California Wireline Telephone

Service Quality

Pursuant to General Orders 133-C and 133-D

Calendar Years 2014 through 2016

California Public Utilities Commission

Communications Division

Staff Report

May 8, 2018

Executive Summary

Staff of the California Public Utilities Commission's (CPUC or Commission) Communications Division (CD) prepared this report in accordance with General Order (GO) 133-D Section (§) 7.[1] Staff describes the background, provides an in-depth explanation of GO 133-D's service quality measurements, and examines the critical changes implemented since its adoption in August 2016, in place of GO 133-C. This report serves as baseline data before the implementation of penalties for poor performance, which GO 133-D implemented.

GO 133-D, entitled '*Rules Governing Telecommunications Services*,' defines the CPUC's service quality rules. Facilities-based wireline telephone carriers must comply with five (5) service quality measures and reporting standards. The five measures are:

- *Installation Interval*: 5 business days;
- *Installation Commitments*: 95% of commitments met;
- *Customer Trouble Report*: 6%, 8%, or 10% per 100 working telephone lines, based upon wire center size;
- *Out of Service Repair Interval*: 90% of telephone service outages restored within 24 hours or less; and,
- *Answer Time*: 80% of calls answered within 60 seconds or less.

Staff analyzed the service quality data reported by telephone service providers in California for calendar years 2014 through 2016 which shows:

- All reporting carriers met the *Installation Interval*, *Installation Commitments*, and *Customer Trouble Report* standards.
- Uniform Regulatory Framework (URF) Incumbent Local Exchange Carriers (ILECs), which provide land-line telephone service to the majority of customers in California, failed to comply with the *Out of Service Repair Interval* standard. URF Competitive Local Exchange Carriers (CLECs), on average, failed to comply with the *Out of Service Repair Interval* standard. In contrast, General Rate Case (GRC) ILECs largely complied with this standard.[2]
- None of the URF ILECs consistently met the *Answer Time* standard for several of the observed years. The *Answer Time* data for URF CLECs and GRC ILECs is incomplete because many of these carriers did not report for the entire time period; the data received by the CPUC from URF CLECs and GRC ILECs showed intermittent compliance by several carriers.

On April 1, 2016, the CPUC approved Frontier Communications Corporation's application to acquire Verizon California, Inc., which transferred two million Verizon customers to Frontier.[3] In the Decision, the Commission ordered the applicant to improve its service quality performance and to comply with the requirements of General Order 133. Staff analyzed Frontier and Verizon's performance and found that Frontier has yet to meet the required performance improvements.

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[1] "Commission staff may investigate any reporting unit that does not meet a minimum standard reporting level and any major service interruption." General Order 133-D, § 7.

[2] Appendix A to this report shows which companies are URF ILECs, URF CLECs, and GRC ILECs.

[3] The Commission approved the acquisition in Decision (D.) 15-12-005.

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1. General Order 133-D

A. History of the General Order

General Order 133-C, adopted on July 9, 2009, by D.09-07-019, established a minimum set of service quality standards and measures for installation, maintenance, and operator services for local exchange telephone service in California. In March 2011, Communications Division issued a staff report detailing substandard levels of service quality reported by carriers for 2010. In response, the Commission opened Rulemaking (R.) 11-12-001 on December 1, 2011, to review carriers' performance, to assess the relevance and effectiveness of the GO 133-C measures, and to determine the need for penalties for substandard performance.

On August 29, 2016, the Commission issued D.16-08-021, which adopted GO 133-D and closed the rulemaking.[4] While GO 133-D maintained the five service quality measurements adopted in GO 133-C, it expanded a number of GO 133-C's provisions including establishing monetary penalties for violating its five service quality measures.[5]

This report addresses carrier service quality from January 1, 2014, through December 31, 2016. The majority of the data analyzed in the report was submitted in accordance with the requirements of GO 133-C.

B. Five (5) Minimum Service Quality Reporting Measures

General Order 133-D provides that operators of public utility telephone corporations must meet five minimum telephone service quality measures with required standards and an assigned Minimum Standard Reporting Level. A carrier is out of compliance when its performance falls below any of the minimum standards and must report this information to the Commission. The five measures are as follows:

i. Installation Interval

This requirement measures the average amount of time it takes a carrier to install basic telephone service, beginning from the day and hour of the customer's request until the service order is completed.[6] Adding the total of all installation intervals and dividing by the total number of service orders during the reporting period calculates the average interval. This measure applies to GRC ILECS's residential and small business customers.[7]

The Minimum Standard Reporting Level for *Installation Interval* is 5 days.

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[4] On October 12, 2016, the Commission issued D.16-10-019 correcting minor errors in the original version of GO 133-D.

[5] § 9 (Fines) became effective on January 1, 2017.

[6] GO 133-D defines installation as the provision of telephone service at the customer's request.

[7] GO 133-D defines small business customers as those that purchase 5 or fewer lines.

ii. Installation Commitments

This requirement measures the percentage of telephone service installations successfully completed by the carrier. Dividing the actual number of installations by the total number of installation commitments made equals the percentage. A carrier compiles its total number of commitments made and missed monthly and reports those numbers quarterly.

The Minimum Standard Reporting Level for *Installation Commitments* is 95% of commitments met.

iii. Customer Trouble Reports

This requirement measures the number of reports a carrier receives from its customers regarding their dissatisfaction with telephone company services.

The Minimum Standard Reporting Level for the *Customer Trouble Report* measurement varies based on the number of working lines per reporting unit. The three (3) minimum thresholds for reporting are as follows:

- 6 trouble reports per 100 working lines for reporting units with 3,000 or more working lines.
- 8 trouble reports per 100 working lines for reporting units with 1,001-2,999 working lines.
- 10 trouble reports per 100 working lines for reporting units with 1,000 or fewer working lines.

iv. Out of Service Repair Interval

This requirement measures the average interval between the time a carrier responds to out of service trouble reports and the restoration of the customer's service. The sum of the total number of out of service repair tickets restored within 24 hours divided by the total number of reports received equals the average interval.

The Minimum Standard Reporting Level for the *Out of Service Repair Interval* is 90% of outages restored within 24 hours or less.

A carrier must submit both its adjusted and unadjusted out of service reports. Adjusted reports exclude Sundays, federal holidays, and repair tickets when maintenance is delayed due to factors outside of the carrier's control. Additionally, a carrier impacted by a catastrophic event[8]

[8] "A catastrophic event, an event where there is a declaration of a state of emergency by a federal or state authority, and a widespread service outage (an outage affecting at least 3% of the carrier's customers in the state) are circumstances beyond the carrier's control. A catastrophic event ends when the trouble ticket level returns to the average level three months prior to the catastrophic event. The average level is calculated by summing the actual number of out of service tickets for residential and small business (5 lines or less) customers for the three

in any month may request excluding a specific month(s) from its service quality reports. Staff used only adjusted reports to determine whether a carrier has met the minimum standard reporting level.

v. Answer Time

This requirement measures the amount of time it takes for an operator to answer a customer's call to a business office for billing and non-billing inquiries and to the repair office for trouble reports. The average answer time of a sample of the answering interval of calls to business and repair offices that is representative of the reported period equals the *Answer Time*.

The Minimum Standard Reporting Level for *Answer Time* is 80% of calls answered within 60 seconds when speaking to a live agent, or 80% of calls answered within 60 seconds when speaking to a live agent after completing an interactive voice response (IVR) or automatic response unit (ARU) system. Traffic offices serving 10,000 or more lines are required to report for this measure.[9]

The *Customer Trouble Report*, *Out of Service Repair Interval*, and *Answer Time* service quality measures only apply to time division multiplexing (TDM)-based voice services. GO 133-D specifies that TDM refers to "traditional telephone service."[10]

C. Major Service Interruption Reporting

General Order 133-D, § 4, adopts requirements for major service interruption (MSI) reporting. The CPUC requires that wireline, wireless, and Voice over Internet Protocol (VoIP) providers in California submit reports to the CPUC when telecommunications carriers' service outages meet the following thresholds:

a) Duration of 30 minutes or more;
b) Affect 900,000 user minutes[11] for residential line outages, or 1,350 DS3[12] user minutes for DS3 outages or simplex events.[13]

Additionally, carriers must report all outages if they affect special facilities[14] and Public Safety Answering Points' (PSAPs) ability to handle 911 calls.[15]

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consecutive calendar months that did not have catastrophic events prior to the declared State of Emergency divided by three." GO 133-D, § 3.4 (b).

[9] Staff has determined that a traffic office is a functional equivalent to a central office.

[10] GO 133-D, § 1 (Definitions), p. 4.

[11] User minutes are the total number of outage minutes experienced by all users affected by an outage event, calculated by multiplying the number of users experiencing a service interruption by the duration of the event.

[12] A DS3 is a communications infrastructure component having a significant traffic carrying capacity and typically used by business corporations or government agencies. DS3 is the common denominator used throughout the communications industry as a measure of capacity.

[13] Simplex events are events when backup systems are enabled to maintain DS3 service during an outage.

A carrier must provide three (3) separate reports for each qualifying outage within the affected time-frame.[16] Carriers must submit Notification reports within 2 hours, Initial reports within 3 days, and Final reports within 30 days of an outage (that meets the reporting threshold). A carrier may also file a "Withdrawn" report at any time indicating that an outage did not meet any reporting thresholds.

These MSI reporting requirements provide the CPUC with timely data about major outages and allow staff to track the causes of outages as well as the actions carriers take responding to outages and restoring service. Staff also has greater situational awareness and insight into carriers' outage response practices. Additionally, MSI reports provide staff with information about the performance of a much broader range of communications services than traditional telephone service.

D. Overview of the Penalty Calculations and Procedures for the Five (5) Measures

General Order 133-D differs from GO 133-C by imposing fines for carriers that fail to meet the five service quality measures. Fines apply to facilities-based telephone corporations regulated under the Uniform Regulatory (URF) framework that possess a franchise or a Certificate of Public Convenience and Necessity (CPCN).[17] Carrier performance determines fines and applies only to TDM-based service.

A carrier begins incurring fines after reaching a "chronic failure status," defined as a failure to meet a Minimum Standard Reporting Level for three (3) consecutive months for the *Customer Trouble Report*, *Out of Service Repair Interval*, and *Answer Time* service quality measures. There are no fines assessed for the *Installation Interval* and *Installation Commitments*. A carrier must meet any service quality measure's Minimum Standard Reporting Level for two consecutive months in order to exit chronic failure status.

GO 133-D §§ 9.3, 9.4, and 9.5 provide the formulas and details for calculating carrier fines; these are adjusted depending on the relative size of the carrier determined by the total number of access lines reported in California. The fine scaling formula is as follows:

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[14] Per 47 Code of Federal Regulations 4.5, special offices and facilities are defined as entities enrolled in the Telecommunications Service Priority Program at priority Levels 1 and 2, which may include, but are not limited to, major military installations, key government facilities, nuclear power plants, and those airports listed as current primary (PR) airports in the Federal Aviation Administration's National Plan of Integrated Airports Systems.

[15] A PSAP is a call center responsible for answering calls to an emergency telephone number for police, fire, and medical emergency services.

[16] VoIP providers are required only to provide Notification and Final reports.

[17] The Commission grants CPCNs under Public Utilities (PU) Code §1001 and registrations under PU Code §1013.

(Carrier's Access Lines / Total CA Access Lines) = Carrier's Scaling Factor

(Carrier's Scaling Factor) X (Monthly Base Fine per Measure) X (Number of Months Measure Was Not Met) = $ Fine Amount

The minimum fine amounts for the *Customer Trouble Report*, *Out of Service Repair Interval*, and *Answer Time* service quality measures are based on the carrier's respective number of access lines served as of June 30 in a given year and are as follows:

Base Out of Service Fine, GO 133-D § 9.3		
	1 or 2 Consecutive Months	**3 or more Consecutive Months**
Fine Per Day	$0 per day	$25,000 per day
Days in a Month (for all months)	30 days	30 days
Base Fine per Month	$0	$750,000

Base Customer Trouble Report Fine, GO 133-D § 9.4					
	1 or 2 Consecutive Months	**3 to 5 Consecutive Months**	**6 to 8 Consecutive Months**	**9 to 11 Consecutive Months**	**12 or More Consecutive Months**
Fine Per Day	$0 per day	$500 per day	$1,000 per day	$1,500 per day	$2,000 per day
Days in a Month (for all months)	30 days	30 days	30 days	30 days	30 days
Base Fine per Month	$0	$15,000	$30,000	$45,000	$60,000

Base Answer Time Fine, GO 133-D § 9.5					
	1 or 2 Consecutive Months	**3 to 5 Consecutive Months**	**6 to 8 Consecutive Months**	**9 to 11 Consecutive Months**	**12 or More Consecutive Months**
Fine Per Day	$0 per day	$500 per day	$1,000 per day	$1,500 per day	$2,000 per day
Days in a Month (for all months)	30 days	30 days	30 days	30 days	30 days
Base Fine per Month	$0	$15,000	$30,000	$45,000	$60,000

For example, a carrier receives a scaling factor of 0.2 for operating 20% of the total number of access lines in California. If this carrier violates the *Out of Service Repair Interval* measure for 3 consecutive months, it receives a fine of $750,000 X 0.2, or $150,000, starting the third month and for any consecutive month it remains in violation.

General Order 133-D requires that carriers calculate their own fines annually and notify the CPUC by February 15 of the following year via a Tier 2 Advice Letter. The advice letter must contain detailed and specific explanations of the fine calculations.[18] A carrier may request a suspension of its fines if it agrees to invest twice or more of the amount of the fine in one or more project(s) that would measurably improve service quality within two years. Staff will prepare a resolution for the Commission's consideration to adopt or reject the payment of the fine(s) or a plan to invest in its network.

General Order 133-D provides tools for staff to investigate reported service quality deficiencies. A carrier failing to meet any of the five service quality standards for two or more consecutive months must submit a Corrective Action Plan (CAP) addressing its service failures. Staff may recommend that the CPUC initiate a formal investigation into carriers' performance if they fail to address deficiencies in meeting one or more service quality measure for six or more consecutive months. Staff also may investigate any reporting unit that fails to meet a service quality measure or any major service interruption.

E. Refunds and Other Requirements

GO 133-D specifies that in addition to the five service quality requirements, GRC ILECs and URF carriers must compile monthly and report quarterly the following:

a) Total monthly count of refunds given to customers;
b) Total monthly refunded amount.[19]

Carriers must utilize their existing tariffs or customer guidebook provisions for offering refunds. Absent tariffs, carriers must develop a refund policy to file with the CPUC through a Tier 1 Advice Letter.

General Order 133-D requires carriers to submit all reports within 45 days of the end of a reporting quarter. Carriers must maintain their quarterly service quality reports and all major service interruption reports for three years. The CPUC posts these quarterly reports of the carriers' performance for the five service quality measures on its website.

[18] "The minimum annual fine shall be no lower than the registration fee for a CPCN." General Order 133-D, § 9.6. At this time, the carrier registration fee is $500.
[19] Refund reporting was first required for 3rd Quarter 2016; however, some carriers requested extensions for this requirement. Refund analysis was not performed for this report since the data set was so small.

The GO requires all facilities-based telephone corporations that offer wireless services and operate under a CPCN or Wireless Identification Registration (WIR) to make service coverage maps available for customers through the carriers' website and store locations. These maps must show where wireless phone users can expect to receive sufficient signal strength to make and receive calls outdoors under normal operating conditions.

2. Differences Between GO 133-C and GO 133-D

General Order 133-D adopted revisions to the requirements of GO 133-C.[20]

A. Addition of Fines

The most significant change in GO 133-D is the adoption of automatic fines for carriers offering TDM service when violating the *Customer Trouble Report*, *Out of Service Repair Interval*, and *Answer Time* service quality measures.[21] GO 133-D's fine mechanism became effective January 1, 2017. Carriers annually calculate and submit fines to the CPUC via a Tier 2 Advice Letter by February 15 of the following year. The CPUC received the first fine filings under GO 133-D on February 15, 2018, and staff will assess the impact of these fines in addressing carriers' deficient service quality performance in future years.

B. Changes to Definitions

General Order 133-D included several important revisions to the list of definitions and terms of GO 133-C.

i. Customer

While GO 133-C equated "customers" with individual access lines, GO 133-D defines each customer as a separate account number for either a voice service subscription or as a bundle of services that includes a voice subscription and classified as either residential or small business (having 5 lines or fewer). This change captures the individual customer's out of service experience regardless of how many lines they have.[22]

ii. Facilities -Based Carrier

GO 133-D revised the former definition of "facilities-based carrier" as "a telephone corporation or interconnected VoIP provider that owns or controls facilities used to provide communication

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[20] See D.16-08-021 §§ 2.2 and 2.3 for a complete discussion of all changes implemented by GO 133-D to the requirements of GO 133-C.
[21] Refer to Section II (B) of this report for detailed information about fines.
[22] *Decision 16-08-021, to Rulemaking 11-12-001, Order Instituting Rulemaking to Evaluate Telecommunications Corporations Service Quality Performance and Consider Modification to Service Quality Rules.* (D.16-08-021 adopted August 18, 2016) p.5.

for compensation, including the line to the end-user's location."[23] This revised definition is technology-neutral and based on providing a connection from the service provider's facilities to the end-user rather than the technology utilized (i.e. coaxial cable, fiber optics, or wireless).[24]

GO 133-D's five service quality measures and reporting requirements apply to TDM-based service defined as traditional telephone service. Decision 16-08-021 noted that TDM is "a technique that has been used for years to provide plain old telephone service – the service to which the previous GO 133-C rules apply."[25] Therefore, the expanded definition of facilities-based carrier does not affect the applicability of the GO's five service quality measures.

iii. Interconnected VoIP Provider

Under GO 133-D, an interconnected VoIP provider is a provider that uses internet protocol or a successor protocol to enable real-time, two-way, voice communication. The phrase "or a successor protocol" makes this definition technologically neutral, while the Federal Communications Commission's (FCC) definition only refers to internet protocol.[26] The GO 133-D definition will provide the Commission greater flexibility in addressing VoIP and IP-based services as technologies change.[27]

iv. Line

GO 133-C defined "line" as "an access line (hardwire and/or channel) which provides dial tone and runs from the local central office to the subscriber's premises." GO 133-D expanded this definition to include that "a channel can be provided with or without wires." This addresses the changes in communications technologies without limitation of specific types of central offices.[28]

C. Applicability of Major Service Interruption Reporting

General Order 133-C, § 4, adopted rules for major service interruption reporting. However, it did not require the participation of interconnected VoIP carriers. In D.16-08-021, the Commission reasoned that interconnected VoIP service has become more prevalent and is marketed as a substitute for traditional telephone service. As a result, interconnected VoIP users have the same need for reliable service and access to emergency services.[29] GO 133-D now includes all types of carriers:

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[23] GO 133-C defined a facilities-based carrier as "a local exchange carrier that uses facilities it owns, operates, manages, or controls to provide service, including partially or totally owning, operating, managing or controlling such facilities."
[24] D.16-08-021 at p. 6.
[25] Id. at p. 7-8.
[26] 47 C.F.R. § 9.3.
[27] D.16-08-021 at p. 7.
[28] Ibid.
[29] Id. at p.12.

a) Telephone corporations granted either a franchise or a CPCN pursuant to PU Code § 1001;

b) Telephone corporations registered under PU Code § 1013;

c) Telephone corporations registered pursuant to the WIR process; and

d) Any entity subject to PU Code § 285.[30]

3. Service Quality Data Analysis

A. Reporting Carriers and Line Counts

i. Number of Reporting Carriers

For the Years 2014, 2015, and 2016, staff received filings from 28, 24, and 24 reporting carriers, respectively, classified by operating authority type, as follows:

- URF ILEC: incumbent local exchange carriers (ILECs) granted CPCNs and regulated under the uniform regulatory framework (URF).[31]
- URF CLEC: competitive local exchange carriers (CLECs) operating in territories formerly reserved for the URF ILECs and regulated under the uniform regulatory framework.[32]
- GRC ILEC: general rate case (GRC) incumbent local exchange carriers possessing CPCNs and operating under rate of return regulation.[33]

A break-down of the number of reporting carriers follows:[34]

Carrier Type	2014	2015	2016
URF ILEC	5	5	5
URF CLEC	9	6	6
GRC ILEC	14	13	13
Total	**28**	**24**	**24**

[30] PU Code 285 definition: http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PUC&sectionNum=285.

[31] D.06-08-030 established the Commission's uniform regulatory framework (URF) and granted URF ILECs full pricing flexibility.

[32] Per D.95-07-054, URF CLECs provide service in former URF ILEC territories in competition with ILECs and must obtain a CPCN in order to operate.

[33] The Commission designates GRC ILECs as Carriers of Last Resort in their territories per D.96-10-066 and regulates them under GO 96-B.

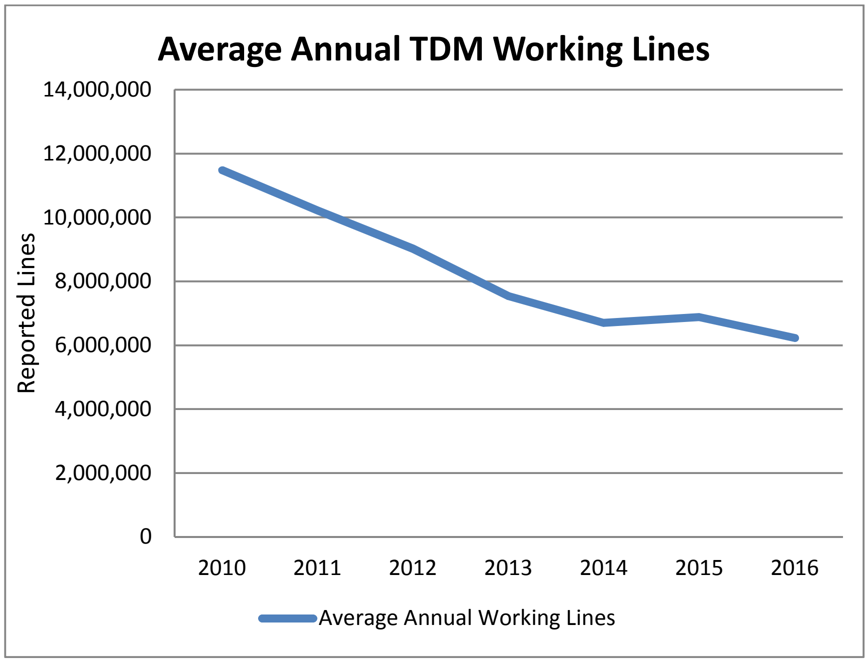
[34] In 2015, Frontier West Coast, a GRC ILEC, began reporting its data combined with Frontier Citizens, an URF ILEC, resulting in one less reporting GRC ILEC. The number of URF CLECs decreased from 2014-2016 because the number of working lines for three of the CLECs fell below the minimum reporting threshold of 5,000 lines.

ii. Decrease in Reported Lines

Carriers report their monthly total number of working lines per § 3.3 of GO 133-D. Staff summed all the carriers' reported line counts for 2010-2016 to analyze the statewide change in lines over a longer period of time.

The total number of working lines reported annually for 2010 through 2016 is as follows:[35]

Year	Average Annual TDM Working Lines
2010	11,477,913
2011	10,215,128
2012	9,020,404
2013	7,537,758
2014	6,696,239
2015	6,880,572
2016	6,229,123



From 2014 to 2016, carriers reported a decrease of 467,116 TDM working lines, which is 6.96 percent. The reported average annual line counts and percentages of change follow:

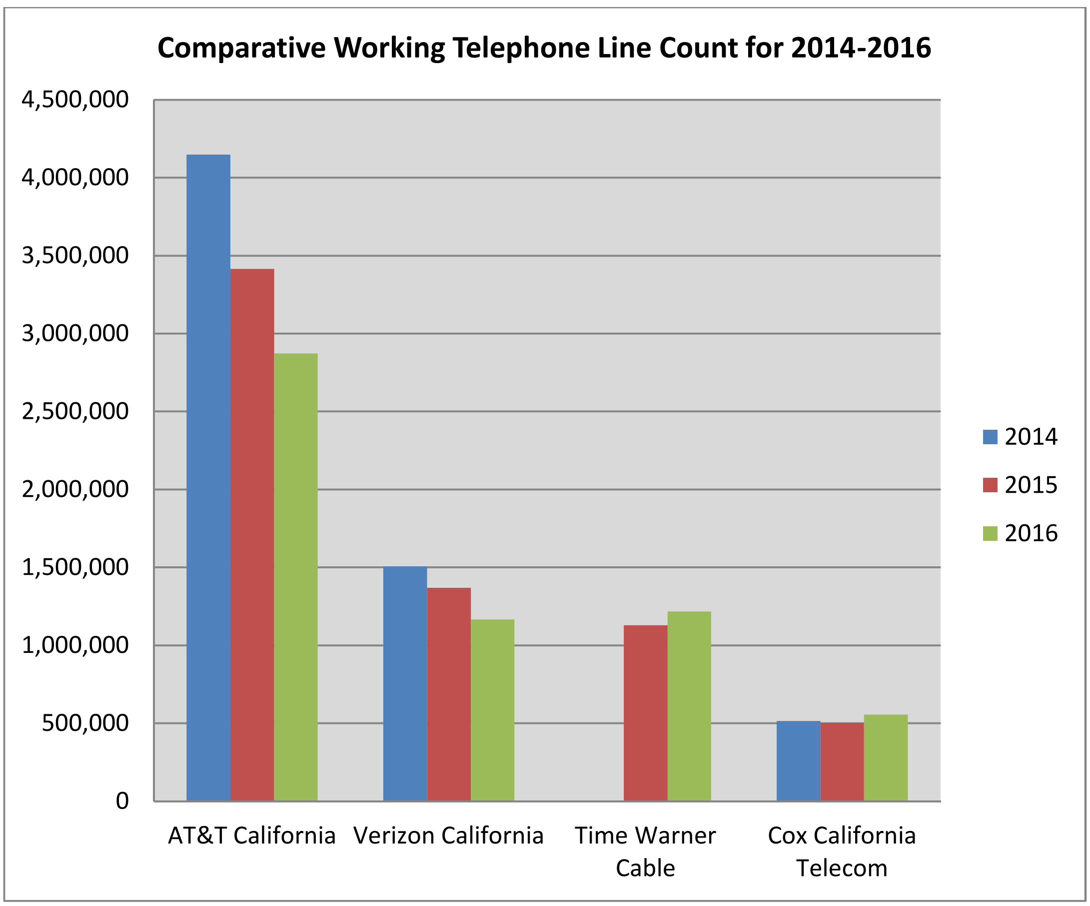
Change in Average Annual TDM Working Lines, 2014-2016

Year	2014	2015	2016
Average Annual TDM Working Lines	6,696,239	6,880,572	6,229,123
Difference from Previous Year	-11.20%	+2.75%	-9.47%

[35] Values are annual averages derived from quarterly working line totals reported by carriers according to § 3.3 of GO 133-C and GO 133-D.

Staff analyzed the reported line counts for the four largest carriers in California: AT&T California (U-1001-C), Frontier formerly Verizon California (U-1002-C), Time Warner Cable (U-6674-C), and Cox California Telecom (U-5684-C). Together, the companies operated 93.3% of the total working lines in California from 2014-2016. AT&T California and Verizon California[36] reported significant decreases in their average annual line counts between 2014 and 2016: 1,276,414 and 342,193 fewer lines, respectively. Time Warner Cable only began filing service quality data in 2015; this largely explains the overall increase in the total number of reported working lines when compared to the previous year. Cox California Telecom's working line count remained relatively static from 2014 to 2016.

The following graph shows the four carriers' average annual reported line counts based on TDM service.



Appendix A lists the California-wide annual line counts for URF ILECs, URF CLECs, and GRC ILECs.

[36] Pursuant to D.15-12-005, Verizon California is now Frontier California.

Customers moving to other technologies not reportable under GO 133 can be a reason for the decrease in reported working lines. The GO requires line count reporting for TDM, but not cellular phones, VoIP, or other platforms. Additionally, customers may have moved to carriers with fewer than 5,000 lines and, therefore, not required to file service quality data.[37]

B. Results of Five (5) Performance Measures

Staff annualized the monthly GO 133-C and GO 133-D data reported by carriers in order to provide a year-by-year comparison and a clearer picture of performance over a longer period.[38]

i. Installation Interval

All GRC ILECs met the minimum standard for the *Installation Interval* measure. As the following graph shows, the GRC ILECs' average installation times ranged from 0.22 to 4.07 days for installing service. The URF ILECs and URF CLECs are exempt from reporting data for this measure. After 2015, Frontier West Coast (U-1020-C) and Frontier Citizens (U-1024-C) reported combined data, so Frontier West Coast shows a dash (--).

Installation Interval (Days) - Annual Averages, 2014-2016, must be < 5 days

Type	Company Name	Utility Number	2014	2015	2016
GRC ILECS	Calaveras Telephone	U-1004-C	1.18	2.21	1.46
	Cal-Ore Telephone	U-1006-C	2.39	2.15	1.96
	Frontier West Coast	U-1020-C	2.22	2.31	--
	Ducor Telephone	U-1007-C	1.93	0.22	2.4
	Foresthill Telephone	U-1009-C	1.49	1.5	1.54
	Happy Valley Telephone	U-1010-C	2.66	2.74	2.8
	Hornitos Telephone	U-1011-C	4.07	2.89	2.72
	Kerman Telephone	U-1012-C	3.52	2.86	1.95
	Pinnacles Telephone	U-1013-C	0.52	0.71	0.45
	Ponderosa Telephone	U-1014-C	2.36	2.51	2.27
	Sierra Telephone	U-1016-C	1.08	1	0.96
	Siskiyou Telephone	U-1017-C	0.93	0.91	0.74
	Volcano Telephone	U-1019-C	1.02	1.3	1.44
	Winterhaven Telephone	U-1021-C	1.96	2.18	3.17

[37] As of April 2018, at least 24 carriers are not required to submit service quality data because they have less than 5,000 lines.

[38] Refer to Appendix B for an annualized summary of all reporting carriers' performance per the 5 service quality measures for 2014-2016.

ii. Installation Commitments

All GRC ILECs complied with the minimum standard for the *Installation Commitments* measure. As the following graph shows, the carriers ranged from 97% to 100% of installation commitments met. The URF ILECs and URF CLECs are exempt from reporting this measure. After 2015, Frontier West Coast (U-1020-C) and Frontier Citizens (U-1024-C) reported combined data, so Frontier West Coast shows a dash (--).

Installation Commitments - Annual Averages, 2014-2016, 95% must be met

Type	Company Name	Utility Number	2014	2015	2016
GRC ILECS	Calaveras Telephone	U-1004-C	100%	100%	100%
	Cal-Ore Telephone	U-1006-C	97%	99%	98%
	Frontier West Coast	U-1020-C	98%	98%	--
	Ducor Telephone	U-1007-C	100%	100%	100%
	Foresthill Telephone	U-1009-C	100%	100%	100%
	Happy Valley Telephone	U-1010-C	99%	100%	100%
	Hornitos Telephone	U-1011-C	96%	99%	100%
	Kerman Telephone	U-1012-C	99%	100%	98%
	Pinnacles Telephone	U-1013-C	100%	100%	100%
	Ponderosa Telephone	U-1014-C	100%	100%	100%
	Sierra Telephone	U-1016-C	100%	100%	99%
	Siskiyou Telephone	U-1017-C	100%	100%	100%
	Volcano Telephone	U-1019-C	100%	100%	100%
	Winterhaven Telephone	U-1021-C	100%	100%	100%

iii. Customer Trouble Report

All carriers complied with the minimum standard for the *Customer Trouble Report* measure. All carriers reported fewer than 6, 8, or 10 trouble reports per 100 working lines (i.e. less than 6%, 8%, or 10%), relevant to their reporting unit size. The data below shows carriers received between 0.13 to 4.82 reports per 100 working lines from 2014-2016. Carriers with a dash did not submit *Customer Trouble Report* data because they did not meet the minimum GO 133-D reporting requirements in those particular years.

Customer Trouble Report - Annual Averages, 2014-2016, all carriers met standard

Type	Company Name	Utility Number	2014	2015	2016
URF ILEC	AT&T California	U-1001-C	1.45%	1.39%	1.50%
	Frontier Citizens	U-1024-C	0.88%	0.86%	0.78%
	Frontier Southwest	U-1026-C	1.15%	0.97%	1%
	Consolidated	U-1015-C	1.28%	0.77%	0.85%
	Verizon California	U-1002-C	0.98%	0.90%	0.77%
URF CLEC	ACN Communications	U-6342-C	1.08%	0.72%	1.12%
	Advanced Telecom	U-6083-C	0.65%	--	--
	Astound Broadband	U-6184-C	2.27%	--	--
	AT&T Corporation	U-5002-C	1.52%	1.60%	2.45%
	Time Warner Cable	U-6674-C	--	--	0.51%
	Cox California	U-5684-C	2.30%	1.70%	1.70%
	Electric Lightwave	U-5377-C	0.92%	--	--
	Paetec Communications	U-6097-C	0.94%	0.96%	0.98%
	Sonic Telecom	U-7002-C	0.93%	0.13%	0.34%
	Telscape Communications	U-6589-C	4.40%	3.19%	--
GRC ILECS	Calaveras Telephone	U-1004-C	0.43%	0.29%	0.19%
	Cal-Ore Telephone	U-1006-C	1.67%	1.94%	1.82%
	Frontier West Coast	U-1020-C	0.72%	0.68%	--
	Ducor Telephone	U-1007-C	0.86%	0.89%	0.13%
	Foresthill Telephone	U-1009-C	0.99%	1.06%	1.14%
	Happy Valley Telephone	U-1010-C	1.33%	3.05%	1.11%
	Hornitos Telephone	U-1011-C	2.53%	4.82%	3.39%
	Kerman Telephone	U-1012-C	0.90%	0.76%	1.54%
	Pinnacles Telephone	U-1013-C	0.16%	0.50%	0.24%
	Ponderosa Telephone	U-1014-C	0.79%	0.68%	1.28%
	Sierra Telephone	U-1016-C	0.58%	0.65%	0.82%
	Siskiyou Telephone	U-1017-C	0.31%	0.26%	0.25%
	Volcano Telephone	U-1019-C	0.54%	0.30%	0.29%
	Winterhaven Telephone	U-1021-C	1.99%	1.89%	1.82%

iv. Out of Service Repair Intervals

The *Out of Service Repair Interval* measure requires carriers to restore a minimum 90% of service outages within 24 hours. This is a significant service quality measure because it tracks the time that consumers have no telephone service and are unable to contact 911 or emergency services. The data show that the largest carriers demonstrated the worst performance. Three of the four largest carriers, representing 93.3% of California's land-line customers, consistently failed to meet the *Out of Service Repair Interval* measure for the years 2014-2016.

URF ILECS

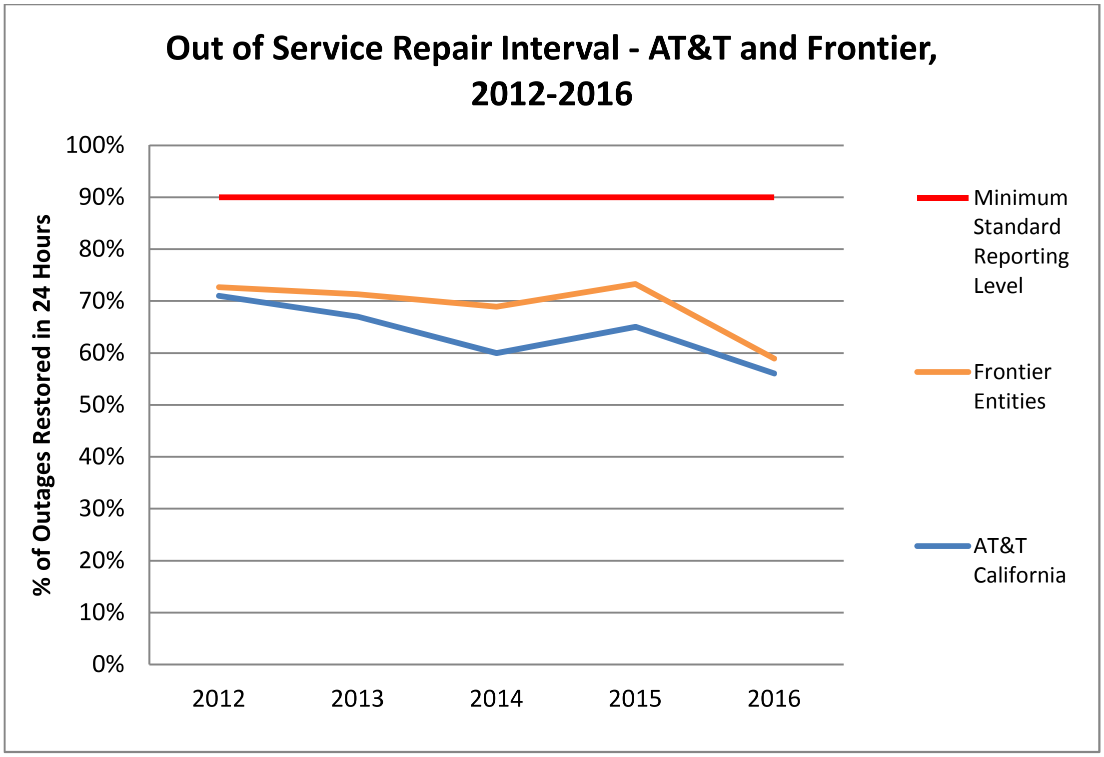
The URF ILECS largely failed to meet the minimum 90% *Out of Service Repair Interval* standard from 2014-2016. Consolidated Telephone successfully met this measure in 2014 by restoring an average of 93% of outages within 24 hours and nearly met this standard in 2015 and 2016 (with 86% and 87% respectively). In contrast, AT&T California's and Frontier/Verizon California's performance fell far below the minimum standard. AT&T California's performance fell short by 30%, 25%, and 34% for 2014, 2015, and 2016, respectively, while Frontier/Verizon California's performance fell short by 32%, 27%, and 33% for these years.

Out of Service Repair Interval - Annual Averages, 2014-2016, Must Repair 90% in 24 hours

URF ILECs	Utility Number	2014 Performance	2015 Performance	2016 Performance
AT&T California	U-1001-C	60%	65%	56%
Frontier Citizens	U-1024-C	82%	77%	83%
Frontier Southwest	U-1026-C	83%	88%	84%
Consolidated Telephone	U-1015-C	93%	86%	87%
Frontier/ Verizon California	U-1002-C	68%	73%	57%

The out of service performance reported by the two largest carriers in California has remained below the minimum 90% standard during and prior to the observed time period. The graph below indicates AT&T and Frontier annualized *Out of Service Repair Interval* results for 2012-2016.[39] Both carriers' performance fell approximately 25% short of meeting the Minimum Standard Reporting Level over this time period.

[39] Frontier's performance is expressed through a weighted average for all three registered Frontier entities scaled by their reported line counts. As of December 31, 2016, these include: Frontier Citizens (U-1024-C), Frontier of the Southwest (U-1026-C), and Verizon California (U-1002-C), which Frontier acquired on April 1, 2016.



URF CLECs

The URF CLECs largely did not meet the minimum *Out of Service Repair Interval* standard for 2014-2016. ACN Communications restored only 5%, 3%, and 5% of their outages within 24 hours for 2014, 2015, and 2016 respectively. Paetec Communications, by contrast, met the minimum standard for all three years. Cox California, the URF CLEC with the highest number of reported working lines, met the minimum standard in 2014 but fell short by only 1% and 2% for the next two years.

Some URF CLECs did not meet the minimum requirement of having 5,000 or more customers, and therefore were not required to submit *Out of Service Repair Interval* data.[40] A dash (--) shows for years in which carriers did not report.

[40] There are four CLECs who reported service quality data in 2014, but stopped by the end of 2016 because their number of access lines fell below the minimum of 5,000.

Out of Service Repair Interval – URF CLECs, Annual Averages, 2014-2016

URF CLECs	Utility Number	2014 Performance	2015 Performance	2016 Performance
ACN Communications	U-6342-C	5%	3%	5%
Advanced Telecom	U-6083-C	70%	--	--
Astound Broadband	U-6184-C	94%	--	--
AT&T Corporation	U-5002-C	76%	72%	75%
Time Warner Cable	U-6674-C	--	--	91%
Cox California	U-5684-C	92%	89%	88%
Electric Lightwave	U-5377-C	73%	--	--
Paetec Communications	U-6097-C	94%	95%	94%
Sonic Telecom	U-7002-C	59%	43%	56%
Telscape Communications	U-6589-C	40%	25%	--

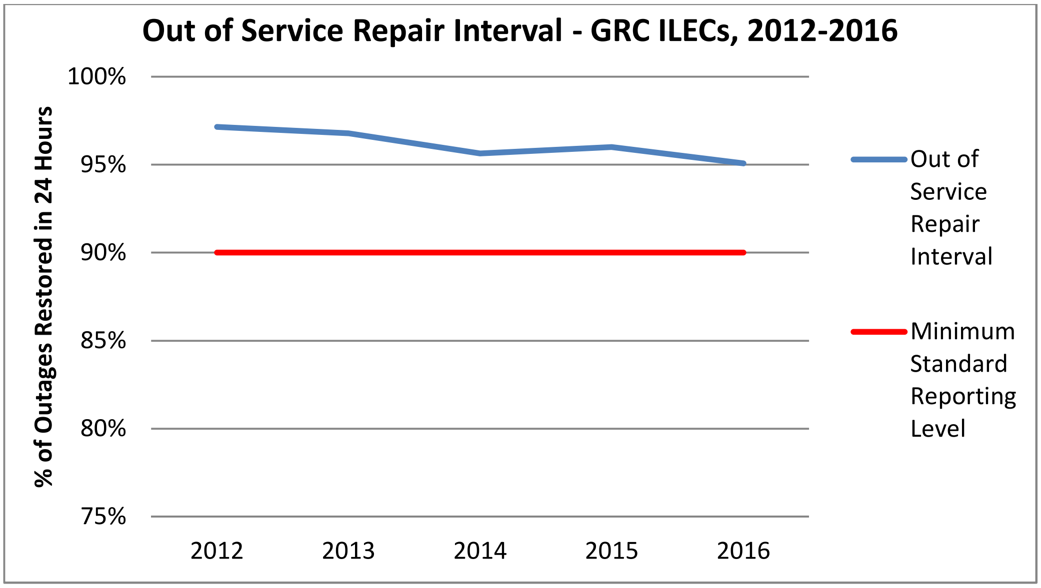
GRC ILECs

Twelve GRC ILECs consistently met the *Out of the Service Repair Interval* threshold for 2014-2016. Frontier West Coast fell short by 7% in 2014 and 6% in 2015. Volcano fell short by 1% and 24% in 2015 and 2016. After 2015, Frontier West Coast (U-1020-C) and Frontier Citizens (U-1024-C) combined their reported data, so Frontier West Coast shows a dash (--) in 2016.

Out of Service Repair Interval – GRC ILECs, Annual Averages, 2014-2016

GRC ILECs	Utility Number	2014 Performance	2015 Performance	2016 Performance
Calaveras Telephone	U-1004-C	100%	100%	100%
Cal-Ore Telephone	U-1006-C	95%	95%	98%
Frontier West Coast	U-1020-C	83%	84%	--
Ducor Telephone	U-1007-C	95%	98%	99%
Foresthill Telephone	U-1009-C	98%	99%	95%
Happy Valley Telephone	U-1010-C	94%	95%	92%
Hornitos Telephone	U-1011-C	95%	94%	92%
Kerman Telephone	U-1012-C	99%	97%	97%
Pinnacles Telephone	U-1013-C	100%	100%	100%
Ponderosa Telephone	U-1014-C	93%	97%	91%
Sierra Telephone	U-1016-C	98%	98%	98%
Siskiyou Telephone	U-1017-C	98%	100%	100%
Volcano Telephone	U-1019-C	95%	89%	76%
Winterhaven Telephone	U-1021-C	96%	98%	98%

The following graph shows the average *Out of Service Repair Interval* for all GRC ILECs from 2012-2016.[41] The data indicates that although their average performance has decreased by approximately 2.5% over the last six years, it remains consistently above the minimum standard.



v. Answer Time

<u>URF ILECs</u>

The URF ILECs reported mixed results for the *Answer Time* measurement which requires a live agent to answer 80% of customer calls within 60 seconds. AT&T California's performance improved from 65% to 82% between 2015 and 2016, while the *Answer Time* results for Frontier Citizens and Frontier of the Southwest declined from 74% to 70% over the three years. Verizon California had the lowest performance of the URF ILECs in the observed years, with only 56% of their calls in 2016 answered within 60 seconds.

Answer Time – URF ILECs, Annual Averages, 2014-2016, 80% must be answered in 60 seconds

URF ILECs	Utility Number	2014 Performance	2015 Performance	2016 Performance
AT&T California	U-1001-C	79%	65%	82%
Frontier Citizens	U-1024-C	74%	77%	70%
Frontier Southwest	U-1026-C	74%	88%	70%
SureWest Telephone	U-1015-C	89%	86%	71%
Verizon California	U-1002-C	64%	73%	56%

[41] The results are not weighted.

URF CLECs and GRC ILECs

The Commission did not receive sufficient data from the URF CLECs and GRC ILECs to make definitive conclusions about these carriers' overall performance in meeting the minimum *Answer Time* standard. Carriers are only required to report *Answer Time* data for their traffic offices serving 10,000 or more lines. Some carriers also voluntarily opted to report answer time data even though they are not required to do so.

The data indicates mixed performance from the carriers. URF CLECs (with the exception of AT&T Corporation and Cox California) did not meet the minimum standard in 2014 and 2015. All reporting GRC ILECs met the minimum standard in 2015 and 2016. The URF CLECs and GRC ILECs showing a dash (--) did not report data for this measure because their traffic offices served less than 10,000 lines.[42]

Answer Time – URF CLECs, Annual Averages, 2014-2016, 80% must be answered in 60 seconds

URF CLECs	Utility Number	2014 Performance	2015 Performance	2016 Performance
ACN Communications	U-6342-C	63%	60%	64%
Advanced Telecom	U-6083-C	--	--	--
Astound Broadband	U-6184-C	48%	--	--
AT&T Corporation	U-5002-C	80%	71%	--
Time Warner Cable	U-6674-C	--	--	94%
Cox California Telecom	U-5684-C	--	86%	--
Electric Lightwave	U-5377-C	--	--	--
Paetec Communications	U-6097-C	64%	56%	--
Sonic Telecom	U-7002-C	62%	78%	82%
Telscape Communications	U-6589-C	61%	60%	--

[42] Staff determined that traffic offices are equivalent to central offices.

Answer Time – GRC ILECs, Annual Averages from 2014-2016, Must Answer 80% in 60 seconds

GRC ILECs	Utility Number	2014 Performance	2015 Performance	2016 Performance
Calaveras Telephone	U-1004-C	--	--	--
Cal-Ore Telephone	U-1006-C	--	--	--
Frontier West Coast	U-1020-C	74%	--	--
Ducor Telephone	U-1007-C	--	--	--
Foresthill Telephone	U-1009-C	--	--	98%
Happy Valley Telephone	U-1010-C	75%	85%	--
Hornitos Telephone	U-1011-C	75%	85%	--
Kerman Telephone	U-1012-C	--	--	99%
Pinnacles Telephone	U-1013-C	--	--	--
Ponderosa Telephone	U-1014-C	--	--	--
Sierra Telephone	U-1016-C	91%	86%	88%
Siskiyou Telephone	U-1017-C	--	--	--
Volcano Telephone	U-1019-C	92%	90%	83%
Winterhaven Telephone	U-1021-C	76%	89%	--

vi. Summary of Compliance with the Five (5) Measures

Overall, the 2014-2016 service quality data indicates all reporting carriers are complying with the minimum standards for the *Installation Interval*, *Installation Commitments*, and *Customer Trouble Report* measures. This indicates that carriers are generally completing most of their service orders within an adequate timeframe.

The URF ILECs and URF CLECs mostly failed to meet the *Out of Service Repair Interval* measure. AT&T California and Frontier Communications, representing the majority of reportable telephone lines in California, failed to meet the minimum out of service standard by a wide margin in 2014-2016. URF ILECs and CLECs in general are not addressing service outages as required by GO 133-D and, as a result, should work to improve their outage restoral time more quickly in order to meet the Commission's service quality standards.

vii. Scope of Data

The GO 133-D five service quality standards, minimum reporting requirements, and the automatic fine mechanism apply only to TDM-based voice services.[43] GO 133-D specifies that TDM refers only to "traditional telephone service." [44] Decision 16-08-021, which adopted GO

[43] GO 133-D, § 2.

[44] Id. at § 1.3.

133-D, specified that TDM is a technology used to provide “plain old telephone service” (POTS).[45]

According to GO 133-D, many California consumers are transitioning to other technologies for their voice service, with the majority of working lines not classified as TDM. Thus, carriers’ service quality data provides the Commission with a narrow scope of information about the overall quality of communications service in California.

4. Frontier-Verizon Merger and GO-133 Compliance

The Commission adopted D.15-12-005 on December 3, 2015, with the acquisition transaction closing on April 1, 2016. On April 1, 2016, Verizon California transferred 2.2 million customers to Frontier Communications through the merger agreement approved by the Commission in D.15-12-005.[46] Ordering Paragraph 5 of this Decision ordered Verizon to demonstrate its compliance with the GO 133-C *Out of Service Repair Interval* measure prior to the merger taking effect:

> “In the interval between the issuance of this decision and the closing of the Transaction, Verizon California Inc., shall fully comply with GO 133-C and complete a minimum of 90 percent of out of service repairs within 24 hours of receiving notice of the out of service condition.”

The *Out of Service Repair Interval* data reported by the transferred assets of Verizon California (U-1002-C) during this time period follows:

Verizon California - Out of Service Repair Interval by Month

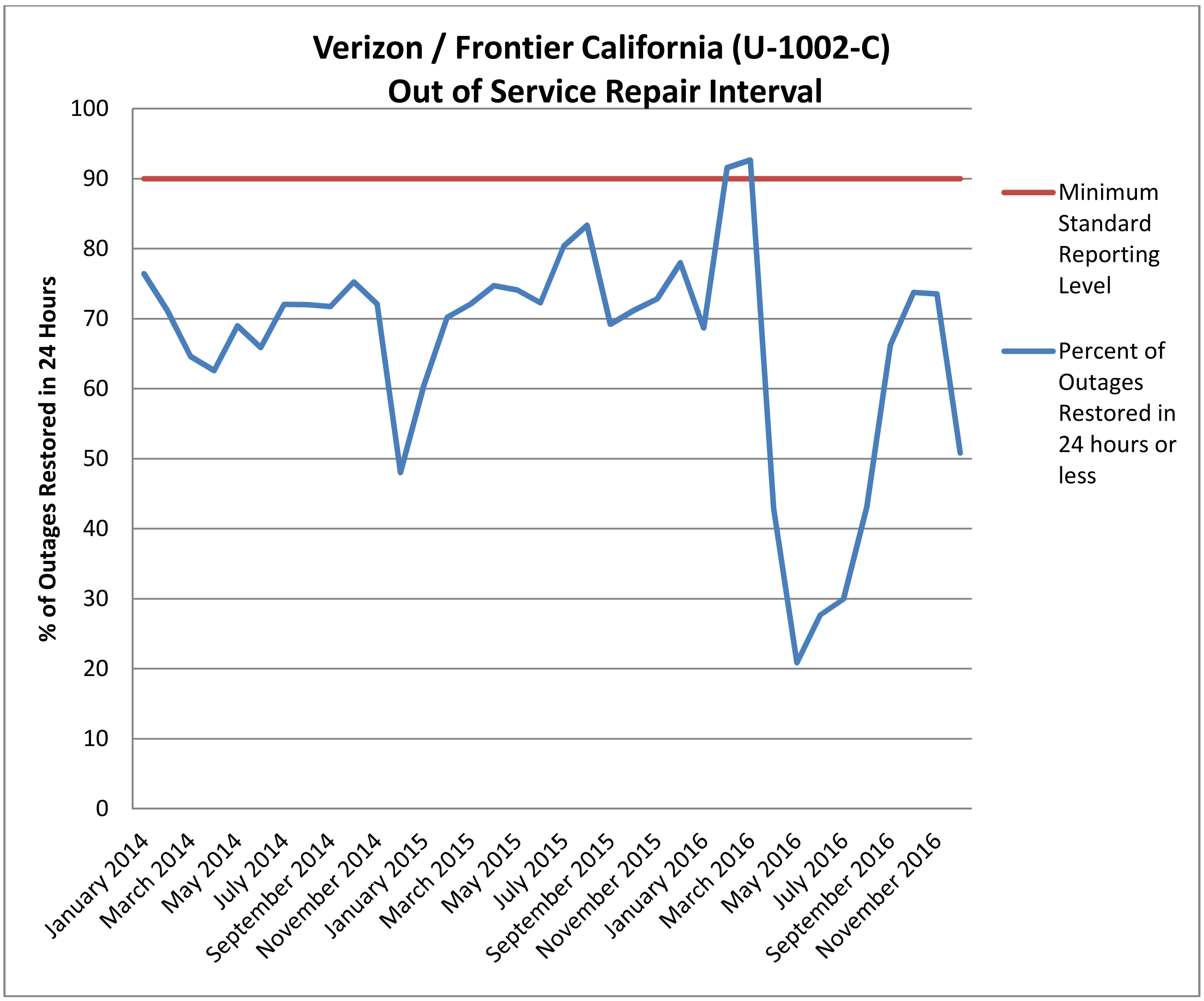
Month	Verizon – Out of Service Repair Interval
December 2015	**78.00%**
January 2016	**68.68%**
February 2016	**91.58%**
March 2016	**92.64%**

[45] D.16-08-021, § 2.1.5 (Time Division Multiplexing (TDM)), at p.7.

[46] On March 18, 2015, Frontier Communications Corporation (Frontier), Frontier Communications of America, Inc. (Frontier America, U-5429-C), Verizon California Inc. (Verizon California, U-1002-C), Verizon Long Distance, LLC. (Verizon LD, U-5732-C), and Newco West Holdings LLC., (collectively, Joint Applicants) filed Application 15-03-005. The application requested approval of the sale and transfer of Verizon California, certain assets held by Verizon California, and Verizon Long Distance’s customer accounts in Verizon California’s service territory to Frontier. The Commission granted the request in Decision D.15-12-005 on December 3, 2015.

Verizon California met the minimum out of service standard for February and March 2016, as required by Ordering Paragraph 5 of D.15-12-005, by resolving more than 90% of outages within 24 hours in those two months.

Verizon and Frontier's performance during this specific time period, however, is not representative of their out of service performance over a wider range of time. The following graph shows that Verizon complied with GO 133-C's *Out of Service Repair Interval* standard as ordered before the transaction closed. Frontier, however, did not maintain this level of performance, with the reported results dropping immediately after March 2016 to levels lower than those reported prior to the transaction.[47] The results from January 2014 through December 2016 are as follows:



[47] Refer to Appendix B for the monthly reported percentages for the *Out of Service Repair Interval*.

Ordering Paragraph 9 of D.15-12-005 imposed the following requirements:

> "As soon as possible, but in any case not later than 24 months from the closing of the Transaction, Frontier Communications Corporation shall: (a) bring overall network performance in its California service territory including the service territory acquired from Verizon California, Inc., in the Transaction up to General Order 133-C standards for out-of-service and major outage intervals."

While Ordering Paragraph 5 refers to the assets belonging to Verizon California, Inc. prior to the transaction, Ordering Paragraph 9 refers to the overall performance of Frontier Communications Corporation post-transaction, including both its original and newly acquired assets.

With the Verizon California acquisition, Frontier Communications Corporation began operating and submitting GO 133 required service quality data for each of its three California telephone corporations:

- Frontier California, Inc. (U-1002-C)
- Citizens Communications Company of California, Inc. d/b/a Frontier Communications of California (U-1024-C)
- Frontier Communications of the Southwest Inc. (U-1026-C).

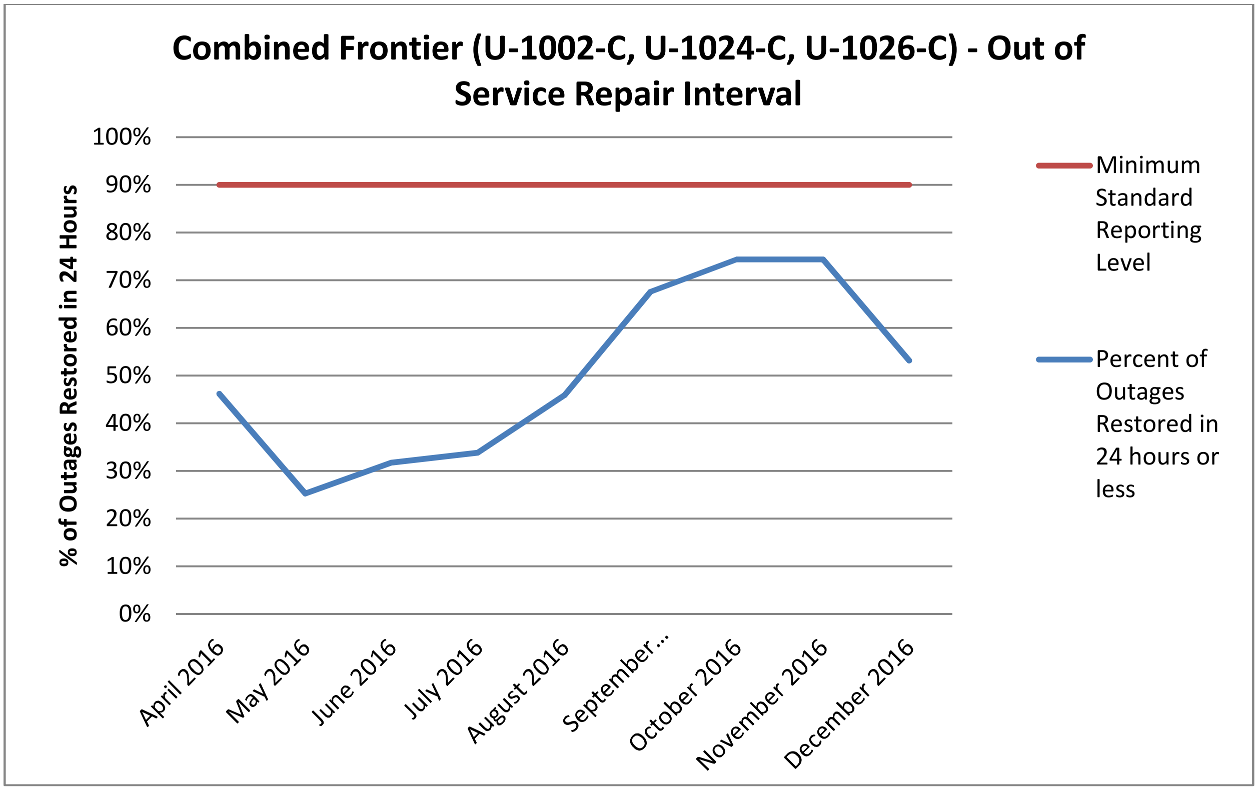
Staff evaluated Frontier's overall compliance with the GO 133-C *Out of Service Repair Interval* measure using the three companies' combined performance and calculated a weighted average scaled by reported line counts for each month.[48] Staff analyzed data from April 2016 through December 2016 and the results are as follows:

Frontier Entities – Out of Service Repair Interval by Month

Month	Frontier - Combined Out of Service Repair Interval
April 2016	**46.16%**
May 2016	**25.23%**
June 2016	**31.79%**
July 2016	**33.82%**
August 2016	**45.84%**
September 2016	**67.60%**
October 2016	**74.35%**
November 2016	**74.36%**
December 2016	**53.17%**

[48] Refer to Appendix D for the calculation methodology.

Frontier did not meet the minimum 90% standard for the *Out of Service Repair Interval* measure for the nine (9) months immediately following the transaction and has yet to comply with Ordering Paragraph 9 of the Decision.[49] Ordering Paragraph 9 provides Frontier with twenty-four (24) months to bring its performance level up to GO 133 standards. A graph of Frontier's performance, relative to the minimum standard, is as follows:



5. Conclusions and Recommendations

This report presents a baseline of service quality before the implementation of penalties, fines, and other changes in GO 133-D. As such, future evaluation of post-2016 service quality data should show the effectiveness of GO 133-D changes to improve carrier service quality performance.

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[49] Ordering Paragraph 9 required that Frontier meet GO 133-C's standards for "major outage intervals." GO 133-D requires carriers to report Major Service Interruptions; however, the measurement does not include performance standards.

From its analysis, staff identifies the following conclusions and recommendations and suggests considering these in a rulemaking together with the results of the Commission-ordered network examination of Frontier California and AT&T California currently underway.[50]

- Staff analyzed the service quality results reported by California's wireline telecommunications carriers for the Years 2014 through 2016, in accordance with GO 133-C and GO 133-D, and found that:
    - All reporting carriers complied with the *Installation Interval*, *Installation Commitments*, and *Customer Trouble Report* standards.
    - URF ILECs and URF CLECs failed to comply with the *Out of Service Repair Interval* standard as a result of substandard performance in addressing outages and restoring their customers' telephone service.
    - GRC ILECs largely complied with the *Out of Service Repair Interval* standard.

- Staff will continue to examine carriers' *Out of Service Repair Interval* performance, pursuant to GO 133-D § 7, as well as hold regular meetings with deficient carriers to address their service quality performance. Staff recommends revising the GO 133-D corrective action plans to require that carriers include project plans and timelines for improving their performance in all counties with out of service repair rates under 90%.

- While the URF ILECs largely did not comply with meeting the GO 133-D *Answer Time* standard from 2014 through 2016, staff did not receive *Answer Time* data from all URF CLECs and GRC ILECs because many carriers do not serve the minimum 10,000 lines required for reporting. Staff recommends reducing the minimum 10,000-line threshold so that more carriers report their *Answer Time* data. If more carriers report for this measure, staff will be able to analyze carrier service quality data related to customer calls and complaints more thoroughly.

- The Commission approved Frontier Communications Corporation's purchase of Verizon California's assets in D.15-12-005 and required both companies to improve their *Out of Service Repair Interval* performance to meet the minimum standard within two years. Verizon California, now Frontier California, complied before the effective date of the transaction. However, immediately after, Frontier California's performance dropped below the minimum 90% *Out of Service Repair Interval* and has not met the minimum to date. Staff will continue to evaluate Frontier's service quality reporting to comply with Ordering Paragraph 9 within the two-year period and recommends viewing those results

[50] In D.13-02-023, the Commission ordered an examination of the condition of Frontier California (formerly Verizon California, Inc.) and AT&T California's network infrastructure to ensure that facilities and company practices support a level of service consistent with public safety and customer needs. See also D.15-08-041.

in conjunction with the Commission-ordered network examination of Frontier and AT&T's facilities and infrastructure.

- GO 133-D's five service quality reporting standards are limited in that they only apply to TDM-based services, as well as to carriers serving 5,000 or more lines for the *Customer Trouble Report* and *Out of Service Repair Interval* standards and 10,000 or more lines for the *Answer Time* standard. Staff is unable to effectively analyze the overall scope of communications service quality in California because there are a large number of carriers who are not TDM-based and/or have less than the minimum number of lines required for reporting and, therefore, are outside the jurisdiction of GO 133-D reporting parameters. Staff recommends modifying the five service quality measures to include all types of voice platforms (not just TDM) and to lower the minimum number of lines required for reporting. These modifications will help provide a more comprehensive picture of communications service providers' quality of service as well as better reflect consumers' need for safe and reliable services in California.

6. Appendices

A. Carrier Average Annual Working Lines, 2014-2016

Type	Company Name	Utility Number	2014		2015		2016	
			Avg. Working Lines	%	Avg. Working Lines	%	Avg. Working Lines	%
URF ILECS	AT&T California	U-1001-C	4,149,022	62.00%	3,415,043	49.63%	2,872,608	46.12%
	Frontier California, dba Verizon CA	U-1002-C	1,507,460	22.50%	1,368,589	19.89%	1,165,267	18.71%
	Frontier Citizens Telecom. Company	U-1024-C	93,953	1.40%	91,174	1.33%	88,061	1.41%
	Consolidated Comm., dba SureWest	U-1015-C U-6324-C	22,381	0.30%	20,482	0.30%	18,644	0.30%
	Frontier Communications of the Southwest	U-1026-C	6,922	0.10%	6,402	0.09%	5,882	0.09%
URF CLECS	Time Warner Cable	U-6674-C	Did not file	NA	1,128,205	NA	1,217,940	19.55%
	Cox California Telecom	U-5684-C	514,923	7.70%	501,739	7.29%	556,972	8.94%
	Paetec Communications	U-6097-C	200,509	3.00%	197,013	2.86%	180,050	2.89%
	Sonic Telecom	U-7002-C	49,205	0.70%	54,815	0.80%	54,793	0.88%
	ACN Communications	U-6342-C	17,982	0.26%	14,938	0.22%	12,311	0.20%
	AT&T Corporation	U-5002-C	668	0.01%	528	0.01%	409	0.01%
	Telscape Communications	U-6589-C	33,682	0.50%	25,209	0.37%	Did not file	NA
	Electric Lightwave	U-5377-C	21,867	0.31%	Did not file	NA	Did not file	NA
	Advanced Telecom	U-6083-C	5,779	0.08%	Did not file	NA	Did not file	NA
	Astound Broadband	U-6184-C	4,808	0.10%	Did not file	NA	Did not file	NA
GRC ILECS	Sierra Telephone	U-1016-C	18,085	0.30%	17,687	0.26%	17,138	0.28%
	Volcano Telephone	U-1019-C	9,609	0.10%	9,572	0.14%	9,572	0.15%
	Ponderosa Telephone	U-1014-C	7,823	0.12%	6,846	0.10%	7,630	0.12%
	Siskiyou Telephone	U-1017-C	5,246	0.10%	5,233	0.08%	5,244	0.08%
	Kerman Telephone	U-1012-C	4,922	0.10%	4,595	0.07%	4,396	0.07%
	Calaveras Telephone	U-1004-C	3,526	0.05%	3,498	0.05%	3,079	0.05%
	Foresthill Telephone	U-1009-C	2,300	0.03%	2,110	0.03%	2,455	0.04%
	Happy Valley Telephone	U-1010-C	2,688	0.04%	2,528	0.04%	2,393	0.04%
	Cal-Ore Telephone	U-1006-C	1,863	0.03%	1,865	0.03%	1,842	0.03%
	Ducor Telephone	U-1007-C	1,022	0.02%	1,034	0.02%	1,021	0.02%
	Winterhaven Telephone	U-1021-C	731	0.01%	690	0.01%	667	0.01%
	Hornitos Telephone	U-1011-C	578	0.01%	527	0.01%	503	0.01%
	Pinnacles Telephone	U-1013-C	251	0.00%	250	0.00%	246	0.0%
	Frontier Communications West Coast	U-1020-C	8,434	0.13%	Did not file	NA	Did not file	NA
TOTAL			**6,696,239**	**100%**	**6,880,572**	**100%**	**6,229,123**	**100%**
Percentage Change from Prior Year			**-11.20%**		**2.75%**		**-9.47%**	

B. Carrier Average Annual GO 133-C and GO 133-D Service Quality Data, 2014-2016

Type	Company Name	Utility Number	2014					2015					2016				
			Installation Interval (days)	Installation Commitment	Customer Trouble Reports	Out of Service Repair Interval	Answer Time	Installation Interval (days)	Installation Commitment	Customer Trouble Reports	Out of Service Repair Interval	Answer Time	Installation Interval (days)	Installation Commitment	Customer Trouble Reports	Out of Service Repair Interval	Answer Time
URF ILEC	AT&T California	U-1001-C			1.45%	60%	79%			1.39%	65%	88%			1.50%	56%	82%
URF ILEC	Frontier Citizens	U-1024-C			0.88%	82%	74%			0.86%	77%	71%			0.78%	83%	70%
URF ILEC	Frontier Southwest	U-1026-C			1.15%	83%	74%			0.97%	88%	71%			1%	84%	70%
URF ILEC	SureWest Telephone	U-1015-C			1.28%	93%	89%			0.77%	86%	53%			0.85%	87%	71%
URF ILEC	Verizon California	U-1002-C			0.98%	68%	64%			0.90%	73%	72%			0.77%	57%	56%
URF CLEC	ACN Communications	U-6342-C			1.08%	5%	63%			0.72%	3%	60%			1.12%	5%	64%
URF CLEC	Advanced Telecom	U-6083-C			0.65%	70%	--			--	--	--			--	--	--
URF CLEC	Astound	U-6184-C	Exempt		2.27%	94%	48%	Exempt		--	--	--	Exempt		--	--	--
URF CLEC	AT&T Corporation	U-5002-C			1.52%	76%	80%			1.60%	72%	71%			2.45%	75%	--
URF CLEC	Time Warner Cable	U-6674-C			--	--	--			--	--	--			0.51%	91%	94%
URF CLEC	Cox California	U-5684-C			2.30%	92%	--			1.70%	89%	86%			1.70%	88%	--
URF CLEC	Electric Lightwave	U-5377-C			0.92%	73%	--			--	--	--			--	--	--
URF CLEC	Paetec Communications	U-6097-C			0.94%	94%	64%			0.96%	95%	56%			0.98%	94%	--
URF CLEC	Sonic Telecom	U-7002-C			0.93%	59%	62%			0.13%	43%	78%			0.34%	56%	82%
URF CLEC	Telscape Communications	U-6589-C			4.40%	40%	61%			3.19%	25%	60%			--	--	--
GRC ILEC	Calaveras Telephone	U-1004-C	1.18	100%	0.43%	100%	--	2.21	100%	0.29%	100%	--	1.46	100%	0.19%	100%	--
GRC ILEC	Cal-Ore Telephone	U-1006-C	2.39	97%	1.67%	95%	--	2.15	99%	1.94%	95%	--	1.96	98%	1.82%	98%	--
GRC ILEC	Frontier West Coast	U-1020-C	2.22	98%	0.72%	83%	74%	2.31	98%	0.68%	84%	--	--	--	--	--	--
GRC ILEC	Ducor Telephone	U-1007-C	1.93	100%	0.86%	95%	--	0.22	100%	0.89%	98%	--	2.4	100%	0.13%	99%	--
GRC ILEC	Foresthill Telephone	U-1009-C	1.49	100%	0.99%	98%	--	1.5	100%	1.06%	99%	--	1.54	100%	1.14%	95%	98%
GRC ILEC	Happy Valley Telephone	U-1010-C	2.66	99%	1.33%	94%	75%	2.74	100%	3.05%	95%	85%	2.8	100%	1.11%	92%	--
GRC ILEC	Hornitos Telephone	U-1011-C	4.07	96%	2.53%	95%	75%	2.89	99%	4.82%	94%	85%	2.72	100%	3.39%	92%	--
GRC ILEC	Kerman Telephone	U-1012-C	3.52	99%	0.90%	99%	--	2.86	100%	0.76%	97%	--	1.95	98%	1.54%	97%	99%
GRC ILEC	Pinnacles Telephone	U-1013-C	0.52	100%	0.16%	100%	--	0.71	100%	0.50%	100%	--	0.45	100%	0.24%	100%	--
GRC ILEC	Ponderosa Telephone	U-1014-C	2.36	100%	0.79%	93%	--	2.51	100%	0.68%	97%	--	2.27	100%	1.28%	91%	--
GRC ILEC	Sierra Telephone	U-1016-C	1.08	100%	0.58%	98%	91%	1	100%	0.65%	98%	--	0.96	99%	0.82%	98%	88%
GRC ILEC	Siskiyou Telephone	U-1017-C	0.93	100%	0.31%	98%	--	0.91	100%	0.26%	100%	--	0.74	100%	0.25%	100%	--
GRC ILEC	Volcano Telephone	U-1019-C	1.02	100%	0.54%	95%	92%	1.3	100%	0.30%	89%	90%	1.44	100%	0.29%	76%	83%
GRC ILEC	Winterhaven Telephone	U-1021-C	1.96	100%	1.99%	96%	76%	2.18	100%	1.89%	98%	89%	3.17	100%	1.82%	98%	--

= in compliance

= out of compliance

C. Verizon California and Frontier California (U-1002-C) Out of Service Repair Interval

Month	Percent of Outages Restored in 24 hours or less
Jan 2014	76.40
Feb 2014	71.17
March 2014	64.61
April 2014	62.59
May 2014	68.98
June 2014	65.86
July 2014	72.03
August 2014	72.02
September 2014	71.76
October 2014	75.22
November 2014	72.11
December 2014	48.00
Jan 2015	60.41
Feb 2015	70.22
March 2015	72.09
April 2015	74.72
May 2015	74.12
June 2015	72.26
July 2015	80.35
August 2015	83.35
September 2015	69.22
October 2015	71.19
November 2015	72.83
December 2015	78.00
Jan 2016	68.68
Feb 2016	91.58
March 2016	92.64
April 2016	42.92
May 2016	20.85
June 2016	27.68
July 2016	29.95
August 2016	43.06
September 2016	66.21
October 2016	73.77
November 2016	73.52
December 2016	50.84

* The merger transaction closed March 31, 2016. Starting April 2016, all Out of Service Repair data is from Frontier California.

D. Frontier-Verizon Merger Data

Out of Service Repair Interval - April-December 2016

		Verizon (U-1002-C)	Frontier Citizens (U-1024-C)	Frontier Southwest (U-1026-C)
April	Line Count	1,237,736.00	88,830.00	6,005.00
	Performance (%)	42.92	88.49	86.96
	Weighted Value	531,236.29	78,605.67	5,221.95
	Weighted Avg.	(sum weighted values / sum line counts) x 100 =		**46.16**
May	Line Count	1,215,168.00	88,843.00	5,970.00
	Performance (%)	20.85	82.21	67.74
	Weighted Value	253,362.53	73,037.83	4,044.08
	Weighted Avg.	(sum weighted values / sum line counts) x 100 =		**25.23**
June	Line Count	1,195,696.00	88,260.00	5,930.00
	Performance (%)	27.68	83.85	84.62
	Weighted Value	330,968.65	74,006.01	5,017.97
	Weighted Avg.	(sum weighted values / sum line counts) x 100 =		**31.79**
July	Line Count	1,178,887.00	87,697.00	5,878.00
	Performance (%)	29.95	82.38	85.71
	Weighted Value	353,076.66	72,244.79	5,038.03
	Weighted Avg.	(sum weighted values / sum line counts) x 100 =		**33.82**
Aug	Line Count	1,118,242.00	87,012.00	5,816.00
	Performance (%)	43.06	78.95	85.71
	Weighted Value	481,515.01	68,695.97	4,984.89
	Weighted Avg.	(sum weighted values / sum line counts) x 100 =		**45.84**
Sept	Line Count	1,102,431.00	86,701.00	5,671.00
	Performance (%)	66.21	84.75	75.86
	Weighted Value	729,919.57	73,479.10	4,302.02
	Weighted Avg.	(sum weighted values / sum line counts) x 100 =		**67.60**
Oct	Line Count	1,082,071.00	86,202.00	5,646.00
	Performance (%)	73.77	80.81	87.10
	Weighted Value	798,243.78	69,659.84	4,917.67
	Weighted Avg.	(sum weighted values / sum line counts) x 100 =		**74.35**
Nov	Line Count	1,066,262.00	85,659.00	5,662.00
	Performance (%)	73.52	83.57	92.59
	Weighted Value	783,915.82	71,585.23	5,242.45
	Weighted Avg.	(sum weighted values / sum line counts) x 100 =		**74.36**
Dec	Line Count	1,047,684.00	85,137.00	5,643.00
	Performance (%)	50.84	79.34	90.00
	Weighted Value	532,642.55	67,547.70	5,078.70
	Weighted Avg.	(sum weighted values / sum line counts) x 100 =		**53.17**