May 7, 2021

The Honorable Brian E. Schatz
United States Senate
Washington, DC 20510

Dear Senator Schatz:

Thank you for your letter of April 19, 2021, in which you and your fellow Senators inquire about T-Mobile's plans for the sunset of 2G and 3G technologies as part of the ongoing move to next-generation 5G. T-Mobile shares your excitement over the extraordinary benefits 5G can deliver and we are laser focused on making sure that customers, particularly those struggling financially, are not left behind in this transition. I appreciate the opportunity to detail the actions that T-Mobile is taking to seamlessly transition customers from outdated technologies to our world-leading 5G network.

True to our Un-carrier DNA, all of us at T-Mobile are working diligently to bridge the Digital Divide by bringing 5G for all. T-Mobile will cover 99% of the country and 90% of rural America with high-speed 5G mobile broadband service, as well as provide Home Internet service to millions of households with no service or no choice in provider today. We are moving fast to make 5G available across the country with over 295 million Americans covered today – coverage that will increase to well over 300 million Americans by the end of this year.

T-Mobile is already leading the industry by ensuring consumers have access to affordable plans and devices to transition to newer technologies. T-Mobile is tackling affordability by offering low-cost plans for those who need service most. Our T-Mobile Connect helps the financially strapped with a $15 per month plan for unlimited talk and text (2.5 GB data) – half the price of our previous lowest-priced plans. Our Connecting Heroes Initiative provides free 5G access with unlimited talk, text and smartphone data for state, local, and non-profit law enforcement, as well as fire and EMS agencies. And we are taking on the Homework Gap and the challenge of accessibility to broadband for every student with our Project 10Million, which offers school districts and families free hotspots, free and low-cost data plans, and at-cost devices for 10 million eligible households.

We are also committed to ensuring that all of our customers – no matter their financial situation – have access to the latest technology, rather than continuing to be consigned to second-class, obsolete technology that provides them an inherently unequal level of service and access to the internet. An essential step in that process is moving customers who are on old networks that cannot deliver broadband at all onto modern, advanced high-speed networks. T-Mobile is transitioning customers from an out-of-date CDMA 3G technology to our new 4G/5G lightning-

fast broadband network.[1] This means that customers stuck with snail's pace connections from a bygone era will get real broadband speeds that are 100 to 300 times faster. In addition, 4G/5G service significantly enhances public safety and 911 location accuracy capabilities that will make customers safer post-migration. In making this leap forward, I want to underscore that **T-Mobile CDMA customers will pay the same or less for significantly improved 4G/5G service and can turn in their old handset for a free 5G phone.**

A brief review of the steps T-Mobile is taking to sunset CDMA will help inform you and your colleagues, as Congressional leaders, how the company will ensure a smooth migration of customers from outdated 2G and 3G technologies to modern wireless broadband services. While we are starting with CDMA, T-Mobile will be following a similar plan to transition customers from other 2G and 3G technologies in the future. The CDMA transition is being implemented in the following ways that directly address the important consumer issues identified in your letter:

- ***Customers will pay the same or less for 4G/5G service.*** CDMA customers upgrading their devices will have access to the same or better plans as they have today, with 5G provided at no extra charge. This contrasts with other providers who impose a 5G surcharge.
- ***Customers can upgrade to the new network without cost to them.*** Older technology phones limit what one can do on our network and T-Mobile wants consumers to enjoy the full benefits of LTE and 5G. To that end, T-Mobile is offering free 5G smartphones to both new and existing customers who trade in their old mobile phone. This is an important investment T-Mobile is making in our customers.
- ***Advance notice to customers will be given.*** T-Mobile will provide at least 6 months advance notice of the CDMA sunset to our CDMA customers. This ensures that customers have sufficient time to prepare for the transition and to ensure that there are no unpleasant surprises. T-Mobile has already made great progress in upgrading CDMA customers to our new network and are very much on track to complete this by the end of the year.
- ***CDMA will not be turned off before 4G or 5G service coverage is available.*** T-Mobile will be migrating customers onto its new advanced 4G/5G network and will not leave any customer without access to service. This is a transition to better service, much faster speeds, and broader coverage.

***T-Mobile is assisting its MVNOs in transitioning their own 2G and 3G customers.*** As you know, there are MVNOs who use the T-Mobile network to serve their own CDMA customers. T-Mobile has provided its MVNO partners with more than one-year advance notice of the CDMA sunset and has been working cooperatively and diligently to assist them in migrating their customers onto the new T-Mobile network. For example, T-Mobile has provided DISH with 15-months advance notice of the CDMA sunset; implemented a cross-provisioning capability that enables DISH to quickly migrate customers with compatible devices; offered to implement a low-cost solution to extend the life of an estimated very large number of handsets;

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[1] 2G and 3G wireless services are provided using several different types of technologies that include CDMA (3G), UMTS (3G) and GSM (2G). T-Mobile has various deadlines for sunsetting these technologies.

and, has offered to assist DISH in its efforts to secure 4G/5G compatible handsets for its CDMA customers who require handset replacements, notwithstanding the fact that T-Mobile's experience is there is ample supply of such compatible handsets.

As our actions show, **T-Mobile takes very seriously its responsibility to make sure that "as it transitions to cutting-edge technologies, the digital divide is narrowed and not widened."** By replacing outdated 2G/3G services with advanced and affordable 4G/5G capabilities and smoothly transitioning customers through the steps outlined above, we will help bridge the Digital Divide and provide our customers with world-leading 4G/5G service. In terms of giving *all* Americans – regardless of their economic situation – the benefit of being able to communicate and access the internet with modern day technology, there is simply no time to waste and T-Mobile is leading the way.

I am pleased to provide T-Mobile's answers to your specific questions below and look forward to assisting you in the important goal of ensuring affordable 5G for all.

Respectfully submitted,

Anthony Russo
Vice President, Federal Legislative Affairs
T-Mobile USA, Inc.

CC: Senator Joe Manchin, III
Senator Tammy Baldwin
Senator Margaret Wood Hassan
Senator Edward J. Markey
Senator Cory A. Booker
Senator Elizabeth Warren
Senator Ben Ray Luján
Senator Kirsten Gillibrand
Senator Angus S. King, Jr.
Senator Richard Blumenthal
Senator Michael F. Bennet
Senator Patrick Leahy

## T-MOBILE RESPONSES TO QUESTIONS

1. ***How many T-Mobile customers currently rely on 2G and 3G services? Which states have the highest numbers of 2G and 3G customers, both as a total number and as a portion of T-Mobile's total subscribers?***

Active 2G/3G devices accounted for less than 1% of traffic on the T-Mobile network as of the week of April 11, 2021. The states with the highest numbers of 2G and 3G devices, as a total number, are consistent with the relative populations of the states, with the five highest being California, Texas, Florida, New York, and Illinois. Similarly, the states with the highest numbers of 2G and 3G devices, as a portion of T-Mobile's total subscribers, are again consistent with the relative populations of the states, with the five highest being California, Texas, Florida, New York, and Illinois.

2. ***What information have you provided to your current 2G and 3G customers regarding the transition to 4G and 5G services? Has T-Mobile provided its customers with the date on which it intends end their 2G and 3G services?***

Given our extended timeframes for sunsetting 2G and 3G service, we have not yet provided any direct notifications to customers. T-Mobile will provide impacted customers with at least 180-days advance notice prior to the sunset of 2G or 3G service in any area. These notifications will inform the customer of the date of the sunset, what will happen to the customer's service after the sunset, notify the customer that they must upgrade their device to maintain service, advise the customer how to contact customer service or schedule an appointment at their nearest T-Mobile retail location, and provide them with details on promotions for device upgrades. T-Mobile will increase the frequency of emails, text messages, and direct messages on social media as the sunset date for the applicable legacy service approaches. We will also send notification letters by mail to customers we have not been able to reach by other means, and will set up a hotline to call customers beginning closer to the relevant sunset dates. T-Mobile's contact strategy is designed to ensure we reach all of our customers in sufficient time to ensure a smooth transition. In the meantime, we have provided eligible customers who have incompatible devices with device offers and promotions (including the aforementioned offer for a free 5G smartphone) to upgrade to a bigger and better network in order to move as many customers off the legacy networks as we can before we begin the formal transition process.

3. ***Does T-Mobile have any services or offerings designed for customers transitioning from 2G and 3G services? Is T-Mobile offering any financial support for customers who may not be able to afford more expensive 4G and 5G devices and services? How will T-Mobile support customers who currently do not have a 4G or 5G handset?***

Yes. T-Mobile has several current special upgrade offers and promotions for eligible customers to upgrade to 4G/5G compatible devices. Among them is an offer for consumers trading in an

existing mobile phone (including a 2G or 3G phone) to receive a Samsung Galaxy A32 5G smartphone for free.[2] Additionally, eligible customers receive $200 off any mobile phone that costs $505 or less. These incentives provide customers with many options for a free phone. We have plans to roll out more free 5G devices later this year as well. Significantly, 2G and 3G customers upgrading their devices will have access to the same or better rate plans as they have today,[3] with 5G at no extra charge.[4] This contrasts with other providers who impose a 5G surcharge.

***4. Will T-Mobile immediately provide 4G and 5G services in areas where it plans to shut down its 2G and 3G networks? If not, how long will it take for T-Mobile to deliver 4G and 5G services in those areas? How will T-Mobile ensure that the shutdown of its 2G and 3G networks do not leave some customers without mobile wireless service?***

T-Mobile will not sunset its 2G and 3G networks in any area until 4G and/or 5G service is available in that area.

***5. How will the 2G and 3G shutdown impact access to public safety and 9-1-1 services?***

Public safety and 9-1-1 services will be significantly improved for customers upgrading to a 4G or 5G device. The 2G and 3G technologies have limited ability to locate 911 callers. Customers on the 4G/5G network will have improved public safety and 911 capabilities, with 50-meter E911 location accuracy 90% of the time using Device-Based Hybrid.[5] Simply put, customers will have access to the latest public safety capabilities post-migration.

***6. How will the 2G and 3G shutdown impact non-cellular devices and other devices and systems that are not mobile phones on your networks? How many of these devices will be impacted in each state?***

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[2] T-Mobile, *T-Mobile's Next Un-carrier Move: #5GforAll* (Apr. 7, 2021), https://www.t-mobile.com/news/un-carrier/t-mobiles-next-un-carrier-move-5gforall ("The Great Free 5G Phone Upgrade: Now, everyone in America can trade in any mobile phone and get a 5G smartphone for free.").

[3] *See* Eli Blumental, *New T-Mobile CEO: Sprint users can still keep plans after merger*, CNET (Apr. 1, 2020), https://www.cnet.com/news/new-t-mobile-ceo-sprint-users-can-still-keep-plans-after-merger/ ("T-Mobile CEO Mike Sievert confirmed that Sprint users will still be able to keep their existing plans while taking advantage of the combined carriers' improved network.").

[4] John Legere, *New T-Mobile: Lower Prices and Better Service. Period.* (Mar. 20, 2019), https://www.t-mobile.com/news/un-carrier/new-t-mobile-lower-prices-better-service.

[5] Device-Based Hybrid location technology combines GPS, Wi-Fi Access Points, and Bluetooth beacons to find a more exact location than traditional location technologies, which use a combination of network triangulation and trilateration to get an approximate location of an emergency caller.

Non-cellular, data-only devices that rely on 3G data will need to be capable of LTE operation or will need to be upgraded. Devices that rely on 2G data will remain operational until that network sunsets at a later date, but such devices should still be upgraded in the long term.[6] For this response, we interpreted "non-cellular device" to mean any device that is not a feature phone or a smartphone. Non-cellular 2G/GSM and 3G/UMTS active devices accounted for less than 1% of traffic on the T-Mobile network as of the week of April 11, 2021.

***7. How will the shutdown of 2G and 3G services impact the ability of other carriers to use the T-Mobile network for roaming traffic or wholesale services? What is T-Mobile doing to ensure that the voice traffic of roaming carriers will not be impacted?***

When the sunset of both 2G and 3G services has been completed, customers of other carriers will need to use compatible devices to access the T-Mobile network. For voice services, this means that the device will need to support Voice over LTE (VoLTE). Devices that do not support VoLTE will need to be upgraded in order to continue receiving service on the T-Mobile network. Similarly, data-only devices that rely on 3G data (including handsets, IoT/M2M, tablets and air cards) will need to be capable of LTE or 5G operation or will need to be upgraded.

T-Mobile has provided advance notice to both our MVNO partners and our roaming partners about the January 1, 2022 sunset of T-Mobile's CDMA platform in order to prepare all users of the network for the changes that will occur. MVNO partners have also been notified of the planned sunset dates of other 3G technologies, as well as the coming Device Registration Block that will restrict registration of new devices to those that are LTE/VoLTE compatible. While roaming partners are not constrained by the Device Registration Block, T-Mobile will also provide them with appropriate notice of the sunset of other 2G/3G technologies as those dates draw near. T-Mobile currently expects to sunset its 3G UMTS network before sunsetting 2G, which means that voice service on 3G UMTS devices will continue to be supported in areas where the 2G network is operational – providing roaming and MVNO partners with even more time to smoothly transition these customers. We also note that many of our rural roaming partners potentially impacted by the CDMA sunset have roaming agreements with Verizon, which will maintain operation of its CDMA network until December 31, 2022, providing an extended option for those roaming partners and their customers. In addition, 911 capabilities for CDMA customers will continue as carriers are obligated to accept all 911 calls – with or without a roaming agreement. We will continue to be in close communication with our roaming and MVNO partners to assist in ensuring a smooth transition for them and their customers. Finally, it is worth noting that in approving the T-Mobile/Sprint merger, the FCC specifically addressed the CDMA sunset issue after significant comment and debate.

The sunsetting of a technology is a normal occurrence in the telecommunications industry and there are tried-and-true methods for transitioning customers that include: (1) providing advance notice to customers; (2) stopping the sale of non-compatible devices; (3) stopping the addition of new customers with non-compatible devices; (4) offering promotions to encourage customers to upgrade their devices; (5) procuring a supply of 4G/5G replacement devices; and (6) allocating

[6] Note that all non-cellular 3G/UMTS devices also have 2G/GSM capabilities.

funds to provide for free phones, if needed, to get customers to move. T-Mobile has assisted our MVNO and roaming partners that utilize CDMA service to effectuate their own customer transitions utilizing the above methods and will do the same for the sunset of 2G/3G service.

***8. Can current 2G and 3G customers change service providers during this transition without incurring additional fees? If so, what information have you provided customers on how to do this?***

Yes. Current T-Mobile 2G and 3G customers have the ability to change service providers during this transition without incurring additional fees from T-Mobile. T-Mobile makes clear in its advertising and customer plan information that it does not charge early termination fees to customers who leave T-Mobile.

2G and 3G customers of other carriers who move to T-Mobile get to enjoy a wide variety of low-cost plans, including our current offer to receive a Samsung Galaxy A32 5G smartphone for free. T-Mobile has made clear that Sprint customers can keep their pre-merger plans and that T-Mobile will not charge extra for 5G service. T-Mobile additionally committed to the FCC that it would continue to offer the same or better rate plans as those offered by Sprint or T-Mobile on February 4, 2020, for three years following the close of the merger.[7]

***9. How has T-Mobile trained its customer service representatives to assist and provide resources to 2G and 3G customers during the transition? What are these resources and when will they be available to customers?***

T-Mobile has trained its customer service representatives to assist and provide resources to help 2G and 3G customers smoothly transition to 4G or 5G service. Our front line tools allow representatives to advise each customer, based on their specific device, whether the customer will be affected by an upcoming sunset of 2G or 3G technology, and inform the customer whether a new device is necessary and the promotions for 4G/5G-compatible devices available to them. The front line resources are enabled through a tool called Next Best Action (NBA).

***10. What other steps, if any, is T-Mobile taking or has planned to take to ensure that this transition closes rather than widens the digital divide? Please describe in terms of both availability and affordability.***

T-Mobile views the sunset of 2G/3G service as an essential step to bridge the Digital Divide and ensure that customers utilizing outdated legacy networks are able to enjoy the benefits that T-Mobile's world-leading 5G network will bring. T-Mobile takes the smooth migration of our customers very seriously and will make sure that there is no lapse in service for impacted customers. To that end, as detailed above, 2G or 3G service will not be turned off before 4G or 5G service is available in any area. T-Mobile also knows that availability is only one part of the Digital Divide and we will ensure that wireless service is affordable and that customers will not

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[7] *See* Letter from John Legere, CEO, T-Mobile US, Inc., to Hon. Ajit Pai, Chairman, FCC, WT Docket No. 18-197 (filed Feb. 4, 2019).

pay more for 4G or 5G service. We also know that paying for a new device is challenging for some customers, so we've made this easy with our promotion that enables customers to turn in their old phone and get a new 5G smartphone for free.

We will also ensure there are no surprises with the coming migration and will provide advance notice to affected customers at least 180 days prior to the sunset of 2G or 3G service in any area. As referenced above, we have and will continue to assist our MVNO, IoT, and roaming partners to transition their 2G and 3G customers. Our focus during the migration to 4G/5G service is providing consumers with improved service that is available and affordable 5G for all. We are engaged in the seamless transition to next-generation networks that will serve to narrow the Digital Divide.