two key insights we gained from the complex engineering and cost calculations that produced this figure. First, data demand greatly affects costs and stand-alone T-Mobile’s ability to remain competitive. The huge difference in cost efficiencies between Fig. 3a and Fig. 3c ([BEGIN HIGHLY CONF. INFO.] [END HIGHLY CONF. INFO.] versus [BEGIN HIGHLY CONF. INFO.] [END HIGHLY CONF. INFO.] per additional user) is entirely the result of different assumptions in data demand—[BEGIN HIGHLY CONF. INFO.] [END HIGHLY CONF. INFO.] GB and [BEGIN HIGHLY CONF. INFO.] [END HIGHLY CONF. INFO.] GB, respectively. If our [BEGIN HIGHLY CONF. INFO.] [END HIGHLY CONF. INFO.] GB data demand assumption in Fig. 3a is too low—and there is overwhelming evidence that it is, based on early 5G customers’ usage as well as the consensus of industry estimates—the cost for stand-alone T-Mobile to serve customers will skyrocket.¹⁹ These costs would have to be passed on to customers through increased prices, countering T-

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¹⁴ See, e.g., *Expanding Flexible Use of the 3.7 to 4.2 GHz Band*, GN Docket No. 18-122, Order and Notice of Proposed Rulemaking, 33 FCC Rcd at 6915, para. 5 (“Mid-band spectrum is well-suited for next generation wireless broadband services due to the combination of favorable propagation characteristics (compared to high bands) and the opportunity for additional channel re-use (as compared to low bands).”).

¹⁵ See, e.g., Michael Hodel, *Sprint Will Continue to Struggle As It Waits on the States’ T-Mobile Challenge*, MORNINGSTAR (Oct. 1, 2019) (“Sprint simply doesn’t have the scale or financial resources to overcome the disadvantages it faces Sprint’s competitive disadvantages are legion. Its unconventional technology choices and unusual spectrum portfolio have limited its ability to serve customers well over the years, causing its market share to shrink. Small scale compared with Verizon, AT&T, and even T-Mobile leaves it with a relatively weak cost structure. Finally, a stretched balance sheet has forced it to undertake complex financing transactions to refinance debt, limiting its strategic flexibility and ability to aggressively attack operational problems.”).

¹⁶ *Infra* para. 98.

¹⁷ See Technical Appendix, Fig. A15.

¹⁸ *Infra* Fig. 3a.

¹⁹ The [BEGIN HIGHLY CONF. INFO.] [END HIGHLY CONF. INFO.] GB model run does not reflect the Commission’s view as to consumers’ actual data demand in the out years. Instead, it results from Applicants’ cost constraint: that is, Applicants’ view as to what costs consumers would be willing to bear. Applicants calculate that consumers actually will demand around [BEGIN HIGHLY CONF. INFO.] [END HIGHLY CONF. INFO.]

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Mobile’s popular strategy of high data at low prices, which has resulted in consumer welfare gains across the industry. Second, Sprint’s 2.5 GHz spectrum theoretically allows it to respond more cost-effectively to demand increases than T-Mobile, as is seen in the small Sprint marginal cost savings due to the transaction relative to T-Mobile’s cost savings in Fig. 3a. However, Sprint lacks the financial wherewithal and scale to put that 2.5 GHz spectrum to use, precisely at the moment when Americans need that additional capacity.

Combining the two companies allows them to leverage the strengths and address the weaknesses of each. T-Mobile contributes high and low-band spectrum for performance and coverage plus management capabilities and strategy that have changed the industry. Sprint contributes mid-band spectrum that is critical to mobile 5G, and it enables the combined company to compete for the first time at the same scale as Verizon and AT&T.

IV. Market Segment Benefits

Even if we focused solely on the wireless industry as constituted today, providing a strong third competitor provides obvious benefits to a number of market segments. Indeed the benefits to rural America and to every customer who demands quality, including enterprises, are not strongly challenged in our record. New T-Mobile will cover 99 percent of Americans with 5G, an enforceable condition of this transaction. T-Mobile and Sprint today do not compete meaningfully for profitable enterprise accounts, and injecting choice into that market should have downstream economic benefits.

But what about price-conscious, urban consumers? This Commission is well-aware of the economics of building networks in dense urban areas versus rural communities. We collect around \$10 billion per year in Universal Service Fund fees, and we spend the lion’s share of that money on supporting rural service. Urban networks are cheaper per capita to build, and our wireless carriers use profits from urban centers to help pay for coverage outside of cities. Treating urban users as their own market undermines the way carriers finance network coverage and is blind to the market’s demand for national pricing plans and free roaming.

Nonetheless, the record shows that this transaction will not lead to small but significant price increases even for the price-conscious, urban sub-market. The foundation of our belief rests in the capacity increases in combining the two networks. The complementarity of T-Mobile’s and Sprint’s networks results in about a doubling of capacity compared to the stand-alone networks.²⁰ Wireless networks entail high fixed costs and low marginal costs. Because the cost of a network is disproportionately in building it, once built, the incentive is to sell all of the network’s capacity. After integrating the networks over the next two years, the new firm will be faced with a problem: It will have double the capacity of the stand-alone companies and yet about the same number of customers as before. All of that excess capacity will make onboarding each additional customer cheap, since the capacity already will be paid for and will represent wasted investment if not used. Doubling the “production” of 5G data that can be delivered on new T-Mobile compared to stand-alone T-Mobile and Sprint will put strong downward pressure on prices.

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GB of data per month in 2024, but the cost of providing the data given the companies’ assets and high marginal costs would be unaffordable. If we disregarded the cost constraint and modeled what it would cost the stand-alone firms to deliver what consumers want ([BEGIN HIGHLY CONF. INFO.] [END HIGHLY CONF. INFO.] GB per month), the marginal costs of adding users would increase sharply and the cost savings of the merger—the benefit to Americans in the form of lower prices—would be much higher. Due to limitations in the model provided to the Commission, we were unable technically to model the marginal costs at that heightened level of usage.

²⁰ See Technical Appendix, Fig. A4.

To confirm the protection against higher prices that I view as inherent in new T-Mobile's surplus capacity, we now require certain actions from the combined company. We require the combined company to divest Boost, which has focused on serving price-conscious consumers. Aside from the name, however, there won't be much in common between new and old Boost. The new company will have best-in-class access to new T-Mobile's network—a far improved experience over Boost's current access to Sprint's network. With DISH's acquisition, it also would increase the overall wireless industry's data production. DISH has a deep spectrum portfolio that lies fallow, and its plan absent the Boost transaction was to use a small fraction of its capacity, in what some criticized as a “save build” aimed only at trying to preserve its licenses. DISH's more robust build commitments made as a condition of the transaction would put more spectrum to work, increase capacity, and put additional downward pressure on wireless prices. We also require that new T-Mobile keep the existing companies' rate plans for three years. That period is significant because it spans the time it will take the new company to integrate the networks and realize the major capacity expansion that will naturally push down prices.

V. A More Accurate View of 5G Competition

The foregoing analysis should leave no doubt that our decision promotes the public interest and encourages greater competition for the benefit of all Americans.

And yet the Order represents a missed opportunity for the Commission. Instead of formally updating our view of competition to reflect 5G, we conduct our initial screen using the market definition of “mobile telephony/broadband services.”²¹ The Commission created that market definition in November 2008—more than two years before any of the nationwide wireless providers had deployed 4G LTE. Even at that time, we saw how faster wireless service would combine the markets for talk, text, and low-data uses on phones with the market for high-data uses on computers and non-voice devices. The new market definition recognized how “mobile broadband services” (enabled by upgraded 3G and 4G networks) would break down previously siloed industries. And so when we reviewed a transaction between wireless companies in 2008, we took the opportunity to update our market definition, “conclud[ing] that there are risks associated with defining product markets too narrowly, since doing so may thwart this and future pro-competitive deals that take place in the context of rapidly evolving markets and services.”²²

The Commission shows no such prescience in defining the relevant market here. Rather, it applies the same definition that both the FCC and antitrust authorities have been using for a decade. By sticking with a pre-4G market definition, we miss an essential feature of 5G: the blurring of wired and wireless networks and the enhanced competition that results. While our legacy market definition may track FCCs and antitrust authorities past, it prevents the expert agency Congress created to regulate telecommunications from helping our sister agencies modernize their approach to this technology.²³ That's a shame, because it forces us to understate the benefits of this transaction to the Americans we serve.

This overly constrained view distorts the Order's treatment of in-home broadband, for example. We discuss the new competition for Internet access within the Order's public interest benefits section. While providing a choice for home Internet access to at least 28 million families is undoubtedly a

²¹ *Infra* para. 60.

²² Applications of Cellco Partnership d/b/a Verizon Wireless and Atlantis Holdings LLC For Consent to Transfer Control Licenses, WT Docket No. 08-95, Memorandum Opinion and Order, 23 FCC Rcd 17444, 17470 (Nov. 10, 2008).

²³ See generally Advanced Communications Law & Policy Institute at New York Law School, Comments, WT Docket No. 18-197 (Sept. 17, 2018), <https://go.usa.gov/xp4D9>.

significant public interest benefit, a modern approach would consider in-home broadband in the basket of services offered by new T-Mobile, “wireless” companies, “cable” companies, and others. As the connections become increasingly fast and mobile, all of the connection companies begin competing against each other, injecting competitive pressure into services that increasingly look substitutable.

We don’t have to rely on predictions of coming convergence because we see it already. Verizon’s first 5G offering is for in-home broadband, taking on cable. Cable is offering wireless service even on an unbundled, stand-alone basis—and buying spectrum and building small cells in the process. Wireless, cable, and satellite companies are offering next-gen smart city and IoT applications. We risk making ourselves a restraint on competition if we don’t pay adequate attention to how connectivity businesses are changing all around us.

* * *

But let’s step back from the minutiae of competition analysis, transaction conditions, spectrum bands, and engineering models. Fundamentally, our job at the FCC is to see clearly the generational upgrade in communications that is taking place before us. We have to grasp how 5G will challenge every part of the communications industry, how it will reshape competition. It would be unwise for the expert agency created to regulate telecommunications to blinker ourselves to the coming 5G convergence and what that means for everyday Americans. Analysis that looks backwards to the age of talk-and-text may prolong those dying use cases, but it lacks relevance to how consumers use high-speed connections today and, certainly, tomorrow. Put simply, our decision must understand and encourage 5G competition.

Verizon and AT&T have built the leading national wireless networks. They have dominant coverage and capacity in many rural and urban markets; they generate almost all of the industry’s profits. In the coming converged market for 5G connectivity, they are well positioned to take on new competitors from cable and elsewhere, and they are most able to meet 5G’s data demand. T-Mobile has been successful in a 4G industry but is running out of room to grow and is impaired by structural disadvantages to the market leaders. Sprint is a flailing firm whose future is in doubt absent this merger. What Sprint does have is a trove of mid-band spectrum that is extraordinarily useful for 5G, but no ability to put it to use outside a handful of cities.

By approving this merger, a true third national competitor can be created, pressing the two market leaders in wireless like they have not been pressed before. And it prepares the wireless industry to advance not two but three contenders in the battle with other companies from other industries to serve Americans’ connectivity needs.

That is the intense competition that best serves the public interest. And so I strongly support this Order’s approval of the transaction.