TESTIMONY OF KATHLEEN O'BRIEN HAM
VICE PRESIDENT, FEDERAL REGULATORY AFFAIRS,
T-MOBILE US, INC.

on

OVERSIGHT OF INCENTIVE AUCTION IMPLEMENTATION

before the

SUBCOMMITTEE ON COMMUNICATIONS AND TECHNOLOGY
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VICE PRESIDENT, FEDERAL REGULATORY AFFAIRS,
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Good morning Chairman Walden, Ranking Member Eshoo, and Members of the Subcommittee. My name is Kathleen O'Brien Ham, and I am the Vice President of Federal Regulatory Affairs for T-Mobile US, Inc. I have responsibility for T-Mobile's policy agenda before the FCC and other governmental bodies, and have worked at the company for more than nine years. Prior to joining T-Mobile in 2004, I worked for fourteen years at the Federal Communications Commission in a number of top policy positions, including Deputy Chief of the Wireless Telecommunications Bureau and as the first Chief of the FCC's Spectrum Auctions Program. Thank you for inviting me today to testify regarding the upcoming incentive auction of 600 MHz broadcast spectrum.

T-Mobile is Shaking up the Wireless Industry

Headquartered in Bellevue, Washington, T-Mobile offers nationwide wireless voice, text, and data services to individual and business customers. We are the fourth largest wireless carrier in the United States and serve approximately 43 million subscribers, employ almost 38,000 people with a payroll of more than $2 billion, and invested more than $3.5 billion last year in the U.S. Since the government scuttled our acquisition by AT&T 18 months ago, we have been busy re-introducing ourselves to consumers and reinvigorating our brand and our network. Most recently, we merged with the 5th largest wireless carrier MetroPCS and we are moving ahead to integrate that value player into our business and extend the MetroPCS brand to new markets for the benefit of consumers and the economy.

T-Mobile is the upstart innovator in the wireless market today, and the last several months have been especially eventful for us. In March, we announced our "Un-carrier" strategy to set us apart from our larger competitors and address the pain points that are at the heart of consumer frustration with wireless. In just a short time, we have eliminated traditional pricing plans in favor of affordable new "Simple Choice" plans that offer unlimited talk, text and Web, and we have addressed the worst pain point of all – by eliminating the need for annual service contracts. T-Mobile customers can now bring their own device to our network or they can buy and even finance it with us, interest free – and this includes the iPhone. We also launched JUMP, a groundbreaking offer that allows customers to upgrade their phones when they want, not when they are told.

T-Mobile's innovative moves are putting pressure on our competitors, forcing other carriers – including AT&T and Verizon – to follow suit and start treating their own customers differently. That's what healthy competition achieves. And on top of all this, we are also rolling out 4G LTE at a record-shattering pace – recently achieving service in 116 metro areas with plans to make LTE available to 200 million people by the end of this year. In just six months, we have gone from covering from zero to 150 million people with commercial LTE service – from 7 markets to 116 areas between March and July.

The Future is Now for Competitive Carriers

T-Mobile firmly believes the incentive auction should be designed to maximize the amount of spectrum that can be auctioned for mobile broadband services. That will in turn ensure significant auction revenues and promote competition in the wireless marketplace.

As a wireless carrier, spectrum is the air that we breathe. Without it, we cannot compete. Sufficient spectrum is also necessary for carriers to provide the range and quality of services that

benefit the entire economy. But spectrum supply is uniquely controlled by the government and is in limited supply. All carriers, including T-Mobile, are doing their best to fill in gaps in coverage by buying and swapping spectrum in the secondary market, but that is not good enough for the future. The 2012 Spectrum Act took an important step toward alleviating the well acknowledged spectrum crunch by giving the FCC "incentive auction" authority to reclaim broadcast spectrum in the 600 MHz band and convert it to wireless broadband use. T-Mobile commends Chairmen Upton and Walden, Ranking Members Waxman and Eshoo, and this Subcommittee, for their leadership and commitment to promoting growth, competition, and innovation in mobile broadband services for all Americans by passing this critical legislation.

Making broadcast spectrum available for wireless use provides a unique opportunity to help meet growing spectrum needs by providing access to critical low-band frequencies that are vitally important in providing in-building and wide-area coverage on an efficient basis.

The FCC is now taking steps to implement the Spectrum Act by developing rules that will govern the incentive auction. We commend the Commission and its staff for their hard work over the past months in developing auction rules and a band plan for the recovered spectrum. In order to ensure that this spectrum is put to its best use in a way that promotes competition and consumer choice, the FCC's final rules should fulfill three critical objectives. *First*, the FCC should encourage widespread broadcaster participation in the auction so as to maximize the amount of spectrum auctioned. *Second*, the Commission should adopt a band plan for the 600 MHz spectrum that maximizes the amount of paired spectrum auctioned for wireless broadband services. *Third*, the FCC should adopt reasonable limits on spectrum aggregation to ensure the two dominant carriers do not foreclose other competitors as the Department of Justice has warned could happen. No one argues that there should be *no* limits on spectrum aggregation,

either generally or in the incentive auction in particular; the only dispute is about the means by which the Commission should implement this policy.

Taken together, these measures will promote a robust auction that will favor competition and consumer choice and deliver generous revenue for the Spectrum Act's objectives.

The Commission Should Structure the Reverse Auction So that Broadcasters Are "All In"

A successful forward auction is one in which there is a lot of recaptured broadcast spectrum. To ensure that happens, the Commission should adopt clear reverse auction rules and get the word out to broadcasters about the benefits of participation. The incentive auction is 100% voluntary. No broadcaster has to participate, but we believe many will want to and should be encouraged to participate. After all, the value of a spectrum license is derived from the value of how that spectrum is used, and the demand for wireless broadband continues to explode year after year, while the number of Americans receiving over-the-air broadcasts continues to fall.

Give Broadcasters Bidding Options

To promote broadcaster participation, the FCC has said it wants to make submitting a bid both simple and financially rewarding for the broadcasters. We think that is a critical piece of the auction puzzle. Broadcasters should not only have the option to turn in their licenses and cease broadcasting (in exchange for payment), but also the option to shift to another band or share spectrum with another broadcaster. The FCC should start the reverse auction with high opening prices to attract broadcasters and increase the chances that there will be enough broadcaster participation to clear the target amount of spectrum. Then, if there are more broadcasters willing to sell than necessary, the FCC can lower the price. Flexibility for broadcasters, coupled with high opening bids in the reverse auction increases the chances that

broadcasters participate and get paid, and that spectrum is transferred to a more socially efficient use.

Make Post-Auction Rules Transparent

After the broadcast auction, some broadcasters will be required to relocate to different spectrum, or be "repacked." The Commission's repacking plans should also maximize the amount of spectrum made available for wireless use by laying out clear rules about how repacking will occur and how broadcasters will be reimbursed for repacking costs. The Spectrum Act requires the Commission to make "reasonable efforts" to maintain coverage area and the population served. To do that, the Commission can and should require all broadcasters to provide it with an inventory of their equipment and facilities that will be affected, along with an estimate of the repacking costs. Finally, the FCC should also adopt firm milestones that a broadcaster must satisfy prior to receiving full payment for relinquishing its spectrum to ensure timely and predictable relocation.

The Band Plan for 600 MHz Should Promote the Most Efficient Use of the Spectrum

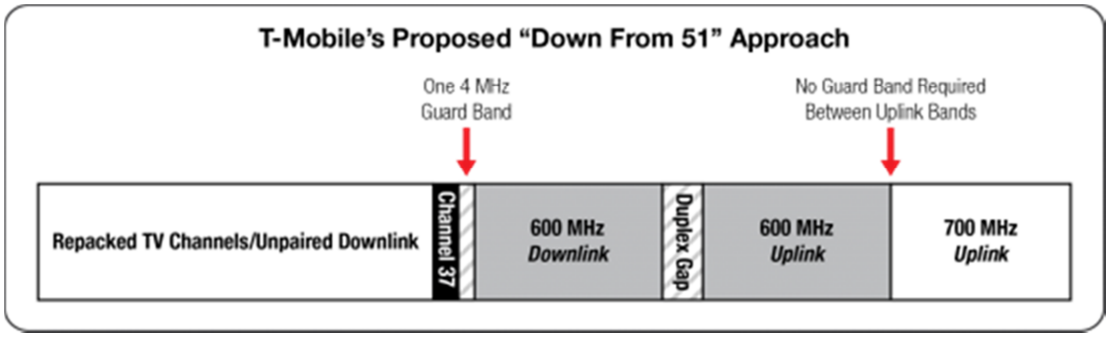
T-Mobile is a strong advocate for maximizing the amount of spectrum available for auction. More spectrum is going to translate into more competitive opportunity and more revenue – plain and simple. We have proposed arranging the reclaimed spectrum so that it can be paired, with specific spectrum dedicated to handset use and other spectrum allocated for base stations. A paired configuration offers flexibility depending on how much broadcast spectrum is recaptured, is the most efficient use of the spectrum, and is the method most preferred by carriers.

The Down From 51 Plan Allows Multiple Competitors

There is no single perfect band plan for the recovered broadcast spectrum, and the Commission staff has offered a range of thoughtful alternatives for structuring these frequencies for broadband use. Interested stakeholders have also offered proposals. T-Mobile joined AT&T, Verizon, the National Association of Broadcasters, Intel and Qualcomm in endorsing the so-called "Down from 51" band plan, which would designate the reclaimed spectrum in the frequencies adjacent to the TV channels next to channel 51 for uplink (handset) use, with downlink (base station) spectrum below that and a duplex gap between the two. T-Mobile proposed that these frequencies be organized into two 35 megahertz blocks of paired spectrum, consisting of seven paired five-megahertz licenses (a total of 10 megahertz for each license).

As shown in Figure 1 below, this band plan assumes that the FCC will recapture the equivalent of eight broadcast channels, or 84 megahertz, with 10 megahertz serving as the duplex gap between the uplink and downlink and a 4 megahertz guard band between the downlink and TV channel 37. We recommend that no matter the result of the broadcast reverse auction, there be a uniform amount of spectrum designated for downlink, or base station operations, across regions which would promote interoperability across the entire band. If there is *more* than 84 megahertz of recaptured spectrum, it would be designated for flexible use operations, below TV channel 37.

Figure 1: T-Mobile's proposed 35x35 MHz band plan.



T-Mobile's proposed configuration increases the opportunity for bidders to acquire critical, high-value low-band spectrum. It also allows up to three competitors each to acquire enough contiguous spectrum (assembling spectrum in paired 10 megahertz blocks) to operate at the highest possible levels of efficiency. In addition, this plan offers the greatest public benefits with the fewest and least extensive technical, economic and competitive deficiencies.

We are optimistic that there will be at least 84 megahertz cleared in a substantial majority of markets. In most markets, the number of stations that would have to sell their licenses to get to 84 megahertz is fairly small. The availability of spectrum will depend in part on the plan adopted by the FCC for repacking the broadcast band, and we look forward to working with the FCC on that plan to ensure it both protects broadcasters and provides an opportunity to auction a robust supply of new spectrum for mobile broadband.

However, our plan also recognizes that the FCC may not be able to capture 84 megahertz of spectrum in every market. In those circumstances, the amount of downlink spectrum would remain the same, and the shortfall would come out of the uplink band, where broadcast operations would continue. While incorporating broadcasters anywhere above TV channel 37 is not optimal because it could otherwise be used for wireless broadband, the potential for some degree of "market variability" and broadcast use of what is in other places wireless broadband spectrum does not pose a serious interference threat, especially so long as only a minority of

markets are affected. As we've shown in our comments to the FCC, broadcasters can operate in the uplink band and interference concerns are unlikely to occur under real-world conditions using filtering technology. Assertions of the need for enormous separation between broadcast and mobile broadband operations are not accurate.

T-Mobile and others also have recommended that the FCC adopt a flexible approach to the band plan depending on the spectrum clearing target. In a typical auction, the FCC knows how much spectrum it will assign before it starts selling licenses, and the agency designs the band around the total megahertz involved. The incentive auction is different. Here, the FCC will not know how much spectrum it can assign until *after* the auction ends. Unless the FCC makes a very good guess about the total number of megahertz sold, the agency runs the risk that the band plan design will be ill suited to the number of licenses sold.

Rather than run the risk of guessing wrong, the FCC could allow for different band plans for different levels of spectrum cleared. And it can do this largely because the intent is to sell fungible blocks of spectrum. T-Mobile has recommended the FCC consider this type of contingent band plan to ensure that – no matter how much spectrum is cleared – the FCC makes as much spectrum as possible available for broadband use in the most efficient manner possible.

The Upcoming 600 MHz Auction Can Help Drive Competition

In the wake of spectrum scarcity, the 600 MHz auction represents the last best chance to promote competition – providing an important opportunity for carriers to enhance their spectrum portfolios with valuable low-band spectrum. There is no other low-band spectrum on a scale like this to be sold by the government for the foreseeable future. To meet this objective, however, the FCC must impose reasonable limits on how much spectrum any one entity can bid for in the "forward auction" of spectrum that is reclaimed from the broadcasters, not unlike what the

Commission has employed before in very successful auctions. T-Mobile has proposed a one-third limit for below 1 GHz spectrum to effect the Commission's statutory obligation to "avoid excessive concentration of licensees," and that would ensure availability of this spectrum for all providers, fostering a competitive wireless industry that will continue to develop new and innovative services. Aggregation limits will help ensure competition from the widest array of providers – small and large, regional as well as national – giving consumers the benefits of marketplace choice. Without appropriate limits, by contrast, the two dominant carriers could squeeze out competitors, reducing consumer choice and thwarting the type of innovation that T-Mobile and smaller carriers are introducing to the wireless marketplace today.

That said, I want to emphasize that under our version of spectrum limits, *no carrier would be shut out of 600 MHz spectrum in any market*, consistent with Congress's directive that the Commission not prevent qualified entities from participating in the auction. Our "minimum access plan" would ensure that a carrier could always acquire a 10-megahertz block of paired spectrum even where they would otherwise exceed the proposed sub-1 GHz limit, and at the same time limit the ability of the two largest carriers to foreclose competition from one of the most important spectrum auctions the FCC has run in more than a decade.

Aggregation Limits Are Particularly Important in Low-Band Spectrum

Reasonable limits are particularly important for the spectrum that will be offered in the incentive auction, because it is located below 1 GHz. This low-band spectrum is uniquely valuable because it penetrates buildings much better and covers a much wider geographic area with fewer transmitters and at a lower cost than spectrum above 1 GHz. These advantages cannot be replicated as efficiently with only higher-band spectrum, even if carriers make the investments needed to deploy and operate systems in those bands, as T-Mobile has. Cost-

effective service provision requires a portfolio of low-band and high-band spectrum. Today, the two largest carriers hold about 80% of the spectrum below 1 GHz – about half of which they got for free from the government in the early 1980s when cellular licenses were handed out to the local telephone companies. A reasonable limit on how much more they can get in the future will ensure that all carriers have a shot at the mix of high- and low-band spectrum that enables a provider to compete most effectively.

Congress and the FCC Have Long Recognized the Importance of Reasonable Spectrum Aggregation Limits

When Congress passed the auction statute in 1993, it specifically directed the FCC to "promote economic opportunity and competition" by disseminating licenses among a wide variety of applicants. That is still the law today. Limits for the incentive auction are consistent with that directive and with the Commission's long-standing efforts to ensure that the wireless marketplace is competitive. For example, in the past the FCC imposed a hard *cap* that prohibited the two cellular licensees from obtaining more than 10 megahertz of broadband personal communications service ("PCS") spectrum and prohibited carriers from obtaining more than 40 megahertz of total spectrum allocated to broadband PCS. The Commission later replaced this rule with another cap, this time of 45 megahertz of spectrum designated for commercial mobile radio service systems. The procompetitive policies enacted by Congress and implemented by the Commission triggered the investment of hundreds of billions of dollars in wireless networks and services that have in turn fostered growth and development in every sector of the economy. These pro-competitive policies are the reason T-Mobile exists today; they enabled our company to enter the wireless market at a time when an entrenched cellular duopoly thrived.

It also cannot be overlooked that ensuring a competitive wireless marketplace leads directly to many economic benefits. The Commission has successfully raised more than $50

billion dollars by promoting wireless competition and conducting over 80 wireless spectrum auctions. History has also shown that when carriers like T-Mobile acquire new spectrum, they put it to good use enlarging and enhancing their national network, which translates into significant capital investment and new job opportunities throughout the U.S.

Without Limits in the Auction, the Two Dominant Carriers Can Foreclose Competitors

Spectrum aggregation limits in the auction are even more important today, given the structure of today's marketplace, where 75% of customers are served by the two largest carriers. Economists acknowledge that all resources have a "use" value – the amount of return on investment a carrier can earn from the asset. But economists also know that in highly concentrated markets, resources can have a "foreclosure" value – the additional return on investment a dominant player with market power can earn by preventing its competitors from gaining access to these important resources. The risk is especially pronounced in the upcoming 600 MHz incentive auction. Given the current market positions of the two largest carriers and their concentrated holdings in the valuable spectrum below 1 GHz – nearly 80% – they have much to lose from increased competition. That gives them a significant incentive and ability to acquire spectrum to prevent other wireless carriers from doing so.

Contrast that with T-Mobile and other smaller carriers. We do not place a "foreclosure value" on spectrum. Rather, we value spectrum solely based on the use we can make of it. And that doesn't change because our largest shareholder has substantial financial resources. You don't pay more for spectrum than the value you derive from it, no matter who your shareholders are. Nor do we have the luxury of waiting several years to deploy spectrum after acquiring it for billions of dollars as the two largest carriers have.

In a recent filing with the FCC, the Antitrust Division of the Department of Justice ("DOJ"), the agency charged with protecting competition, raised exactly this concern – that the two largest carriers might engage in bidding driven by the desire to foreclose rivals from obtaining spectrum, rather than by their desire to obtain spectrum for its "use value." To address this concern, DOJ proposed that the FCC adopt reasonable spectrum aggregation limits. DOJ also noted that it is particularly important to guard against the excessive concentration of spectrum below 1 GHz because "[t]oday, the two leading carriers have the vast majority of low-frequency spectrum, while the two other nationwide carriers have virtually none."

Clear Limits Provide More Certainty in Auctions

Some have suggested that there should be no limits on bidding because the FCC can evaluate the spectrum holdings of auction winners, on a case-by-case basis, after the auction has concluded. While this approach is fine for private transactions between carriers, it would not work in an auction. An upfront limit would allow all auction participants to know *in advance* how much spectrum both they and their rivals could purchase in the auction.

Clear up-front rules that prevent the auction from being dominated by just a few carriers will also encourage auction participation. High participation, in turn, will increase bidding and produce higher auction revenues, providing the funds needed to compensate broadcasters, meet the needs of the nation's first responders, and reduce the deficit. Without a clear spectrum-aggregation limit, smaller bidders may simply assume that defeat is inevitable and may not participate, which could reduce bidding and thus auction revenues.

After-the-fact remedies, such as those AT&T has supported, are no substitute for pro-competitive limits adopted prior to the auction. Implementing FCC-mandated spectrum divestitures after an auction has never been done before to effect a competitive auction because it

just doesn't work. Smaller carriers, faced with the uncertainty of an after-the-fact review, may decide to avoid the auction and commit their limited financial capital to other activities. Even large bidders would be affected by this uncertainty, discounting their bids to reflect the risk that a post-auction review could require them to divest some of the licenses they win. Moreover, if the post-auction review requires divestiture, a carrier is typically under no obligation to sell assets to the carrier that values the resource most highly or will best use it to drive down prices or improve the terms of service. By contrast, upfront spectrum limits would avoid the gamesmanship, costs, and delays associated with post-auction regulatory reviews and avoid prolonging the uncertainty about how spectrum would be allocated.

Pro-Competitive Limits Will Not Affect the Auction Revenues or the Amount of Spectrum in the Market

We are confident that reasonable aggregation limits will not reduce auction revenues, and that in fact they could actually increase revenues by fostering a more competitive auction. But to ensure that the auction achieves the Spectrum Act's revenue targets, we have proposed a Dynamic Market Rule ("DMR") that could be seamlessly and simply incorporated into the FCC auction design. The DMR will also ensure that our proposed spectrum aggregation limits have no detrimental effect on the amount of broadcast spectrum tendered for auction or adversely affect television broadcasters (both those who want to sell and those who wish to continue broadcasting).

Under the DMR, the auction would first proceed with the one-third limit on spectrum holdings below 1 GHz we propose. If the FCC's revenue target is met while the limit is in place, the auction would close under its usual rules. If the revenue target is not met, the spectrum aggregation limit would be gradually relaxed. Because the gradual relaxation could lead to aggressive bidding competition between companies who were initially limited on how much

spectrum they could obtain, the DMR could lead to *greater* revenues than an auction with no restrictions at all.

Conclusion

The upcoming incentive auction is a critical opportunity for wireless carriers like T-Mobile and other smaller carriers to secure the low-band spectrum capacity needed to meet escalating consumer demand and effectively compete against our larger competitors. We encourage Congress to work with the FCC to adopt the auction rules I have outlined today in order to ensure that the opportunity is realized. A successful incentive auction will maximize the amount of spectrum made available for wireless broadband, encourage robust participation, raise significant revenues and provide the framework for a competitive wireless marketplace of the future.

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Thank you again for the opportunity to appear before you today. T-Mobile appreciates this Subcommittee's continued focus on this important issue and we look forward to continuing to work with you.