

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UM 1908, UM 2206

In the Matters of

LUMEN TECHNOLOGIES

Proposed Commission Action Pursuant to
ORS 756.515 to Suspend and Investigate
Price Plan (UM 1908), and

QWEST CORPORATION,

Investigation Regarding the Provision of
Service in Jacksonville, Oregon and
Surrounding Areas (UM 2206).

Hearing on Order Nos. 22-340 and 22-422

RESPONSE TO COMMISSION-
DIRECTED INQUIRIES
AND POST-INCIDENT REPORT
OF LUMEN TECHNOLOGIES
D/B/A/ CENTURYLINK

CenturyLink respectfully submits its Response to Commission-Directed Inquiries and Post-
Incident Report as required by Commission Order No. 23-356.

DATED: October 23, 2023

PERKINS COIE LLP

By: s/ Lawrence H. Reichman

Lawrence H. Reichman, OSB No. 860836
LReichman@perkinscoie.com
1120 N.W. Couch Street, Tenth Floor
Portland, OR 97209-4128
Telephone: 503.727.2000
Facsimile: 503.727.2222

Attorneys for Lumen Technologies, Inc.

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	INCIDENT SUMMARY	2
III.	COMPLIANCE WITH ORDER NOS. 22-340 AND 22-422	4
IV.	OUTAGE TRIAGE PROCESS DISCUSSION AND IMPLEMENTATION	7
V.	CUSTOMER COMMUNICATION REVIEW AND ANALYSIS.....	10
VI.	REPORT SUMMARY	13

I. INTRODUCTION

On September 18, 2023, Staff of the Public Utility Commission of Oregon filed a report (hereinafter “Staff Report”) which raised the issue whether Lumen¹ (hereinafter “CenturyLink” or “Company”) complied with applicable Commission orders during certain September 2 and 3, 2023 outages, and what strategies the Company may employ to address any challenges experienced in attempting to disseminate outage information to customers. While Staff ultimately concluded that any non-compliance was excused by force majeure, concerns were expressed over communication methods and inconsistencies pertaining to information supplied to customers via the dedicated repair line. Additional comments and suggestions were submitted by the Oregon Citizens’ Utility Board (“CUB”) and Priscilla Weaver.

The applicable orders referenced in the Staff Report are Order No. 22-340, as modified by Order No. 22-422, and affirmed in Order No. 23-109 (collectively, the “Orders”), requiring CenturyLink to address all trouble tickets and make repairs or provide substitute service within 48 hours of the creation of a trouble ticket in a limited geographic area in southern Oregon. The Orders additionally require CenturyLink to provide a dedicated customer support line to customers in the Jacksonville/Little Applegate area which allows reporting of service issues for multiple addresses.

The Staff Report, adopted by Commission Order No. 23-356 on September 28, 2023, specified that CenturyLink should report on the following: “[1] Were customers allowed to report an outage for multiple addresses to the dedicated support line? If not, what caused the issue? [2] Were customers communicated with on a timeline and in a manner consistent with Lumen policies? [3] What challenges were experienced in attempting to disseminate outage information to customers? How can these challenges be addressed or overcome?” Additionally, the Commission (1) adopted CUB’s recommendation to require CenturyLink to describe how it is complying with each requirement of the Orders related to the September 2 and September 3

¹ Lumen is the parent company of the affiliated incumbent local exchange carriers Qwest Corporation, United Telephone Company of the Northwest, CenturyTel of Oregon, and CenturyTel of Eastern Oregon.

outages; (2) directed CenturyLink to respond to the proposal made by Priscilla Weaver at the September 21, 2023 public meeting regarding a Jackson-area outage “triage” process; and (3) to provide updated call logs that include information for September 7, 2023.

II. INCIDENT SUMMARY

As set forth in the Staff Report, two separate and distinct incidents led to the outages reported by customers over the Labor Day weekend. The event sequence was provided to Staff in telephone conversation and writing, and the events and actions are described below.

1. During the afternoon of Saturday, September 2, 2023, a CenturyLink outside plant technician received a phone call to his mobile phone from a subscriber to whom he had previously provided his direct contact information. The subscriber reported an outage and the technician immediately began troubleshooting the issue. The issue was narrowed to T1 spans in an out-of-balance condition. The technician contacted CenturyLink’s switching surveillance group who attempted but was unable to restore the T1 spans remotely. The CenturyLink technician in Jacksonville then worked with others to reset the T1s manually from within the Jacksonville, Oregon central office. This was completed on or around 8:00 pm on September 2, 2023, and service was restored to all affected customers.
2. At or around noon on Sunday, September 3, 2023, a CenturyLink telecom cabinet near the intersection of Oregon Hwy 238 and Pair-A-Dice Ranch Road west of Jacksonville, Oregon, was destroyed. It appears this was caused by a vehicular accident, though vandalism has not been ruled out. Photographs of the damage were supplied to Commission Staff and were included as Attachment B to Appendix A of Order No. 23-356.
3. The T1 spans serving remote terminals in areas south of Jacksonville are in part comprised of copper wires that passed through CenturyLink’s telecom cabinet that was destroyed.
4. On Sunday afternoon, September 3, CenturyLink isolated the T1 span cables and technicians placed temporary splices for those circuits. The technicians then identified working pairs and began splicing operations on the remainder of the working circuits on the cables that had been damaged by the vehicle accident.

5. After discovery of the damaged facilities, CenturyLink immediately began working to source and install a new cabinet and pull cable into the cabinet. Once cable was pulled into the new cabinet, work began to make permanent the temporary splices. In the days following the facility damage, intermittent service disruptions were unavoidable as temporary splices were removed and cut over to the permanent fix. This process took several days to complete.
6. On Wednesday afternoon, September 6, 2023, CenturyLink's corporate communications department communicated on Twitter/X and Facebook social media platforms describing the causes of the outages. That messaging was received by customers as reply comments were posted on the two platforms.
7. By early morning Thursday, September 7, 2023, CenturyLink's local field operations group reported that service to all affected customers had been restored.
8. On the afternoon of September 7, 2023, some customers continued to experience effects from the September 3, 2023, outage. This was due to complexities of the necessary repair activities at the facility damage location, and the resultant downstream impacts of loss of connectivity between remote terminals and switching facilities in the Jacksonville central office.
9. CenturyLink acknowledges that the complex September 3, 2023 outage persisted for over 48 hours. This uncontrollable event, which was due to the action of a third party who damaged facilities along Highway 238, qualifies under OAR 860-023-0055(1)(h) as a force majeure event. CenturyLink concurs with Staff's observation that the Commission did not intend the 48-hour repair timeframe established in Order No. 22-340 to apply in force majeure situations, and concurs with Staff's finding that any CenturyLink non-compliance with Order No. 22-340 should be excused because of this force majeure event.
10. During the entire duration of the event, CenturyLink technicians worked diligently to repair the facilities and restore service. Once CenturyLink public policy employees were informed of the event on September 5 (the first working day after Labor Day), they were in frequent communication with Commission Staff as well as CUB representatives to provide updates on the incident and restoration activities.

III. COMPLIANCE WITH ORDER NOS. 22-340 AND 22-422

In Order No. 23-356, the Commission also required CenturyLink to describe how it is complying with each requirement of Order Nos. 22-340 and 22-422 related to the September 2 and 3 outages. CenturyLink's compliance with those requirements is described below.

A. Deploy Toll-Free 24/7 dedicated customer support line

In Order No. 22-340, the Commission "require[d] Lumen Technologies (Lumen) to deploy a toll-free, 24/7 dedicated customer support line no later than Wednesday, September 28, 2022, to support customers in Jacksonville, Applegate, and surrounding areas in southern Oregon. The customer support line must remain operational for the duration of Staff's investigation."

The dedicated line was deployed on September 28, 2022, and has been in operation 24 hours each day since then. On Saturday, September 2, 2023, a T1 span trouble condition was experienced and 12 calls were placed to the dedicated line. On Sunday, September 3, 2023, a critical cable facility was destroyed alongside Highway 238. On that day, 10 calls were placed to the dedicated line. Between September 4, 2023 and September 12, 2023, an additional 23 calls were placed to the dedicated line as CenturyLink worked through a complex repair that involved cable splicing, restoration of connectivity to remote terminals, and establishment of connections at the Jacksonville central office. In summary, the deployment of the toll-free 24/7 dedicated customer support line occurred as ordered by the Commission and was in place and operable throughout the September 2 and September 3 outages.

In Order No. 23-356, the Commission further directed the Company to provide updated call logs that include information for September 7, 2023. Confidential and redacted versions of the complete call log from September 28, 2022 through October 10, 2023, which includes the call logs from September 7, 2023, were filed on October 16, 2023.

B. Multiple Address and Repair Ticket Acceptance

The Orders also require that "Through the customer support line, callers may report service issues for multiple addresses and create multiple repair tickets." Since the initial deployment

of the toll-free 24/7 dedicated customer support line, CenturyLink's repair call center agents have been trained to accept multiple tickets from one call to the dedicated line. In response to data requests, CenturyLink has provided examples of how repair agents see flags to ensure acceptance of multiple tickets. CenturyLink is aware that customer communications to the Commission indicate that in a small number of instances multiple tickets were not taken, and acknowledges that its dedicated repair staff failed in a small number of cases to take multiple tickets. These acknowledged lapses were likely caused by the calls reaching new agents, or seasoned agents with little or no experience taking calls from this small area in Oregon (given the very few number of service incidents in the past year), as further described in the outage triage improvement section of this report. CenturyLink also describes below steps it has already implemented to substantially improve call handling for the dedicated customer support line.

C. Resolution of Ticketed Repairs Within 48-Hours

The Orders also require CenturyLink to “address all tickets and make repairs in a manner that results in a consistent and functional dial tone and ability to reliably make and receive calls, or provide the customer with a functionally equivalent substitute service, as defined by Lumen's current tariffs, at no additional customer cost, within 48 hours of creation of the ticket until service issues in the area are remedied. Where repairs are not feasible because of a customer-premise issue preventing such dial tone and the ability to receive and make calls, Lumen must provide documentation of such issue to the customer and the Commission's Consumer Services Division.”

Before the outage that began on September 3, 2023, CenturyLink's field operations group had resolved each and every repair call that came into the dedicated customer support line since Order No. 22-340 took effect, within 48 hours of trouble ticket creation. That level of performance was achieved by frequent daily monitoring of tickets transmitted from CenturyLink's central dispatch group to the field operations team serving the Medford and Jacksonville area. As tickets for the Jacksonville area are received, technician schedules are manually adjusted to ensure that any ticket within the 97530 zip code area covered by the dedicated line is resolved within 48 hours.

The tickets created from calls to the toll-free 24/7 dedicated customer support line on September 2, 2023 were resolved the same day through correction of the out-of-balance T1 spans that occurred at the Jacksonville central office. The tickets created from calls to the dedicated line on September 3, 2023, resulting from third-party damage to critical cable and wire facilities along Highway 238, were not all resolved within 48 hours, despite CenturyLink's diligent efforts. This was due to the complex nature of the necessary repairs that required cable splicing and restoring connectivity between the Jacksonville central office and the remote terminals. Regarding the tickets generated on September 3, 2023 that were not resolved in 48 hours, Staff has found any CenturyLink non-compliance with Order No. 22-340 is excused by force majeure.

D. Tracking and Reporting of Repair Ticket Information

The Orders also require CenturyLink to track and retain information on all tickets generated through the dedicated line. The information to be tracked must include the address, name, and contact information for the customer for whom the ticket has been generated; a description of the service issue; logs of customer contact regarding the service issue; actions taken to resolve the service issue; and information on the results. Dates and times for all of the foregoing information must be logged. Further, Order 22-340 requires: "Every two weeks until December 31, 2022, Lumen must file in docket UM 2206 the above information with customer personal identifying information redacted. A confidential version of the same information, with no redaction, must be filed under a general protective order which will be established in the docket. Filings should summarize how tickets are routed and prioritized."

To date, CenturyLink has filed for 24 separate two-week periods the information required for tracking and reporting of repair ticket information. The repair ticket information is gathered and presented by one internal group within a CenturyLink data analysis group. The data gathered is pulled from records created during by CenturyLink's repair center agents. Those agents have specific notetaking nomenclature. A second group within CenturyLink's customer order resolution function takes the information supplied and provides further explanation. The call logs containing information on tickets created during the September 2,

2023 and September 3, 2023 outages were first filed in Docket UM 2206 on September 18, 2023. That same information was also contained in the subsequent bi-weekly call log filings in Docket UM 2206 on October 2, 2023 and October 16, 2023.

IV. OUTAGE TRIAGE PROCESS DISCUSSION AND IMPLEMENTATION

During the Commission's regular public meeting on September 21, 2023, Intervenor Priscilla Weaver addressed the Commission and suggested following three supplemental call processing methods for consideration, to which the Commission required CenturyLink to respond:

1. Ms. Weaver suggests that, upon receiving the calling customer's service address, CenturyLink customer service agents should immediately inquire of the customer whether they are aware of other CenturyLink subscribers in the area experiencing an outage. On response that there are other known outages, trouble tickets should immediately be created for those addresses.
2. Ms. Weaver also suggests that, once an inquiry described in the initial proposal above is made, and the calling customer responds that they are unaware of other CenturyLink customers are out of service, the customer service agent should search other CenturyLink customer addresses on the calling customer's street, place the calling customer on hold, and make test calls to other CenturyLink subscribers. Upon discovery of a fast busy signal by calling other customer phone numbers, the customer service agent should (according to Ms. Weaver) place a call to the field operations team to initiate an immediate repair.
3. The third suggestion advanced by Ms. Weaver was to have the CenturyLink customer service representative inform the calling customer that their call is from an area receiving special protection. Further, Ms. Weaver suggests that the customer service representative inform that customer that the ticket would be immediately sent to the field team in the area for investigation. Ms. Weaver additionally recommended that a return contact be made to provide a date the technician would arrive for repair activity.

CenturyLink appreciates Ms. Weaver's suggestions. While the Company will not be able to implement all of Ms. Weaver's ideas, her concerns were shared with CenturyLink's contact call

center management, and her comments helped to inform improvements recently made. The primary reason Ms. Weaver's suggestions cannot be fully implemented is that they rely on an organizational structure that does not exist at the Company and cannot be practically implemented for this one small subset of customers. Ms. Weaver appears to assume that there is a direct connection path between the repair call center and the Company's field operations group. However, sitting between those two distinct business units are the Company's dispatch operations. All scheduling of repair technicians is provided by a centralized dispatch group, and repair center personnel cannot create trouble tickets. Repairs are handled the same way across CenturyLink's entire ILEC operations nationwide – with the exception of the preferential treatment Jacksonville residents are given pursuant to the Orders – and Ms. Weaver's recommendation would require an entire overhaul of the Company's operations. Doing so would create tremendous cost and inefficiency, and would not serve the Company's customers overall.

As to the specific questions Ms. Weaver believes should be asked during calls, the CenturyLink repair call center agents are trained to use a specific call flow to increase customer satisfaction and attempt to diagnose and dispatch a service issue while respecting the customer's time. Because these agents take calls from many different customer types, it would be counterproductive to open the call by asking if there are any other neighbors experiencing issues. What would be beneficial is if the customer could let the repair call center agent know that they are part of the group of customers protected by the Jacksonville Orders (“Jacksonville Protected group”) at the beginning of the call. While that would be of benefit to the agent, once the account is accessed and the agent observes the Account Tag indicating that the customer is within the Jacksonville Protected group, they will open tickets for multiple accounts if needed. As multiple tickets will be taken, the desired outcome expressed by Ms. Weaver will be achieved.

Every minute added to the handle time of a repair call by making the process more complicated is a minute that an agent is not able to answer the calls of other customers in need of service repair. CenturyLink schedules agents based on skill, queue type, and call forecasts to ensure sufficient coverage to meet service levels. Calls from the Jacksonville Protected group are now routed to a group of agents with special training to help these and other high priority customers across the U.S. The time required to identify which neighbors are CenturyLink customers (note

that a significant percentage of residents in the Jacksonville area are not CenturyLink customers) and to call additional phone numbers during an outage could tie up resources for lengthy periods of time and possibly lead to inadvertent disconnections as an agent moves from one call to another. CenturyLink concurs that it is not unreasonable to take the reporting customer's word that their neighbor is also experiencing issues; however, the increased handle times of attempting to track down other neighbors who may not have service issues would be counterproductive.

Determining the scope of a potential widespread outage without expert technical assessment of the involved facilities is at best challenging. Dispatching multiple technicians without first confirming an issue requires multiple technicians, unnecessarily ties up limited technician resources and time. Once a technician has been dispatched and arrives at the serving equipment, a determination can be made as to whether the issue is impacting a remote terminal, transport span, individual pedestal, or a single twisted pair in most any location within the network.

After receiving Ms. Weaver's suggestions, numerous teams assembled to consider improvements to processes and procedures. In the first year of operation of the dedicated line, only 184 calls were received through October 10, 2023. Of those 184 calls, 120 were for voice service repair. While training was provided to the repair call center agents beginning in September 2022, the low frequency of repair calls to the dedicated line may have contributed to sub-optimal call handling as agents may have forgotten portions of the training received. To safeguard against this recurring, an optimized call routing method was put in place beginning on October 4, 2023. The new routing method sends calls to a small group of CenturyLink agents from 6 AM to 6 PM Monday through Friday. From 6 PM to 6 AM Monday through Friday, and all day on weekends and holidays, the new routing method sends the calls to a small set of CenturyLink's most seasoned offshore agents. Both the internal and contracted agents received refreshed training on both the circumstances surrounding the Jacksonville area and improved procedures discussed herein. The refreshed training emphasized how to recognize accounts within the Jacksonville Protected group area and to be ready to open multiple tickets during one call. New safeguards were installed to ensure that customers with new trouble tickets opened in Jacksonville Protected group areas are given a service date within 48-hours. Procedures for that safeguard require that the call center agent send an email to one address that forwards the request for a repair visit to

numerous contacts within both the dispatch and field operations groups. The email is sent to field operations as an alert to look for forthcoming dispatch to a Jacksonville Protected group area. This new process brings to the attention of field operations management an issue in Little Applegate without need for the repair call center to call them as there is not a process in place for these managers to staff a phone line in case someone calls needing assistance. Instead, there is an escalated dispatch process: if a ticket comes in for this area, it is grabbed and immediately worked on by a structure load expert to make sure a dispatch occurs as quickly as possible. Waiting for someone to assess if the outage impacts more than one customer before dispatching would slow down response times.

Ms. Weaver's suggestion to have someone reach back out to the customer with the correct dispatch information is reasonable and appropriate. As such, the repair call center agents will collect the customer's preferred contact method and once the ticket has been loaded/assigned, they will contact the customer with the expected due date for the field service repair visit.

V. CUSTOMER COMMUNICATION REVIEW AND ANALYSIS

Order No. 23-356 adopted the Staff Report recommendation that CenturyLink should be required to provide a post-incident assessment reviewing communication challenges and recommending improvements to benefit customers. Specifically, the Staff Report sought the following: “[1] Were customers allowed to report an outage for multiple addresses to the dedicated support line? If not, what caused the issue? [2] Were customers communicated with on a timeline and in a manner consistent with Lumen policies? [3] What challenges were experienced in attempting to disseminate outage information to customers? How can these challenges be addressed or overcome?”

A. Outage Reporting for Multiple Addresses

In general, customers were allowed to report an outage for multiple addresses to the dedicated line. However, it appears that for two customers the repair call center personnel did not take reports for multiple addresses. CenturyLink has taken substantial new steps and provided extensive additional training as described in this report to prevent a future occurrence.

With regard to causal factors for this issue, from the initial implementation of the dedicated line, repair center agents were trained to take multiple tickets from customers in the Jacksonville Protected group area. This responsibility was taken seriously. From the first day of operation of the dedicated line through October 10, 2023, 184 calls were received, of which 120 were related to voice repair.² The pool of repair call center agents taking calls to the dedicated repair line was larger than 120, and as such it is possible that the agents who fielded the calls related to the two separate outage incidents on September 2 and 3, 2023, handled fewer than one or two calls to the dedicated line, if they handled any at all. Given that a typical repair call center agent handles in excess of 10,000 calls per year, recollection of training for adherence to a standard to allow tickets for multiple addresses may have diminished.

Timing is another potential causal factor. The two individual events that occurred on September 2 and September 3, 2023 occurred over a long holiday weekend. As such, in order to afford CenturyLink call center personnel the ability to participate in the long weekend, calls during the time of the two individual events leading to the service outages were routed to CenturyLink's contracted overseas vendors. Those vendors had experienced recent staffing challenges as recovery efforts from typhoon activity in the region made it difficult for employees to travel for work. Hence it is possible that personnel fielding calls during the time of the two individual events may have been new to the contracted vendors and had not yet fully digested the necessary training to implement the requirement for creating trouble tickets for multiple addresses.

CenturyLink concurs with Staff's position that this post-incident assessment is appropriate to pinpoint the hurdles to effective customer communication and identify strategies for mitigating those hurdles during future outages. CenturyLink has revised and

² The remaining categories of calls to the dedicated repair line not related to voice repair included: billing; return calls checking on status; calls where there was no customer response; installation inquiries; Internet issues; misdirected calls where no issue was reported; test calls from OPUC Staff and CenturyLink personnel; calls seeking transfer to other departments; and voicemail issues.

strengthened its procedures and processes for handling calls to the dedicated repair line for Jacksonville protected group areas, as described earlier in this assessment.

B. Communication Policies and Timelines

CenturyLink's communications during the two events were consistent with Company guidelines and practices. During widespread telephone service impairment events, CenturyLink typically communicates with customers and the public in one or two ways (depending on the circumstances of the network event). A widespread outage is generally defined as having 1,000 or more subscribers out of service in a geographic area. The first communication method utilized is social media dissemination of an event through platforms where CenturyLink maintains handles or pages such as Twitter/X or Facebook. Those handle feeds and pages are seen by CenturyLink subscribers over numerous states and as such communicating outages where there are fewer than 1,000 customers impacted would tend to overcrowd the feeds and pages where postings are made, and likely lead to diminished review of those pages. Thus, postings for outages of fewer than 1,000 impacted subscribers are rare. They will occur when CenturyLink's social media teams that monitor the Company's feeds and messages to the Company identify greater than 25 concerns expressed on one event.

The second method of communication used to inform subscribers and the public of outage events is through mass media channels. CenturyLink communicates through television, radio, and print media when contacted for information involving service outage events.

The September 2nd and September 3rd outages were initially not communicated via these methods. The September 2nd outage (involving service disruption due to T-1 spans experiencing an out of balance state) was corrected the same day, and public communications were not sent. The September 3rd outage (involving facility damage as a result of vandalism or vehicular accident), did not affect greater than 1,000 subscribers, and CenturyLink did not receive contacts from local mass media outlets. On Wednesday, September 6th, CenturyLink representatives spoke with Commission Staff to update on

repair status for the facilities damaged as a result of vandalism or vehicular accident. Observing that the two side-by-side outage events gave the appearance of one longer event, Staff and CenturyLink agreed that in this instance customer communication respecting the outage was appropriate. That same day, on Wednesday afternoon, September 6, 2023, CenturyLink's corporate communications department communicated on Twitter/X and Facebook social media platforms describing the causes of both of the outages. Receipt of the messaging by customers was confirmed via reply comments posted on both platforms.

C. Outage Information Challenges and Opportunities

As discussed above, the Company acted consistently with its public communications guidelines and processes. The company understands that customers grow frustrated when service outages occur, especially for protracted periods of time or when multiple events appear to overlap (as happened September 2 and 3). The Company is open to discussion of alternatives for post-incident dissemination of information and/or proactive communication of service outage and repair status.

VI. REPORT SUMMARY

While it is CenturyLink's aim to provide continuous service to its valued subscribers, mechanical and electronic systems will occasionally experience service-impacting issues. Likewise, services may be interrupted from time-to-time due to acts of third parties such as the damage that occurred to CenturyLink's facilities south of Jacksonville on Highway 238 on September 3, 2023. The combination of two events in successive days was unusual. The timing over a lengthy holiday weekend created further complications. The circumstances and discussions among all parties have led to further enhancement of practices and procedures, including call center operations and future communication methods. CenturyLink complied with the Commission's directives under the Orders during the outages over the 2023 Labor Day weekend with the acknowledged exception that in a couple of cases, dedicated line staff failed to accept multiple tickets. CenturyLink has already taken extensive steps to prevent such a recurrence, and apologizes for the inconvenience experienced by its customers. CenturyLink appreciates this

opportunity to respond to the questions and comments of the Commission, Staff, CUB, and Ms. Weaver, and would be pleased to respond to any follow-up questions.