



T-Mobile USA, Inc.
12920 SE 38th Street, Bellevue, WA 98006

November 18, 2019

VIA EMAIL

The Honorable Marybel Batjer, President
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

Re: T-Mobile West LLC's Response to November 13, 2019 Letter

Dear President Batjer:

Thank you for your letter dated November 13, 2019 regarding the recent Public Safety Power Shutoffs ("PSPS") events and wildfires in California and T-Mobile's response to those events. I want to begin by assuring you and the Commission that T-Mobile shares the serious concerns you have raised with respect to the impact of the recent wildfires and PSPS events on California. The wildfires have brought devastation to residents all across the state and the recent PSPS events have had far-reaching impacts on individuals, communities, businesses and governmental agencies alike.

These recent events only reinforce why the overall resiliency of T-Mobile's network, and its ability to provide service to first responders and California consumers in the event of power shutoffs and devastating natural disasters is, and has been, a matter of vital importance and a priority to the Company. T-Mobile wholly agrees that reliable and resilient communications is critical to ensure public safety.

To that end, T-Mobile has numerous built-in resiliency measures, including, but not limited to, backup battery power at cell sites, permanent generators at mission-critical cell sites and at all switch locations, as well as fiber backhaul throughout the network. In addition, T-Mobile's sites are built consistent with existing state and local regulations, many of which are explicitly designed to address the safety, integrity and resiliency of such facilities. T-Mobile also retains a variety of tools to expedite restoration of service when outages occur, regardless of the reason, including COLTs, COWs, portable generators, and alternate backhaul options via microwave or satellite. These options also support non-emergency events. Those resources, combined with T-Mobile's flexible and well-developed emergency disaster policies and procedures which are part of its Business Continuity Program, provide a robust and effective approach to addressing potential network disruptions caused by natural disasters such as fires and hurricanes and restoring service as quickly, responsibly and safely as possible.

President Marybel Batjer

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Although we made every effort to respond robustly to the recent PSPS events – whose scale, scope and length seemed to exceed the reasonable expectations of most, if not all stakeholders - certain important lessons were reinforced as the events evolved. These lessons include, among others, the need for adequate, timely and precise notice of what circuits will be shut down and when those shut downs will occur so that we can effectively deploy our resources to maintain the integrity of the network. In that spirit, we look forward to working collaboratively with the Commission, other utilities, and all interested parties so that we can all successfully address the challenges posed by potential de-energization events going forward.

Per your direction, T-Mobile has attempted to respond fully and completely to the various directives in your November letter in the attached Response. I also look forward to participating in the Prehearing Conference scheduled for this Wednesday to further address any questions or concerns you may have with respect to these important issues. In the meantime, please let me know if you have any questions about the attached responses.

Sincerely,

A handwritten signature in black ink, appearing to read 'David Gallacher', with a long horizontal flourish extending to the right.

David Gallacher
Senior Vice President
Field Engineering Technology

cc: Honorable Governor Gavin Newsom
Commissioner Liane Randolph (via email)
Commissioner Martha Guzman Aceves (via email)
Commissioner Cliff Rechtschaffen (via email)
Commissioner Genevieve Shiroma (via email)
Mark Ghilarducci, Director, Cal OES (via email)
Thomas Porter, Director, CalFire (via email)
Amy Tong, Director California Department of Technology Service List of
R. 18-03-011

T-MOBILE'S RESPONSES TO DIRECTIVES IN PRESIDENT BATJER'S NOVEMBER 13, 2019 LETTER

PUBLIC VERSION

Please note that the attached Response, as marked, and all Attachments, contain confidential and proprietary information that may not be disclosed pursuant to Public Utilities Code Section 583 or General Order 66-D. In particular, the attached documents contain information regarding critical network infrastructure the disclosure of which could pose a security risk and could potentially compromise the integrity of the T-Mobile network. The information also relates to T-Mobile's network operations, network design, and proprietary internal processes, all of which are competitively sensitive and constitute trade secrets. The information also includes confidential network outage reports. All such information is highly confidential and proprietary and is not otherwise available in any public forum. Moreover, there is no countervailing public interest to support its disclosure.

Accordingly, this Response is being provided with the understanding that it will be treated as confidential and will not be publicly disclosed pursuant to, among other things, Evidence Code Section 1061, Gov't Code Sections 6254.15, 6254(k), 6255, and 6276.36; and 6 U.S.C. Section 133(a)(1)(E). See also attached declaration per General Order 66-D.

1. **RESPONSIVENESS DURING THE LATEST WILDFIRES AND PUBLIC SAFETY POWER SHUTOFFS TO KEEP COMMUNICATIONS SERVICES ON.**

Directive 1.a.

The amount and type of power available on site at your central offices, headends and wireless switches, indicating how long these facilities can operate at average load without main power and what your plan is to refuel, if a generator is present. Separately, indicate the number of remotes, field cabinets, nodes or other devices between the subscriber's homes and your central office and headends, and how long each of these devices can operate at average load without main power. Further, provide your refueling plans for these field cabinets, nodes, and remotes.

Response to Directive 1.a.

➤ **Battery Back-up.** T-Mobile responds that essentially all of its approximately [Begin Confidential ("BC")] [REDACTED] [End Confidential ("EC")] macro cell sites have battery backups as they are part of the standard T-Mobile configuration for the macro cell sites. In general, the only cell sites that do not have battery back-up power are in locations where the local authorities restrict their installation, or where other physical limitations (e.g., a weight or size restriction) prevent the permanent installation of back-up batteries. Even in those limited instances, T-Mobile continually evaluates new technologies which may enable the installation of backup power where it was previously unavailable, e.g. Lithium Ion batteries can help address sites that have restrictions due to weight limits.

Back-up batteries can power a macro cell site for [BC] [REDACTED] [EC] depending on the type and/or quantity of batteries at the site. When the normal supply of power is re-established to the site, the back-up battery will automatically recharge. Further, T-Mobile has a program of regularly scheduled maintenance under which back-up batteries are tested and replaced where needed, as they have a lifespan of [BC] [REDACTED] [EC], depending on the type of battery at the site. Back-up batteries, however, are not a solution to longer term commercial power outages.

➤ **Generators.** All of T-Mobile's mobile switching centers have permanent backup generators as described in detail in Confidential Attachment A. In addition, T-Mobile has permanent generators installed at various critical sites throughout the state. A preliminary list of those sites is attached as Confidential Attachment B.¹ In the case of longer power outages, T-Mobile also deploys portable generators as soon as practicably possible, subject to the conditions in and around the site, including access issues that can be created during a wildfire. For example, during the October PSPS Events, T-Mobile had over [BC] [REDACTED] [EC] portable generators deployed; a number which far exceeds the normal course deployment of portable generators in the state. T-Mobile currently has [BC] [REDACTED] [EHC-AEO] portable generators in California, and has hundreds of additional portable generators that can be delivered to California within 24-48 hours. Further, T-Mobile has contracts with both local and national vendors that operate in California, including portable generator rental companies to meet the needs of impacted communities and local governments, as well as to support its own recovery efforts. T-Mobile also maintains information processing and telecommunications backup sites that provide redundancy that is important to protecting key business information and services.

Depending on the size of the generator, the run-time before refueling is generally 48-72 hours, and T-Mobile maintains a 24-hour refueling schedule. To the extent that fuel can be safely, continuously and properly provided for those generators, these generators can run indefinitely.

Directive 1.b.

For wireless providers, provide a list of the cell sites which you have located in the Tier 2 and Tier 3 fire threat areas and how long each facility can operate at average load with onsite power. If the site has a generator, how long can this site operate at average load without refueling and what are your refueling plans?

¹ T-Mobile is in the process of updating the attached list which is based on historical data and will submit a revised list as soon as possible.

Response to Directive 1.b.

A list of T-Mobile's cell sites in Tier 2 and Tier 3 is attached as Confidential Exhibit C.²

Directive 1.c.

Describe the locations in your network where actions need to be taken to harden the communications infrastructure for risk, including but not limited to, wildfires and PSPS events. Provide a list of specific locations that allow emergency responders to understand where catastrophic events (wind, water, fire, earthquake and subsidence) may have local and regional reliability impacts. This must include areas and communities where fiber backhaul routes do not have adequate hardening or physical redundancy.

Response to Directive 1.c.

T-Mobile is continuously enhancing its practices and procedures to better meet the needs of public safety and is continually evaluating its network for additional opportunities to further harden the network. For example, and as noted above, it regularly monitors its battery back-up capabilities, explores new technology to overcome limitations; installs permanent generators where feasible; makes arrangements with vendors to provide necessary equipment in the case of an emergency; works with the IOUs to further refine their PSPS process to ensure timely and specific notice; and monitors the performance of its network on a 24/7 basis. In addition, T-Mobile plans to acquire additional portable generators in 2020 that will be home-based in California. At this time, T-Mobile is not aware of any specific locations in the network that require additional measures to address PSPS events or natural disasters such as wildfires.

Directive 1.d.

Provide the reports of outages which you sent to the FCC for each day of the recent Disaster Information Reporting System (DIRS) activation in California.

Response to Directive 1.d.

A consolidated copy of those reports is attached as Confidential Attachment D.

² Confidential Attachment C currently contains information regarding Tier 2 and 3 sites with permanent generators; T-Mobile is continuing to prepare a complete list and will submit it as soon as possible.

2. ENGAGEMENT AND TIMELY RESPONSIVENESS TO REQUESTS FROM CAL OES AND CAL FIRE.

Directive 2.a.

Confirm the name of an Emergency Operations Center (EOC) liaison that can be present 24/7 in the state operations center during emergency response events. The EOC liaisons shall be trained in emergency response, in accordance with Standardized Emergency Management System (SEMS) and have working knowledge of utility operations and business processes.

Response to Directive 2.a.

T-Mobile identifies Dan Paul, Sr. Director, Engineering Operations (West), as its initial EOC liaison.

Directive 2.b

Develop and implement processes that will ensure that County EOC liaisons will have the latest information during PSPS and wildfire events and are enabled and empowered to resolve local issues as they arise.

Response to Directive 2.b.

T-Mobile has worked closely with the Commission, Cal OES and CUEA to provide daily updates on the status of its network and its efforts to maintain and/or restore service. It will work together cooperatively with all stakeholders to ensure that County EOCs obtain information so they can fulfill their duties.

Directive 2.c.

Establish a more effective communication structure with state, county and tribal government emergency management personnel. This communications structure shall be separate and unique from general updates to local governments and other stakeholders to allow for emergency personnel to receive the support and information required to properly respond.

Response to Directive 2.c.

T-Mobile is willing and committed to working with all state, county and tribal government emergency management personnel in the event of emergencies and/or PSPS events.

3. COMPLIANCE WITH D.19-08-025.

Directive 3

Decision 19-08-025 directs communications carriers to provide a minimum level of consumer protections and safety actions in the case of a declared disaster. Based on responses we have received so far, the CPUC needs to hear more specifics about what you are doing, and provide specifics such as what equipment and when.

Response to Directive 3.

In addition to the advice letters submitted pursuant to D.19-08-025, T-Mobile provided confidential reports on the status of its network during the PSPS events and recent wildfires to the Commission and to Cal OES on a daily basis. T-Mobile also provided the Communications Division with Responses to its October 22, 2019 data request regarding the PSPS events. See also DIRS Reports provided in Response to Directive 1.d. above. T-Mobile will work with the Communications Division to better understand what additional information is requested in terms of specifics in its advice letter filings.

CONFIDENTIAL
ATTACHMENTS A - D
NOT INCLUDED IN
PUBLIC VERSION

